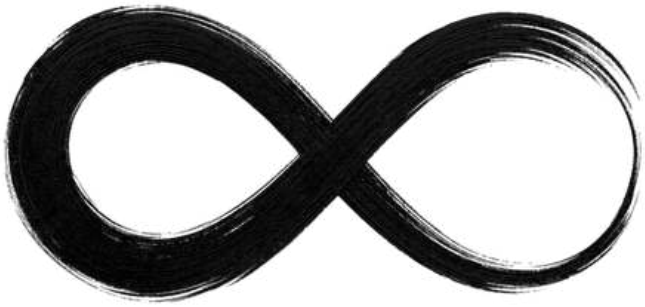


UP

Universal Pragmatism

The whole book, in three parts

Daniel Foster

Working manuscript · revised and assembled 15 November 2026

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About this manuscript

This is the whole book in one file: the Introduction, all twenty-four chapters in three parts, the Conclusion and the back matter. This version carries the revisions of 15 November 2026, made after a full review of the book: chapter pointers and labels in the notes brought up to date after the renumbering, one name for the current system throughout, repetition between neighbouring chapters cut, long sentences split, a “UP at work” walk-through and a table of expected benefits by stage added to Chapters 12 and 20 to 23, the join steps folded into the Conclusion’s invitation, and the back matter rebuilt. Notes written for the author during drafting have been left out; everything else, including the chapter cards, figures, tables and every footnote, is here.

The three parts:

Part	The question it answers	Chapters
Part One	Is this real?	1 to 3
Part Two	What is UP?	4 to 11
Part Three	How could it run, and how do we get there?	12 to 24 and the Conclusion

Which version of each part is included:

Part	Version	Status
Introduction	Draft 3.1 (31 Oct), revised 15 Nov	Approved; 15 Nov changes (three parts, the 14 Nov clarification, term, card label) await the author’s look
Chapter 1	Draft 5.1 (31 Oct), revised 15 Nov	Approved; term changes only
Chapters 2 and 3	Draft 2 (31 Oct, 1 Nov), revised 15 Nov	Approved; Chapter 3’s added clarification awaits the author’s look
Chapters 4 to 7	Draft 1 (1 Nov), revised 15 Nov	Approved; Chapters 4 and 7’s sentence splits await the author’s look
Chapter 8 (Money)	Draft 3 (14 Nov), revised 15 Nov	Awaiting review
Chapters 9 (Government) and 10 (Corporations)	Draft 1 (14 Nov), revised 15 Nov	Awaiting review
Chapter 11	Draft 1 (1 Nov), revised 15 Nov	Awaiting review
Chapter 12	Draft 2 (13 Nov), revised 15 Nov	Awaiting review
Chapters 13 to 19	Draft 3 (14 Nov), revised 15 Nov	Awaiting review
Chapters 20 to 24	Draft 1 (13 Nov), revised 15 Nov	Awaiting review
Conclusion	Draft 1 (13 Nov), revised 15 Nov	Awaiting review
Back matter	Draft 1 (13 Nov), rebuilt 15 Nov	Awaiting review

Figures are from the redrawn figure library of 14 November 2026. Figures new in that library carry a caption without a number, so that the numbering the text refers to is unchanged. Footnotes are numbered afresh in each chapter.

How this book cites UP’s own record

Most of this book’s notes cite outside sources: studies, reports, news and books, each with the words relied on and the date they were checked. Many others cite UP’s own record, and they use a few labels that a new reader cannot be expected to know.

- **The core** is UP’s definition and its ten tenets, settled on 28 October 2026 (T1 to T10 are the tenets). It is printed in full in the back matter.
- **The Position Ledger** is the record of every agreed position, with its agreed wording and its status: *CANON* (settled and confirmed faithful), *AGREED* (agreed in the debate) or *PROPOSED* (open to the collective). The positions the chapters rely on are printed in the back matter.
- **A round** is one round of the written debate in which the core and the positions were settled. “Round 11” settled the core; rounds 12S, 12c and 13 settled the positions on UP at full potential, the evidence by stage, and justice.
- **A card** is one numbered agreed position on a single topic (card 22 is abundance). Labels such as U12 or F9 belong to the step-3 evidence record of round 12c. A chapter card is different: it is the summary at the end of each chapter.
- **DP-001, C-P1-02** and similar are the Ledger’s reference numbers, so that a reader can find the agreed wording.
- **A study lesson** is one of the working rules drawn up during the UP study programme for describing UP faithfully, such as lesson 13 on judging UP by stage. Lessons guide how the book is written; they are not tenets or positions.
- **The author’s reading** marks a reading set out by UP’s author that is going through UP’s method and is not yet an agreed position.

Every one of these records is meant to be public, so that anyone can check the book against them. Until they are on universalpragmatism.com, the back matter prints the parts the chapters rely on.

"Where I once would fear the cost of truth, now I only ask: What is the cost of lies?"[1]

Introduction: Why We Must Get This Right

Look around you

Look around you. Does it feel as if the systems running the world are actually working for you?

For many people reading this, the honest answer is "mostly". The lights come on when you flip the switch. There is food in the shops, and somewhere nearby there is a doctor who can treat illnesses that killed our great-grandparents. From inside a life like that, it is easy to assume the machinery is sound. So look a little further, past your own street, and keep looking for a minute longer than is comfortable.

Somewhere in the world today, around 13,000 children under the age of five will die. That is what an ordinary day looks like. In 2024, 4.9 million young children died, and the World Health Organization and UNICEF say most of those deaths could have been prevented with proven, low-cost care.[1] The WHO links around 45% of deaths of children under five to undernutrition.[2] You might expect, then, that the world is short of food. The opposite is true. In 2025, an estimated 645 million people went hungry,[3] yet the world's households throw away at least a billion meals a day,[4] and on paper the global food supply now comes to more than 3,000 kilocalories for every person alive, every day.[5] The food exists. The children die anyway, because what exists does not reach them.

If those deaths feel far away, the next failure is happening in one of the wealthiest places on Earth. Japan's economy produces more than $4 trillion of goods and services a year.[6] And in 2025, 76,941 people in Japan died alone at home. Nearly 59,000 of them were 65 or older. Police records show that about 22,000 were not found

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[1] "Vichnaya Pamyat", *Chernobyl*, written by Craig Mazin, directed by Johan Renck, season 1, episode 5, HBO, 3 June 2019. Episode title, date, writer and director: https://www.rottentomatoes.com/tv/chernobyl/s01/e05 ; title and date also at https://www.tvmaze.com/shows/30770/chernobyl . Checked 31 Oct 2026.

[1] World Health Organization and UNICEF, joint news release, "Progress in reducing child deaths slows as 4.9 million children die before age five" (18 Mar 2026), on the UN Inter-agency Group for Child Mortality Estimation report: "An estimated 4.9 million children died before their fifth birthday in 2024"; "Most of these deaths are preventable with proven, low-cost interventions and access to quality health care." https://www.who.int/news/item/18-03-2026-progress-in-reducing-child-deaths-slows-as-4.9-million-children-die-before-age-five . The text's figure of around 13,000 a day is the yearly figure divided by 365 (about 13,400), an average. Checked at source on 31 Oct 2026; the series is revised each year.

[2] World Health Organization, "Malnutrition" (health topic page, undated): "Around 45% of deaths among children under the age of 5 years are linked to undernutrition." https://www.who.int/health-topics/malnutrition . The page gives no source. The same figure comes from Black R E et al., "Maternal and child undernutrition and overweight in low-income and middle-income countries", *The Lancet* 382(9890):427-451 (2013), which estimated that undernutrition, counting fetal growth restriction, stunting, wasting, vitamin A and zinc deficiencies and poor breastfeeding, "is a cause of 3·1 million child deaths annually or 45% of all child deaths in 2011": PubMed 23746772, abstract in Europe PMC: https://www.ebi.ac.uk/europepmc/webservices/rest/search?query=EXT_ID:23746772%20AND%20SRC:MED&resultType=core&format=json . So 45% is a 2011 estimate. "Linked to" is broader than "caused by": the 2026 UN child-mortality release (previous note) estimates that severe acute malnutrition directly caused about 5% of deaths among children aged 1-59 months (over 100,000 in 2024), and adds that "The toll is far greater when indirect effects are considered" (https://www.who.int/news/item/18-03-2026-progress-in-reducing-child-deaths-slows-as-4.9-million-children-die-before-age-five). Checked at source, 31 Oct 2026.

[3] FAO, IFAD, UNICEF, WFP and WHO, *The State of Food Security and Nutrition in the World 2026* (Rome, FAO, July 2026), Core messages: "Considering the point estimate of 645 million in 2025, this indicates a decrease of about 14 million people compared to 2024 and 43 million compared to 2022"; the range is 608 to 696 million. "The global number of people unable to afford a healthy diet decreased from 2.97 billion (37.4 percent of the world population) in 2021 to 2.69 billion (32.7 percent) in 2025." https://openknowledge.fao.org/server/api/core/bitstreams/5eda804a-d21d-4042-a0fd-39088374c9df/content/state-food-security-and-nutrition-2026/core-message.html (DOI https://doi.org/10.4060/cd8306en). Launch release, FAO, 21 July 2026: "Global hunger declined for a third consecutive year in 2025", https://www.fao.org/newsroom/detail/un-report–global-hunger-levels-ease-for-third-consecutive-year-as-regional-disparities-persist/en . Checked at source on 31 Oct 2026; the report is published each year.

[4] UNEP, *Food Waste Index Report 2024* (27 Mar 2024). Press release, "World squanders over 1 billion meals a day - UN report": "Households across all continents wasted over 1 billion meals a day in 2022". https://www.unep.org/news-and-stories/press-release/world-squanders-over-1-billion-meals-day-un-report . The same release: "In 2022 there were 1.05 billion tonnes of food waste generated (including inedible parts), amounting to 132 kilograms per capita and almost one-fifth of all food available to consumers." UN News, "With 783 million people going hungry, a fifth of all food goes to waste" (27 Mar 2024): "Some 19 per cent of food available to consumers was lost overall at retail, food service, and household levels." https://news.un.org/en/node/1148036 . Checked at source, 31 Oct 2026.

[5] FAO Statistics Division, "Food balance sheets 2010–2023" (27–28 Oct 2025): in 2023 global food supply "crossed the historic milestone of 3 000 kilocalories per capita per day." This is food supply available per person, not what people eat. https://www.fao.org/statistics/highlights-archive/highlights-detail/food-balance-sheets-2010-2023 (fact pack, item 6d).

[6] World Bank, World Development Indicators, Japan: GDP (current US$) 4.44 trillion in 2025. https://data.worldbank.org/country/japan . Checked by Claude, 29 Oct 2026.

until eight or more days after death, and more than 7,000 not until a month or more had passed.[7] Stop on that last number for a moment. More than seven thousand people, in a country of crowded cities and constant connection, were missed by no one for a month. The problem reaches well beyond Japan. The WHO estimates that one person in six around the world is lonely, and that loneliness accounts for about 871,000 deaths a year, roughly a hundred every hour.[8]

Then there are the failures so large they no longer sound like news. About 2.1 billion people do not have safely managed drinking water, and 3.4 billion lack safe sanitation.[9] Some 4.6 billion cannot get essential health services.[10] A healthy diet is out of reach for about 2.7 billion,[4] and in 2024, 824 million people lived in extreme poverty, on less than $3 a day.[11] Figure 1 sets these numbers side by side. Each bar is made of people who woke up this morning without something that everyone needs and that the world already knows how to provide.

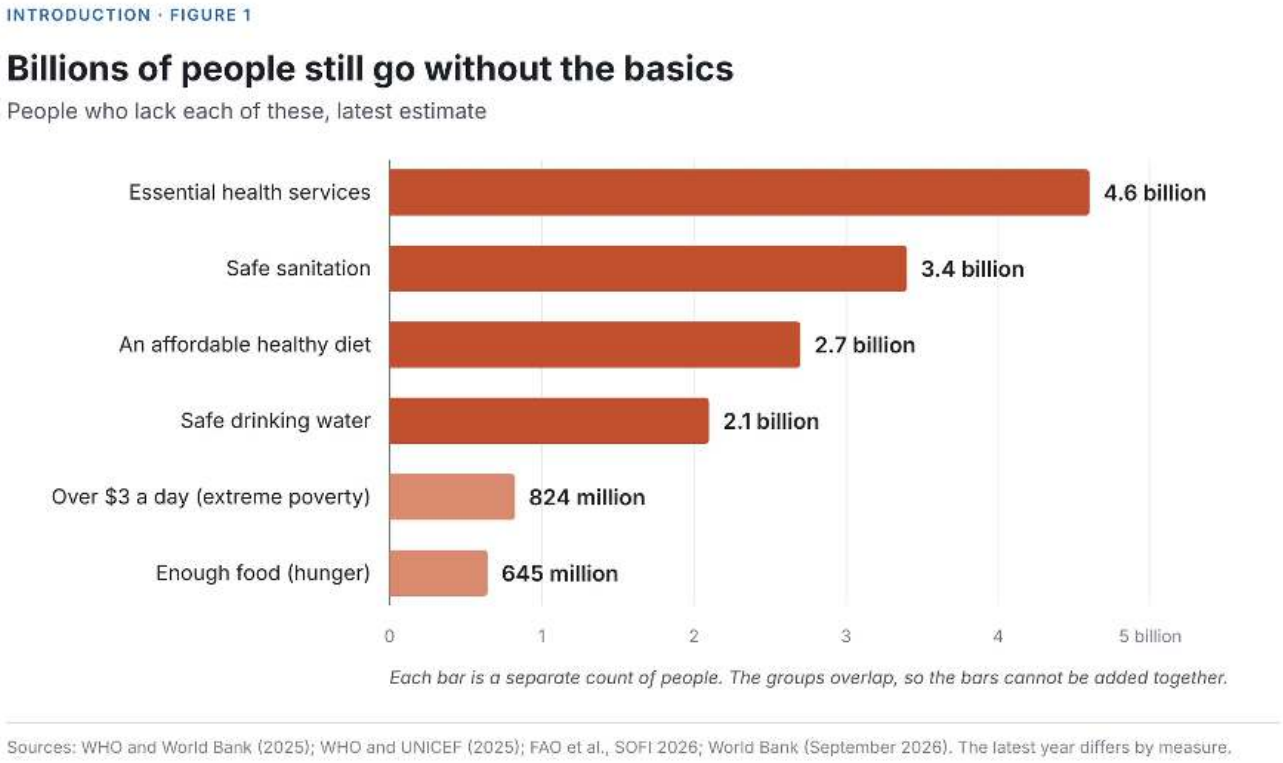


Figure 1. The number of people who lack each basic need, by the latest estimate for each. The groups overlap, so the bars cannot be added together. Sources are in the notes to the paragraph above.

[7] National Police Agency (Japan), Criminal Investigation Bureau, "警察取扱死体のうち、自宅において死亡した一人暮らしの者（令和７年）" (bodies handled by police that were people living alone who died at home, 2025; table by age group and days elapsed, April 2026): 76,941 people in 2025, of whom 58,919 were aged 65 or over. https://www.npa.go.jp/publications/statistics/shitai/hitorigurashi/R7nennreikaisoubetu.pdf . The same table shows 22,222 found eight or more days after death and 7,148 found 31 or more days after death (the sums of its rows); the first is also the Cabinet Office's guideline figure for isolated deaths in 2025, in "令和７年孤立死者数の推計について" (14 Apr 2026), https://www.cao.go.jp/kodoku_koritsu/torikumi/pdf/r7suikei.pdf . These are police counts of cases handled, with the days between death and discovery as recorded by police. Checked at source on 31 Oct 2026; the series is published each year.

[8] WHO Commission on Social Connection, *From loneliness to social connection: charting a path to healthier societies* (30 June 2025): "loneliness accounts for approximately 871 000 deaths each year – or around 100 deaths an hour"; "1 in 6 people worldwide experience loneliness." https://www.who.int/groups/commission-on-social-connection . These are model-based estimates. Checked at source by Claude, 29 Oct 2026.

[9] WHO and UNICEF, "1 in 4 people globally still lack access to safe drinking water" (26 Aug 2025), on *Progress on household drinking water, sanitation and hygiene 2000–2024: special focus on inequalities*: "2.1 billion people globally" lack safely managed drinking water; "3.4 billion people still lack safely managed sanitation." https://www.who.int/news/item/26-08-2025-1-in-4-people-globally-still-lack-access-to-safe-drinking-water—who–unicef . Checked at source on 31 Oct 2026; the series is updated every two years.

[10] WHO and World Bank, "Most countries make progress towards universal health coverage, but major challenges remain" (6 Dec 2025), on the UHC Global Monitoring Report 2025: "an estimated 4.6 billion people worldwide still lack access to essential health services" https://www.who.int/news/item/06-12-2025-most-countries-make-progress-towards-universal-health-coverage-but-major-challenges-remain-who-world-bank-report-finds . Checked at source on 31 Oct 2026; the report is published every two years.

[11] World Bank (Moreno Herrera L et al.), "September 2026 Global Poverty Update" (Data Blog, 22 Sep 2026): "More than 824 million people, about one in ten worldwide, were living in extreme poverty in 2024"; extreme poverty is "living on less than $3.00 per person per day in 2021 purchasing power parity terms." https://blogs.worldbank.org/en/opendata/september-2026-global-poverty-update-from-the-world-bank–one-in . Checked at source on 31 Oct 2026; the series is revised several times a year.

None of this is a mystery. We know how to grow and move food, make water safe and treat the illnesses that kill small children, and many of the answers are cheap.[2,6] There has been real progress, too, and the latest United Nations report on hunger shows the numbers falling. But the progress is far too slow. The same report projects that between 510 and 520 million people could still be going hungry in 2030,[12] the very year the world's governments promised to end hunger.[13] On issue after issue, the problems are outpacing the solutions.

It would be easier if there were a villain to blame. Mostly there isn't. The farmers, nurses, officials and business owners inside the current system are, for the most part, doing their jobs as the system defines them. That is exactly the trouble. A system made of decent people can still produce outcomes that most of those people would call wrong, and it can go on producing them, year after year, while everyone in it does what is expected of them.

It does not have to be this way.

A different way to solve problems

This book describes another way of organising ourselves. It is called Universal Pragmatism, or UP, and the idea fits in a sentence: UP is a way for people to solve shared problems together, using evidence and technology, for the health, happiness and wellbeing of all living things.[14] Anyone can take part. UP checks its own results and corrects itself as it learns. It keeps power spread out, so that no person, group or machine gathers control over everyone else. And it never crosses a small set of floors, limits below which no decision may go, which protect people and the living world. Among them are everyone's basic needs, freedom of the mind, a fair hearing, a truthful shared record, the right to leave any group or community, and the living world's capacity to recover.[15]

If that sounds abstract, it shouldn't for long, because you have almost certainly used something built this way. When you look something up on Wikipedia, you rely on strangers who solved a shared problem together, in the open, and checked one another's work. UP takes that way of working and extends it from shared knowledge to the whole of shared life: meeting needs, making decisions and caring for the living world.

Why look for solutions this way? Because the current system is very good at solving the problems that pay someone, and much weaker at the ones that don't. Sometimes it is worse than weak, and the persistence of a problem is what pays. Antibiotics show how this happens. Bacteria evolve resistance to the drugs we have, so the world needs new ones, kept in reserve and used sparingly. That is precisely what makes them poor business. A review commissioned by the British government found that drug companies were not investing in new antibiotics despite very high medical need, because the commercial return looks unattractive until resistance has already spread, that is, until the old drugs have stopped working.[16] One company did the work anyway. Achaogen won approval for a new antibiotic in June 2018; in its first year the drug brought in $0.8 million, and in April 2019 the company filed for bankruptcy.[17] Nobody in that story behaved badly. The incentives pointed the wrong way.

UP starts from a different question. Instead of asking what will pay, it asks what will improve the health, happiness and wellbeing of each person, counted one by one, so that no one's wellbeing is traded away to raise an average.[18] Its main activity is inventing solutions together. Anyone may take on a problem, propose a fix with the evidence for

[12] FAO, IFAD, UNICEF, WFP and WHO, *The State of Food Security and Nutrition in the World 2026*, the report's page on ending hunger: "in the next five years, the global number of undernourished people is expected to decrease by 20 percent, but it is still projected that between 510 and 520 million people will be facing hunger in 2030, of whom 56 percent will be in Africa." The range depends on how long the 2026 Middle East conflict affects food prices; the pre-conflict projection was 503 million (section 2.1). https://openknowledge.fao.org/server/api/core/bitstreams/5eda804a-d21d-4042-a0fd-39088374c9df/content/state-food-security-and-nutrition-2026/ending-hunger-food-security.html . Checked at source on 31 Oct 2026; the report is published each year.

[13] United Nations, Sustainable Development Goal 2, target 2.1: "By 2030, end hunger and ensure access by all people ... to safe, nutritious and sufficient food all year round". https://sdgs.un.org/goals/goal2 . Checked at source by Claude, 29 Oct 2026.

[14] The definition of UP, in full: "Universal Pragmatism is a way for people to solve shared problems together, using evidence and technology, for the health, happiness and wellbeing of all living things: open to everyone, correcting itself as it learns, keeping power spread out, and never crossing a small set of floors that protect people and the living world. It takes the way people already build shared knowledge together and extends it to the whole of shared life: meeting needs, making decisions and caring for the living world." It is also in "The core of UP", at the back of the book.

[15] Core tenet: *Floors that are never crossed*. The full list of floors is in "The core of UP".

[16] The Review on Antimicrobial Resistance, chaired by Jim O'Neill, *Tackling Drug-Resistant Infections Globally: Final Report and Recommendations* (May 2016), executive summary, section 9: "firms are not investing in antibiotics despite the very high medical needs"; "the commercial return on R&D investment looks unattractive until widespread resistance has emerged". https://amr-review.org/sites/default/files/160518_Final%20paper_with%20cover.pdf

[17] Achaogen, Inc., Form 10-K for 2018: "$0.8 million in net product revenues from sales of ZEMDRI"; Form 8-K exhibit (15 Apr 2019): Chapter 11 petition. https://www.sec.gov/Archives/edgar/data/1301501/000156459019010412/akao-10k_20181231.htm ; https://www.sec.gov/Archives/edgar/data/1301501/000156459019011576/akao-ex991_6.htm . Approval in June 2018 and the reason ("antibiotics are used infrequently and for short durations", Infectious Diseases Society of America): Healio (16 Apr 2019). https://www.healio.com/news/infectious-disease/20190416/achaogen-maker-of-newly-approved-zemdri-files-for-bankruptcy . The filings do not themselves say why the company failed; the reason is from the secondary report.

[18] Core tenet: *The aim: the health, happiness and wellbeing of all living things*.

it, and see it tested against the alternatives, and a solution rises because it works, whether or not a funder or a boss would have backed it.[19] Figure 2 traces the loop a problem travels, from the moment someone names it to the moment its results, good or bad, come back as the next piece of work.[20]

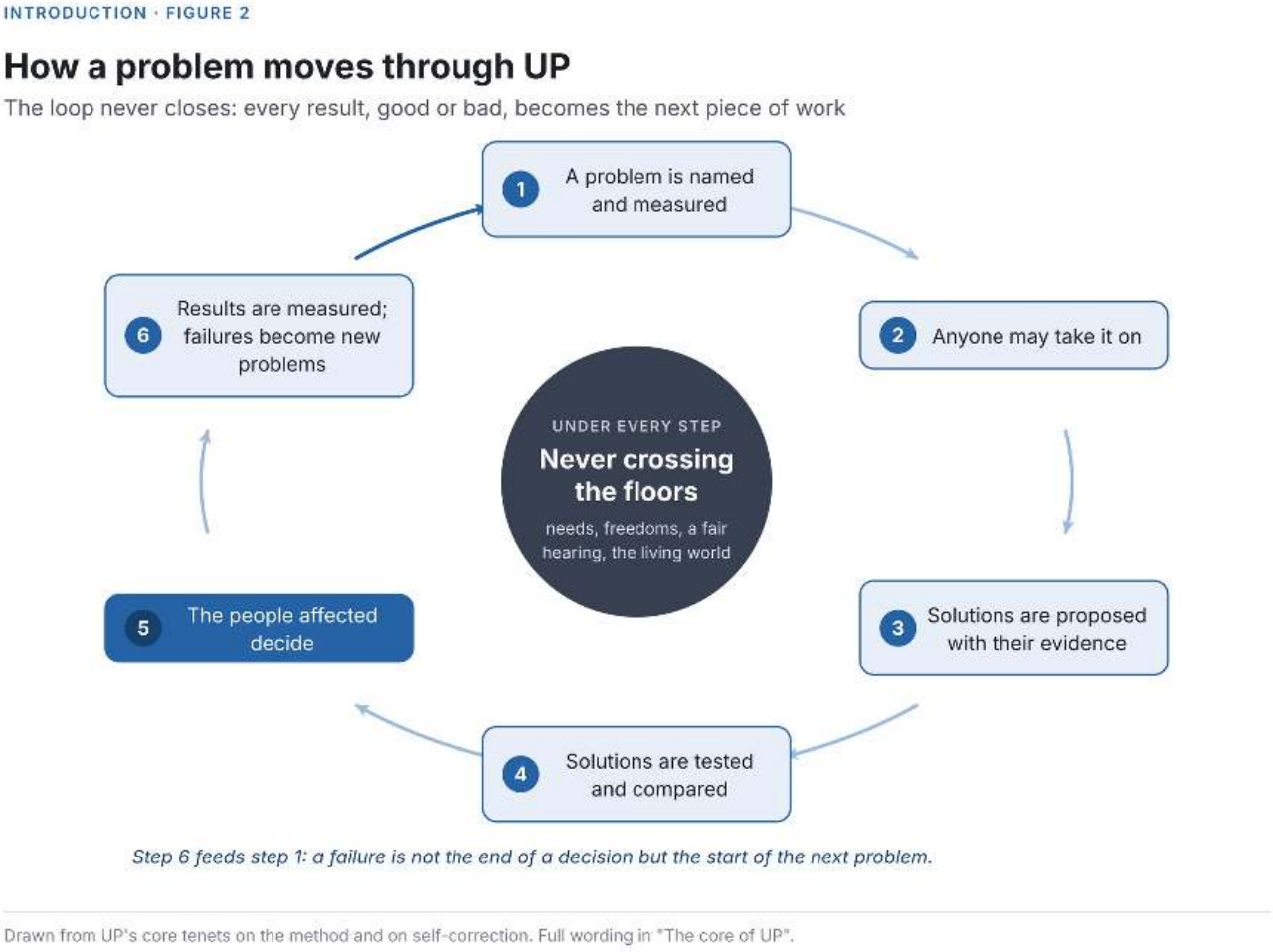


Figure 2. The loop at the heart of UP. Every step is open to anyone, and no step may cross the floors at the centre.

Why change course now? Partly because the problems are not waiting. Reform inside the current system has won real victories, and some of them appear in the next section. On the planet's limits, though (climate, biodiversity, soil and fresh water), and on most of the major issues of our time, the problems are growing faster than the reforms. UP does not claim that reform cannot work. It is built for the gap between how fast reform moves and how fast the problems grow, a gap that Chapter 2 measures issue by issue. The threats reach into almost every part of life, so there is real urgency, and the aim is a transition rather than a collapse. How quickly UP grows is not anyone's to decide; what matters is that it keeps the quality of its core values and tenets as it grows, so that the growth stays healthy.

The other reason is that, for the first time, the tools exist. Open projects built in public already run the world's fastest computers and have written an encyclopaedia in hundreds of languages.[21,22] New renewable power is now

[19] Core tenet: *The method: shared problem solving with evidence*. That inventing solutions together is UP's main activity is also an agreed position.
[20] Core tenet: *Self-correction: nothing is final, including this*.
[21] TOP500.org, List Statistics, "Operating system Family" (https://www.top500.org/statistics/list/): for each of the 18 lists from November 2017 to June 2026 (the 67th edition, published 23 June 2026), Linux is the only operating system family shown, with 500 of 500 systems (100%). In June 2017 it was 498 systems, with 2 running Unix. The first all-Linux list was announced by The Linux Foundation, "Linux Runs All of the World's Fastest Supercomputers" (20 Nov 2017): "Linux powers every one of the world's 500 fastest supercomputers", https://www.linuxfoundation.org/blog/blog/linux-runs-all-of-the-worlds-fastest-supercomputers . Checked at source on 31 Oct 2026; TOP500 publishes a new list every June and November.
[22] Wikimedia Foundation, Meta-Wiki, "List of Wikipedias": all active Wikipedias together hold 68,628,410 articles in 348 language editions (read on 31 Oct 2026). https://meta.wikimedia.org/wiki/List_of_Wikipedias . Pew Research Center (Seets, Lieb and Smith), "Wikipedia at 25: What the data tells us" (13 Jan 2026), https://www.pewresearch.org/short-reads/2026/01/13/wikipedia-at-25-what-the-data-tells-us/ : about "508 million views per day on average" over the past decade; a "community of largely volunteer editors". Checked at source on 31 Oct 2026; Wikipedia's counts change every day.

usually cheaper than new fossil power.[23] Co-operatives already count a sizeable share of humanity among their members.[24] AI can find patterns, match people to problems and help coordinate work, while people keep the decisions.[25] What has been missing is a framework that connects these pieces and is built for them rather than against them. Setting out that framework is the purpose of this book.

More of what already works

None of this requires inventing a civilisation from scratch. UP is less a revolution than a way of naming the best of what civilisation already does, so that we get more of the good and less of the harm. The clearest way to see what that means is to look at a few things people have already done together.

In October 1977, a 23-year-old hospital cook named Ali Maow Maalin, from the coastal town of Merca in Somalia, came down with smallpox. He had never been vaccinated. He was the last person on Earth to catch the disease naturally.[26] Smallpox had plagued humanity for at least 3,000 years, and the WHO estimates that in the twentieth century alone it killed about 300 million people. After Maalin, no one else caught it in the wild. An international commission certified the disease eradicated on 9 December 1979, and the World Health Assembly declared it gone in May 1980.[27] Maalin recovered, and he later went to work for the WHO's polio eradication campaign in Somalia. In 2013, during a campaign against a flare-up of polio, he caught malaria and died a few days later, at 59.[27] A disease that had killed people for thousands of years ended within his lifetime, and he spent his later years helping to end another.

Less than eight years after Maalin fell ill, in May 1985, three scientists from the British Antarctic Survey, Joe Farman, Brian Gardiner and Jonathan Shanklin, reported in the journal *Nature* that the ozone layer over Antarctica was being lost on a large scale.[28] In September 1987, a little over two years later, governments agreed the Montreal Protocol to phase out the chemicals responsible, and 46 states signed it in its first year.[29] By 2009 every country in the world had joined, a status the UN Secretary-General described as unique among the hundreds of treaties deposited with him.[29] And it worked. Governments have phased out almost all of the ozone-depleting substances they banned, and if current policies stay in place, the ozone layer is expected to recover to its 1980 state by around 2040 over most of the world and by around 2066 over Antarctica.[30]

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[23] IRENA, press release "91% of New Renewable Projects Now Cheaper Than Fossil Fuels Alternatives" (22 July 2025), on *Renewable Power Generation Costs in 2024*: "Notably, 91% of new renewable power projects commissioned last year were more cost-effective than any new fossil fuel alternatives." https://www.irena.org/News/pressreleases/2025/Jul/91-Percent-of-New-Renewable-Projects-Now-Cheaper-Than-Fossil-Fuels-Alternatives (read in the Internet Archive's copy, https://web.archive.org/web/2025/https://www.irena.org/News/pressreleases/2025/Jul/91-Percent-of-New-Renewable-Projects-Now-Cheaper-Than-Fossil-Fuels-Alternatives , because irena.org blocks automated reading). "Last year" is 2024. Checked at source, 31 Oct 2026.

[24] International Co-operative Alliance, "Facts and figures" (crediting the World Cooperative Monitor, 2025): "More than 12% of humanity is part of any of the 3 million cooperatives in the world." https://www.ica.coop/en/facts-and-figures . The ICA is the co-operative movement's own body, and people who belong to several co-operatives may be counted more than once.

[25] Core tenet: *Technology serves; people decide*.

[26] World Health Organization, Director-General, "High-Level Welcome at the Seventy-Sixth World Health Assembly" (21 May 2023): "In 1977, Ali Maow Maalin was a 23-year-old working as a hospital cook in the port of Merca, Somalia"; in October of that year he accompanied two children with smallpox to an isolation camp and "wasn't vaccinated"; "He went on to work with WHO in the polio eradication campaign in Somalia"; "In 2013, during a campaign to counter a flare-up of polio, he contracted malaria and died a few days later, aged 59." https://www.who.int/news-room/speeches/item/who-director-general-s-high-level-welcome-at-the-seventy-sixth-world-health-assembly—21-may-2023 . Global Polio Eradication Initiative (WHO), "The world loses one of the 'true heroes' of polio eradication" (31 July 2013): he was "a district polio officer" who died "on the second day of the polio eradication vaccination campaign he was conducting in Merka district", https://polioeradication.org/news/the-world-loses-one-of-the-true-heroes-of-polio-eradication/ . That this was the last naturally acquired case: US Centers for Disease Control and Prevention, "Notice to Readers: 25th Anniversary of the Last Case of Naturally Acquired Smallpox", *MMWR* 51(42):952 (25 Oct 2002): "On October 26, 1977, the last case of naturally acquired smallpox occurred in the Merca District of Somalia." https://www.cdc.gov/mmwr/preview/mmwrhtml/mm5142a5.htm . Checked at source, 31 Oct 2026.

[27] World Health Organization, "WHO commemorates the 40th anniversary of smallpox eradication" (13 Dec 2019): certification by the Global Commission on 9 December 1979; smallpox "had plagued humanity for at least 3000 years"; "killing 300 million people in the 20th century alone" (WHO gives no range or method). https://www.who.int/news/item/13-12-2019-who-commemorates-the-40th-anniversary-of-smallpox-eradication . WHO, "Commemorating smallpox eradication – a legacy of hope, for COVID-19 and other diseases" (8 May 2020): the 33rd World Health Assembly's declaration "On 8 May 1980". https://www.who.int/news/item/08-05-2020-commemorating-smallpox-eradication-a-legacy-of-hope-for-covid-19-and-other-diseases

[28] Farman J C, Gardiner B G and Shanklin J D, "Large losses of total ozone in Antarctica reveal seasonal ClOx/NOx interaction", *Nature* 315:207-210 (issue of 16 May 1985): "observations that the spring values of total O3 in Antarctica have now fallen considerably". https://www.nature.com/articles/315207a0 . The Montreal Protocol was adopted on 16 September 1987 and was open for signature until 15 September 1988 (Ozone Secretariat, Article 15, https://ozone.unep.org/treaties/montreal-protocol/articles/article-15-signature); the UN Treaty Collection lists 46 signatories, https://treaties.un.org/doc/Publication/MTDSG/Volume%20II/Chapter%20XXVII/XXVII-2-a.en.xml . Checked at source, 31 Oct 2026.

[29] United Nations, Secretary-General's message for the International Day for the Preservation of the Ozone Layer, SG/SM/12449 (11 Sep 2009): "Now, the Convention and Protocol have achieved universal participation," a "unique status among the hundreds of treaties deposited with the Secretary-General." https://press.un.org/en/2009/sgsm12449.doc.htm (archived copy: https://web.archive.org/web/20250123053041/https://press.un.org/en/2009/sgsm12449.doc.htm). UNEP Ozone Secretariat: "The Protocol, along with the Vienna Convention, achieved universal participation on 16 September 2009". https://ozone.unep.org/node/3267 . Checked at source, 31 Oct 2026.

[30] UNEP and WMO, joint press release on the *Scientific Assessment of Ozone Depletion: 2022* (9 Jan 2023): the phase-out of "nearly 99%" of banned ozone-depleting substances; "If current policies remain in place, the ozone layer is expected to recover to 1980 values … by around 2066 over the Antarctic … by 2045 over the Arctic and by 2040 for the rest of the world." https://www.unep.org/news-and-stories/press-release/ozone-layer-recovery-track-helping-avoid-global-warming-05degc ; https://wmo.int/news/media-centre/ozone-layer-recovery-track-helping-avoid-global-warming-05degc . The next

Some of the most remarkable cooperation began as almost nothing. On 25 August 1991, Linus Torvalds, a 21-year-old computer science student at the University of Helsinki, posted a note to an online discussion group saying he was writing an operating system, "just a hobby, won't be big and professional like gnu".[31] He shared the code so that others could use, study and improve it, and others joined in. That hobby became Linux, and since November 2017 it has run every one of the world's 500 fastest supercomputers.[22] Less than ten years after Torvalds's post, on 15 January 2001, the first edit to a new website announced: "This is the new WikiPedia!"[32] Today Wikipedia has more than 68 million articles in 348 languages, written largely by volunteers, and over the past decade it has averaged about 508 million views a day.[23]

The same pattern shows up wherever people share what they need. The International Co-operative Alliance says more than 12% of humanity belongs to one of the world's 3 million co-operatives, businesses owned and run by their own members.[25] Public libraries in the United States alone recorded more than 800 million visits in 2023.[33] In Valencia, in Spain, farmers who share irrigation channels settle their disputes at a public water tribunal whose roots UNESCO traces to the al-Andalus period, when much of Spain was under Muslim rule, between the ninth and thirteenth centuries. It still meets every Thursday at noon outside the city's cathedral.[34] For a long time, the conventional wisdom held that resources like these are poorly managed when they are shared. Elinor Ostrom won the 2009 Nobel Memorial Prize in Economic Sciences for showing how shared resources, such as fisheries, pastures, forests and groundwater, can be successfully managed by the people who use them.[35]

And when disaster strikes, people tend to run toward it. Decades of research at the Disaster Research Center in the United States found panic to be rare and helping to be the norm; survivors, it found, "converge upon impact sites to help in whatever ways they can".[36] After Hurricane Katrina, helpful, improvised behaviour was "by far the primary response".[37] When Hurricane Harvey flooded Houston in August 2017, volunteers with their own boats, organising themselves on social media as the "Cajun Navy", were making rescues by 28 August. Their spokesperson put it plainly: "There are hundreds of volunteers and we've already made hundreds of rescues."[37]

None of these needed a revolution. Each is a case of people solving a shared problem together, openly and with evidence. And each has been held back in the same ways: it works largely alone, it lacks the tools to connect with the others, and it has to compete inside a system built for other goals. UP names this existing system, connects its parts and gives it the tools to grow.[38]

That does not mean throwing away what the current system has achieved. It brought enormous gains over the systems that came before it, and this book will credit them as it goes. But arrangements first designed thousands of years ago have limits we no longer need to accept, and it is time for another grand experiment.[39] This one is built

assessment, *Scientific Assessment of Ozone Depletion: 2026*, is due at the end of 2026, https://csl.noaa.gov/assessments/ozone/2026 . Checked at source on 31 Oct 2026.

[31] Linus Benedict Torvalds, "What would you like to see most in minix?", post to the newsgroup comp.os.minix, Date: 25 Aug 91 20:57:08 GMT: "I'm doing a (free) operating system (just a hobby, won't be big and professional like gnu) for 386(486) AT clones." Reproduced in "LINUX's History by Linus Torvalds" (written 31 July 1992), https://www.cs.cmu.edu/~awb/linux.history.html ; archived at Google Groups, https://groups.google.com/g/comp.os.minix/c/dlNtH7RRrGA (which shows the post as 26 August in UTC). Torvalds was born on 28 December 1969 and enrolled at the University of Helsinki in 1988 to study computer science: Computer History Museum, https://computerhistory.org/profile/linus-torvalds/ . Checked at source, 31 Oct 2026.

[32] Pew Research Center, "Wikipedia at 25" (note on Wikipedia, above): the earliest edit found on Wikipedia's homepage, on "Jan. 15, 2001", announced "This is the new WikiPedia!" https://www.pewresearch.org/short-reads/2026/01/13/wikipedia-at-25-what-the-data-tells-us/ . Checked at source, 31 Oct 2026.

[33] Institute of Museum and Library Services, "Increased Public Library Usage Shown by IMLS Survey Data" (2 Sept 2025), on the FY2023 Public Libraries Survey: visits "reaching over 800 million in 2023". Read as republished by Library Technology Guides. https://librarytechnology.org/pr/31661/increased-public-library-usage-shown-by-imls-survey-data

[34] UNESCO Intangible Cultural Heritage, "Irrigators' tribunals of the Spanish Mediterranean coast: the Council of Wise Men of the plain of Murcia and the Water Tribunal of the plain of Valencia" (inscribed 2009): the tribunals "date back to the al-Andalus period (ninth to thirteenth centuries)". https://ich.unesco.org/en/RL/water-tribunal-of-the-plain-of-valencia-00171 . Tribunal de las Aguas de la Vega de Valencia, official website: "The Tribunal de las Aguas meets weekly, every Thursday of the year at 12 noon, at the entrance to Valencia Cathedral." https://tribunaldelasaguas.org/en . Checked at source, 31 Oct 2026.

[35] Royal Swedish Academy of Sciences, press release (12 Oct 2009): "Elinor Ostrom has challenged the conventional wisdom that common property is poorly managed"; "Elinor Ostrom has demonstrated how common property can be successfully managed by user associations"; she studied "user-managed fish stocks, pastures, woods, lakes, and groundwater basins." https://www.nobelprize.org/prizes/economic-sciences/2009/press-release/

[36] Quarantelli E L, *Human and Group Behavior in the Emergency Period of Disasters: Now and in the Future*, Disaster Research Center, University of Delaware, Preliminary Paper 196 (1993): "Overall, panic behavior is not a major characteristic of almost any kind of disaster"; "Instead of fleeing away, they will usually converge upon impact sites to help in whatever ways they can". https://udspace.udel.edu/server/api/core/bitstreams/cc71b2b0-b2be-4984-98ea-27767f2f427e/content . After Hurricane Katrina, helpful emergent conduct was "by far the primary response": Rodríguez H, Trainor J, Quarantelli E L, *The ANNALS of the American Academy of Political and Social Science* 604(1):82–101 (2006). https://ideas.repec.org/a/sae/anname/v604y2006i1p82-101.html

[37] AJ Willingham, CNN, "Harvey good samaritans, Cajun Navy" (28 Aug 2017): spokesperson Clyde Cain, "There are hundreds of volunteers and we've already made hundreds of rescues." https://edition.cnn.com/2017/08/28/us/harvey-good-samaritans-cajun-navy-trnd/index.html . The count is a volunteer's claim, not an audited figure. Checked at source, 31 Oct 2026.

[38] UP's agreed position on building from what already works. Full wording in "The core of UP".

[39] UP's agreed position on judging UP as a whole system against the current system. Full wording in "The core of UP".

to keep improving. Earlier upgrades of civilisation needed revolution, upheaval, mass adoption and submission. UP asks only that people solve problems together, and because every problem with UP is fed back into it as more work, it keeps upgrading itself without revolution or violence. That is why this book calls UP a self-improving paradigm.[40]

What UP is not

People meeting UP for the first time often reach for a familiar label, so it helps to clear a few away early. Chapter 3 takes each of them in turn.

Because UP talks about meeting everyone's needs, it is easy to mistake for communism or state socialism. But it has no central plan and no state that owns everything. Power is kept spread out, no one is forced to join, and each person controls their own information.[41,42,43] Nor does UP do away with money or government overnight. Money, companies and governments made large-scale cooperation possible and served a great purpose. UP keeps such shared arrangements for as long as they serve people's health, happiness and wellbeing, and replaces them gradually, wherever technology can do their job without obvious downsides.[44] The gradual change is in people, not in UP: in the reading UP's author has set out, now going through UP's method, UP itself never runs on money or government, and each person relies on them less as UP meets more of their needs.[45]

Others hear the words "AI" and "coordination" and picture rule by machine. In UP, AI coordinates, proposes and does work, but it never governs, and people can always correct it, pause it or switch it off.[26] The same goes for experts. There are no offices to hold in UP. Where work needs skill, the skill is shown by open standards that anyone can work toward, and the people a problem affects decide its outcome.[46] Readers who know Jacque Fresco's Venus Project will recognise one of UP's sources, since Fresco imagined a society coordinated by a central brain. UP keeps the coordination and drops the single brain. Its AI systems are open and more than one, they are checked against each other and watched like everything else, and people decide.[26]

Finally, UP is no utopia that depends on perfect people. Its aim can never be fully reached, though every step toward it counts, and it promises no world without problems; it treats each failure as the next problem to solve.[19,21] It is never forced on anyone, so no one has to join, to work or to give up what is theirs.[43] And it has no leader or founder at the top. Every part of UP, its core included, can be improved through UP's own method.[21]

How to read this book

Because UP is new to most readers, this book keeps four kinds of statement apart, and it helps to know which one you are reading. Some passages say what UP is: its definition and its ten core tenets, the handful of ideas that make UP what it is, much as a few core ideas make chemistry what it is. When the text rests on one of these, a footnote names the tenet, and the full wording of all of them is collected at the back of the book under "The core of UP". Other passages make the case for UP with evidence, meaning real cases, real numbers and sources you can check; wherever an argument reaches beyond today's evidence, it says so. A third kind describes how UP could run. Those passages are illustrations, set apart and marked as one way it could work, and they are never instructions, because the real answers will come from the people who take part. The fourth kind is the set of questions this book leaves open on purpose for "the collective" to settle, which means the people a problem affects, deciding together through UP's method.

The book also judges UP by stage, because UP would grow alongside the current system rather than replace it in one stroke. Figure 3 shows the three stages. In the early stage, UP is a network of people inside the current system. In the middle stage, it has its own productive base, and most of its members' needs are met from what it produces. In the completed stage, most people live mainly within UP. The early stage rests on today's evidence,

[40] UP's agreed position that it is a self-improving paradigm. Full wording in "The core of UP".
[41] Core tenet: *Power kept spread out*.
[42] Core tenet: *Freely joined, ethically grown*.
[43] Core tenet: *Open systems, shared knowledge, private persons*.
[44] Core tenet: *Reality over fiction*.
[45] Clarification of the tenet *Reality over fiction*, set out by UP's author on 14 November 2026 and going through UP's method; until the UP Moderator enters it in the Position Ledger, it is the author's stated reading, not yet an agreed position. In substance: the gradual change is in people, not in UP. UP's own system does not run on money, a UP government or UP companies; each person relies on money, governments and corporations less as they use UP more, and the number of people doing so grows. Chapter 8 sets it out in full.
[46] Core tenet: *Open participation: anyone may take part; those affected decide*.

while the middle and completed stages are reasoned projections from mechanisms the book cites, and the completed stage is labelled “modelled”. At every stage UP is held to two standards at once: the ideal it aims at, which shows the direction and the distance still to go, and the record of the current system, which shows whether UP is already doing better.[21]

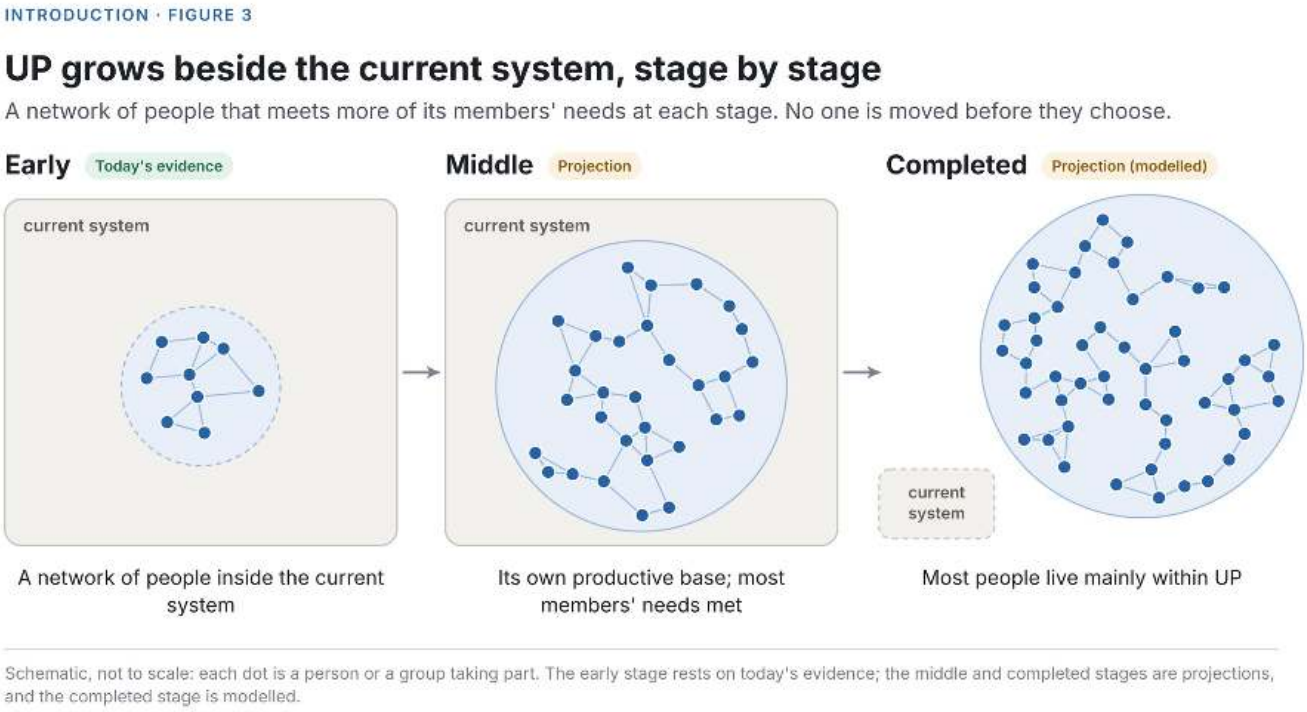
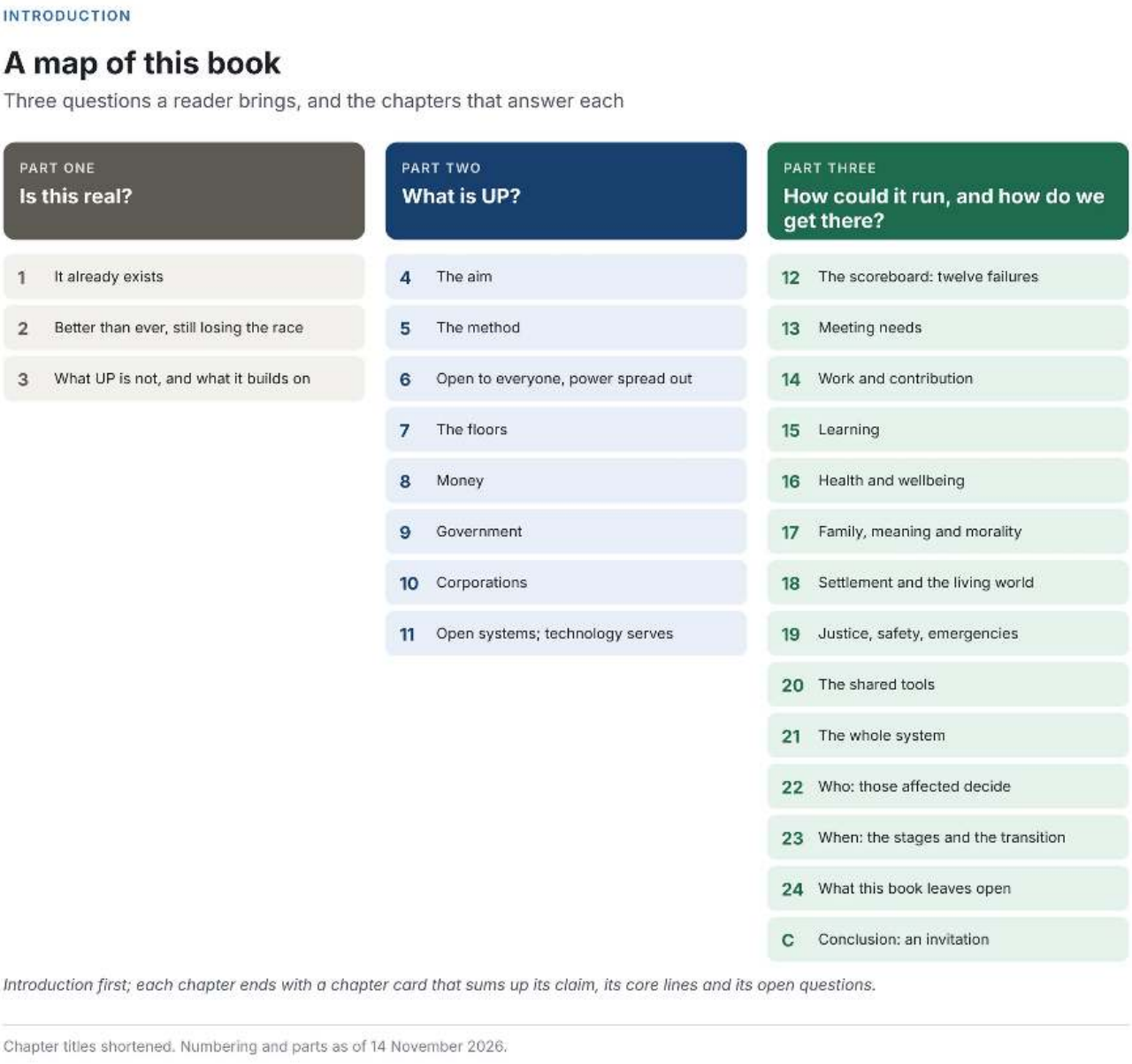


Figure 3. The three stages used throughout this book. The drawing is a schematic, not a forecast of size or timing.

Every factual statement in the book carries a footnote, because a case this large should be as defensible as a dissertation, and where the evidence has not yet been found, the text says so. Every chapter follows the same path. It opens with real people or places, shows how the current system handles the issue, sets out what UP holds, walks through how it could run at each stage, weighs why it is likely to work against the strongest objections, and closes with a short chapter card you can use to check your understanding.

The chapters fall into three parts. Part One asks whether any of this is real: it shows the pieces of UP already at work, explains why today’s progress is still losing the race, and clears away what UP is not. Part Two sets out what UP is, tenet by tenet. Part Three asks how it could run, beginning with a scoreboard of the current system’s twelve great failures and moving through needs, work, learning, health, family and meaning, where and how we live, justice and safety, the shared tools, and the whole system working together; it ends by asking who would take part and when, and what is left to you. If you have ten minutes, read this Introduction and the chapter cards. If you have an evening, add the chapters on the areas of life you care about most. The full text makes the whole case, and the wiki described below is where that case will keep improving.



A map of this book: three parts, the question each answers, and its chapters.

A living book

This book is version one. My hope is that it becomes a wiki, a living manual for UP that anyone can improve, setting out what UP is, why it matters, how it could work, who takes part and when, and getting better each time someone offers a better idea than mine. That is how UP itself is meant to work. Every part of it, the core included, can be improved through its own method, and I define the idea without ruling over it.[21]

For now, this work is the effort of one independent researcher, which is the best argument I know for opening it up. A project like this needs many minds, beginning with this first text. So if you find an error, a weak argument, a better source or a better idea, please treat it as an invitation. Finding and fixing it is UP working as intended. How changes to this text will be proposed, checked and accepted is itself an open problem, and Chapter 24 sets it out for anyone who wants to work on it.

Look around you again. Everything in this book starts from what you can already see working, and from what you can see failing. Together, we can have far more of the first and far less of the second.

Chapter card: Introduction

- **Claim:** UP is a way for people to solve shared problems together, with evidence and technology, for the wellbeing of all, building on the best of what we already do.
- **Rule of thumb:** "Does this proposal help people solve a shared problem together, openly, without anyone falling below the floor?"
- **What this is not:** a revolution, an ideology to obey, or rule by AI.
- **Check yourself:**
    1. In one sentence, what is UP?
    2. Name two things the world already does well that UP builds on.
    3. Who decides in UP?
- **Open questions (for the wiki):** Which existing practices should this Introduction name first? Which failures show most clearly what is at stake?

Part One

Is this real?



Chapter 1. It Already Exists: The Best of What Civilisation Does

In the 1940s, the dairy farmers of Kaira, a district of small villages in western India, shared a problem that none of them could solve alone. Milk does not keep, so a family with a buffalo or two had to sell each day's milk quickly, to whoever was buying. The buyers were contractors, and from 1945 the contract to supply the city of Bombay under a government milk scheme was held by Polson, a private dairy. The farmers had little say in what they were paid.[1,2]

Their leaders took the problem to Sardar Vallabhbhai Patel, one of the leaders of India's independence movement, who repeated the advice he had been giving them for several years: sell your milk through a co-operative society of your own. On 4 January 1946 the politician Morarji Desai held a meeting in the village of Samarkha to organise one.[1] When the farmers' demand to supply Bombay through their own society was refused, they called a milk strike. For fifteen days not a drop of milk was sold to the merchants, and the strike succeeded.[1,3] A farmer named Tribhuvandas Patel had led the fight against Polson, and he became the chairman of the farmers' new union.[4,5]

The Kaira District Co-operative Milk Producers' Union was formally registered on 14 December 1946. When it began pasteurising milk for Bombay in June 1948, it was still tiny: two village societies, producing about 250 litres a day.[1,3] In May 1949 a young government dairy engineer, Verghese Kurien, arrived in the nearby town of Anand to work at a small government creamery. At the end of that year, when his government posting ended, he stayed on to help Tribhuvandas Patel build the union, and in 1950 he became its executive head.[5,6]

What happened next is the part of the story that matters most for UP, so it is worth being precise about it. The farmers did not wait for a government, a company or a charity to fix their problem. They took the problem on themselves, they owned and governed what they built, and when they lacked something, they invented it. The union's engineer, Harichand Megha Dalaya, developed a spray-dryer that could turn buffalo milk into powder. It was installed at the union's dairy in 1955, and by the end of that year the dairy was making butter, milk powder, cheese and baby food from buffalo milk, which the union describes as a first anywhere in the world.[7,1] A group of

[1] Kaira District Co-operative Milk Producers' Union (Amul Dairy), "Milk, The inspiration behind a revolution" (undated): farmers sold through contractors, and "the Government of Bombay entered into an agreement with Polsons Limited to supply milk"; Sardar Patel "reiterated his advice that they should market their milk through a co-operative society of their own"; "Mr. Desai held a meeting in Samarkha village on January 4, 1946"; "The farmers called a 'milk strike'. It lasted 15 days."; "It was formally registered on December 14, 1946"; in June 1948 there were "two village co-operative societies producing about 250 liters a day"; the new dairy, completed "by October 31, 1955", made butter, milk powder, cheese and baby food, "processing buffalo milk for the first time in the world". https://amuldairy.com/history.php . Checked 29 Oct 2026; every quotation above re-checked against the live page on 29 Oct 2026 at 23:10 Phoenix and found to match. The page does not mention Dalaya or the spray-dryer; that rests on the next note.

[2] National Dairy Development Board, "Cooperative Dairying Movement", Farmers' Corner: "The municipal corporation of Bombay city organized a scheme in November, 1945", which "purchased a fixed quantum of milk from Polson Limited, a private enterprise at Anand"; "Polson maximised its profit by minimising the price paid to the milk producers"; the farmers "were still under mercy of milk contractors" and "had to sell their milk at a price the contractors fixed." https://www.nddb.coop/farmer/dairying/movement . The dairy board's own account. Checked at source, 31 Oct 2026.

[3] President Pranab Mukherjee, speech at the inauguration of Amul's cattle feed plant, Kheda (30 Nov 2015): "A fifteen-day milk strike when not a drop of milk was sold to the milk merchants turned successful"; the union "was formally registered on December 14, 1946"; "two village co-operative societies producing about 250 litres a day." https://presidentofindia.gov.in/sites/default/files/sp301115_01.pdf . Checked 29 Oct 2026.

[4] Kaira District Co-operative Milk Producers' Union, "Tribhuvandas K Patel 1903-1994": he "successfully led farmers against the unfair trade practices" of Polson. https://amuldairy.com/t_k_patel.php . Checked 29 Oct 2026.

[5] Kaira District Co-operative Milk Producers' Union, "Dr. Kurien": "He arrived in Anand on Friday, the 13th May 1949"; "At the end of 1949, when he got relieving order from his job from the Government Creamery", Tribhuvandas Patel asked him to stay and help set up the co-operative dairy; "starting from Executive Head of Kaira Union in 1950". https://amuldairy.com/dr_kurien.php . Indian Dairy Association, "Dr Kurien" (undated): "In May 1949, he was posted as Dairy Engineer at the Government Research Creamery, a small milk-powder factory in Anand"; he "resigned from his government job and volunteered to help Shri Tribhuvandas Patel, the Chairman of KDCMPUL." https://indiandairyassociation.org/pdf/info/Dr-Kurien.pdf . The union's page is the union's own account. Checked at source, 31 Oct 2026.

[6] Kurien V, *India's Milk Revolution: Investing in Rural Producer Organizations*, World Bank case study (2004): "V. Kurien began working with these farmers in 1949"; "The mandate of NDDB is to replicate Anand Pattern Dairy Cooperatives in other parts of the country"; Operation Flood "was implemented in three phases between 1970 and 1996." https://documents1.worldbank.org/curated/en/748851468771700148/pdf/308270IN0Milk01ion01see0also0307591.pdf . Checked 29 Oct 2026.

[7] Kaira District Co-operative Milk Producers' Union, "Dr. H M Dalaya 1921-2004": "Dr. Dalaya innovated and developed the world's first buffalo milk spray-dryer"; "installed at Amul Dairy in 1955". https://amuldairy.com/hm_dalaya.php . The "world's first" claim is the union's own and no independent source for the priority was found. Independent accounts agree that the feat was thought impossible: Verghese Kurien, *India's Milk Revolution* (World Bank case study, 2004), calls the "successful leap-forward development of technology to produce milk powder from buffalo milk" the union's competitive advantage, https://documents1.worldbank.org/curated/en/748851468771700148/pdf/308270IN0Milk01ion01see0also0307591.pdf ; and the Press Information Bureau's *New India Samachar* (16-30 Nov 2022, p. 9) says Europeans and New Zealanders held that only cow's milk could be powdered, while Kurien and Dalaya "surprised the world", https://newindiasamachar.pib.gov.in/WriteReadData/flipbook/2022/Nov/2nd/English/files/basic-html/page9.html . Checked at source, 31 Oct 2026.

villages had solved a technical problem for themselves, and the people who owned the dairy were the same people who needed the solution.

The pattern that grew from those villages is simple to describe. Each village has its own society, owned by the farmers who sell milk to it. The village societies own the district union, and the district unions own the federation that sells their products under the name Amul.[8] Each layer is owned by the layer below it, so the farmers at the bottom own the whole. Nobody outside can buy control of it, and no single member can gather it either, since each member of a village society has one vote. The movement that began with two village societies now runs a federation owned by about 3.6 million farmers in 18,600 villages.[8]

What happened next shows something UP is built on: a pattern that works can be recognised, named and copied on purpose. In 1965 India set up a National Dairy Development Board at Anand, and from 1970 the board reproduced what its staff called the Anand pattern across the country, in a programme named Operation Flood that ran in three phases until 1996.[9,10] Kurien, who led the board, later described the pattern as farmer control of all three stages of the business: collecting the milk, processing it and selling it. By the programme's end, his figures show, about 72,500 village societies had been organised, with some 9.26 million members.[10]

Figure 1.1 shows what India's milk production did over those decades. India has been the largest milk producer in the world since 1998.[11] Many things drove that growth, so the chart shows scale rather than a single cause. Even the World Bank, which helped fund Operation Flood and later evaluated it, found that the programme brought a spectacular increase in the growth rate of India's dairy production, and that most of its beneficiaries were small or marginal farmers or landless producers.[12] An evaluation by a lender of its own programme deserves caution. On the direction of the change, though, the record is consistent.

[8] Gujarat Co-operative Milk Marketing Federation (Amul), "Our Legacy": under "Our Amul Co-operative Model", "3.6 million" producer members, "18,600" village dairy co-operatives and "35million litres/ day" of milk procured. https://amul.com/our-legacy . The figures are generated by the page's scripts. The older GCMMF overview page (https://amul.com/m/organisation) gave 3.64 million producer members and 18 district unions and was offline for maintenance on 31 Oct 2026. Checked at source on 31 Oct 2026; the figures are revised each year.

[9] National Dairy Development Board, "Genesis": "The National Dairy Development Board (NDDB) was founded in 1965". https://www.nddb.coop/about/genesis . NDDB, "Operation Flood": "Launched in 1970, Operation Flood"; "Phase I (1970-1980)"; "Phase III (1985-1996)". https://www.nddb.coop/about/genesis/flood . Checked at source, 31 Oct 2026.

[10] Verghese Kurien, *India's Milk Revolution: Investing in Rural Producer Organizations*, case study for "Scaling Up Poverty Reduction: A Global Learning Process and Conference", Shanghai, 25–27 May 2004 (World Bank): "Starting in 1970, NDDB replicated the Anand Pattern cooperatives through the OF programme all over India" (p. 1); the pattern means "farmer control on all the three stages, that is, procurement, processing and marketing" (p. 1); Table 2 (p. 8), March 1996: 72.5 thousand village dairy co-operative societies and 92.63 lakh (about 9.26 million) members. https://documents1.worldbank.org/curated/en/748851468771700148/pdf/308270IN0Milk01ion01see0also0307591.pdf . Written by the programme's own leader and published by the World Bank. Checked at source, 30 Oct 2026.

[11] Press Information Bureau, Government of India, "World Milk Day 2025" (31 May 2025): "India has been the number one milk producer since 1998"; "It now produces 25 percent of the world's milk." https://www.pib.gov.in/PressNoteDetails.aspx?id=154532&NoteId=154532&ModuleId=3&reg=48&lang=2 . The production series in Figure 1.1: Economic Survey 2023-24, Statistical Appendix, Table 1.23, https://indiabudget.gov.in/budget2024-25/economicsurvey/doc/stat/tab123.pdf ; NDDB, "Milk production and per capita availability of milk in India", https://www.nddb.coop/information/stats/milkprodindia ; PIB, year-end review (7 Jan 2026): "247.87 million tonnes during 2024-25", https://www.pib.gov.in/PressReleseDetailm.aspx?PRID=2212290&reg=3&lang=2 . Checked at source on 31 Oct 2026; the series is revised each year.

[12] World Bank, Operations Evaluation Department, "India's Dairy Revolution", *Précis* no. 168 (Summer 1998): an OED impact study found that Operation Flood and associated policy changes "resulted in a spectacular increase in the growth rate of Indian dairy production" (from 0.7 percent a year to 4.27 percent); "Sixty percent of beneficiaries were small- or marginal farmers, or landless producers." https://ieg.worldbankgroup.org/sites/default/files/Data/reports/168precis.pdf (the Independent Evaluation Group's copy of the Précis; the site blocks scripts, so it was read in a browser). The Bank helped fund the programme, so this is a self-evaluation. Checked at source, 31 Oct 2026.

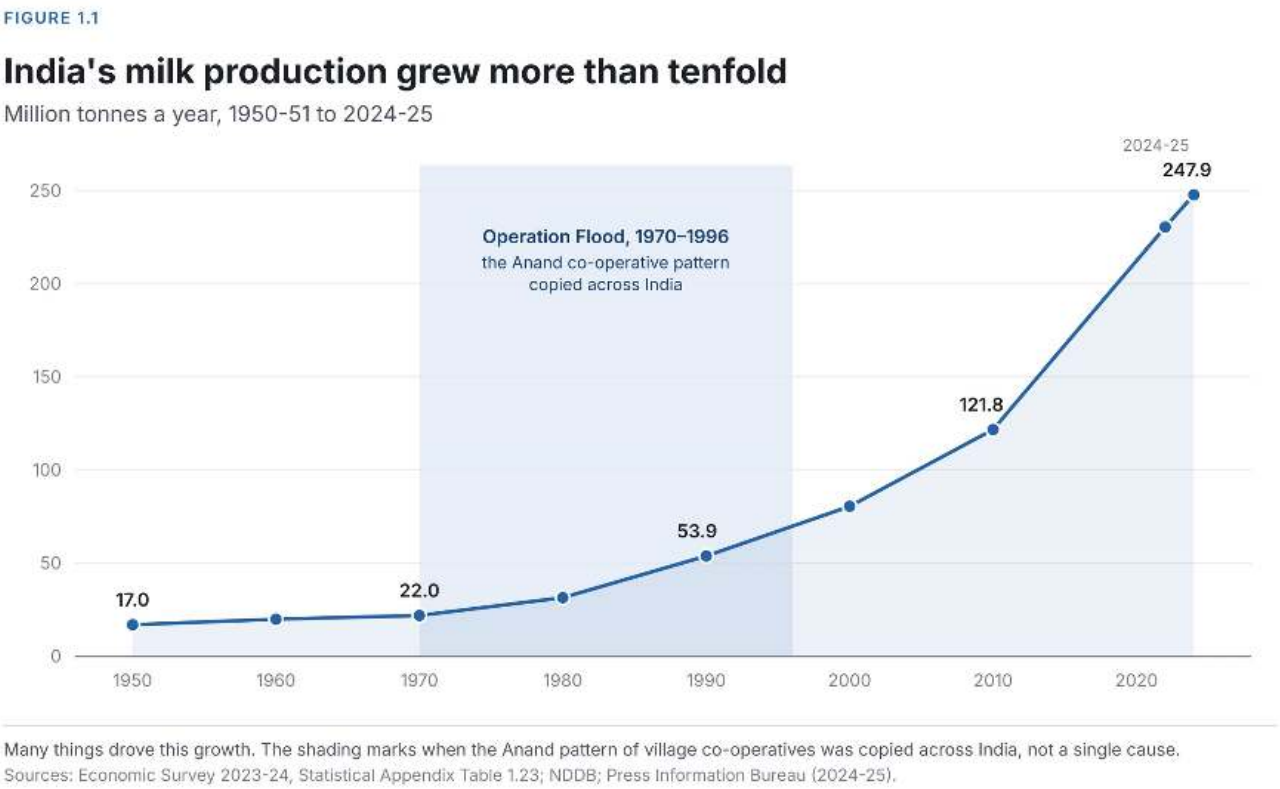


Figure 1.1. India's milk production in million tonnes per year. Operation Flood, which copied the Anand pattern across India, ran from 1970 to 1996 (shaded). Many things drove the growth, so the chart shows scale, not a single cause. Sources: Economic Survey 2023-24; NDDB; Press Information Bureau.

Anand was one case of something far older and far wider. On 21 December 1844 a group of working people in Rochdale, a mill town in the north of England, opened a small shop at 31 Toad Lane that they owned together and ran on rules they had written themselves.[13] In the German Rhineland a local mayor, Friedrich Wilhelm Raiffeisen, built savings-and-loan societies through which farmers lent to one another, and in 1872 he added a central bank to serve them.[14] Their rules were summarised as the Rochdale Principles, the ancestor of the principles that co-operatives follow today. The International Cooperative Alliance, which speaks for the movement, defines a co-operative as people who unite voluntarily to meet common needs through an enterprise they jointly own and democratically control.[15] By its own count there are about 3 million co-operatives on earth, with more than a billion members between them.[16]

[13] Rochdale Pioneers Museum, "About Toad Lane": the store at 31 Toad Lane "first opened for business on 21st December 1844, initially for two nights per week". https://rochdalepioneersmuseum.coop/about-us/about-toad-lane (archived copy: https://web.archive.org/web/2025/https://rochdalepioneersmuseum.coop/about-us/about-toad-lane). "The Rochdale Principles": the Pioneers' original rules were "published in the Pioneers' annual almanac" and "have been summarised and from them extracted what are known as the Rochdale Principles of Co-operation." https://rochdalepioneersmuseum.coop/about-us/the-rochdale-principles (archived copy: https://web.archive.org/web/2025/https://rochdalepioneersmuseum.coop/about-us/the-rochdale-principles). ICA, "Our history": the Pioneers "are regarded as the prototype of the modern cooperative society and founders of the cooperative movement." https://ica.coop/en/cooperatives/history-cooperative-movement . The popular story of "28 weavers" is not used. Checked at source, 31 Oct 2026.

[14] Ulrich S. Soenius, "Raiffeisen, Friedrich Wilhelm", *Neue Deutsche Biographie* 21 (2003), pp. 115-116: mayor of Weyerbusch from January 1845, then of Flammersfeld and Heddesdorf; "In Heddesdorf gründete R. 1864 einen eigenen ‚Darlehnskassen-Verein'" (his own loan-fund society); and in 1872 he "rief … die ‚Rheinische Landwirtschaftliche Genossenschaftsbank' in Neuwied ins Leben". https://www.deutsche-biographie.de/sfz75529.html . Checked at source, 31 Oct 2026.

[15] International Cooperative Alliance, "Cooperative identity": "A cooperative is an autonomous association of persons united voluntarily to meet their common economic, social and cultural needs and aspirations through a jointly-owned and democratically-controlled enterprise"; "In primary cooperatives members have equal voting rights (one member, one vote)"; principle 6, Cooperation among Cooperatives: "Cooperatives serve their members most effectively and strengthen the cooperative movement by working together through local, national, regional and international structures"; "In 1995, the ICA adopted the revised Statement on the Cooperative Identity." https://www.ica.coop/en/cooperatives/cooperative-identity . The ICA is revising the Statement (discussion draft, June 2026). Checked 30 Oct 2026.

[16] International Cooperative Alliance, "Facts and figures" (citing the World Cooperative Monitor 2025): "any of the 3 million cooperatives on earth"; "more than 1 billion cooperative members". https://www.ica.coop/en/cooperatives/facts-and-figures . An estimate by the movement's own body; people who belong to several co-operatives may be counted more than once. Checked at source on 31 Oct 2026; the figures are revised each year.

Farmers who sell milk have found the same answer in country after country, because they face the same problem. Milk spoils, so a farmer working alone must sell it quickly to whoever is buying that day, at whatever price is offered. In the United States, co-operatives marketed 77.8% of all the milk farmers sold in 2017, according to the Department of Agriculture.[17] Among the largest co-operatives in the world, Amul and another Indian co-operative, IFFCO, top the global ranking when turnover is measured against their country's income per person.[18] The details differ from place to place, yet the behaviour repeats. Producers who share a problem pool what they have, own the enterprise that serves them, and decide together how it is run.

Put in UP's own terms, the farmers of Kaira were practising three of its core ideas. UP's method was at work: people who shared a problem worked on it together, tested what they tried, and invented what they lacked, as Dalaya's dryer showed.[19,20] So was the rule that the people a problem affects decide how it is solved, since the farmers owned and governed their own union.[21] And so was power kept spread out: each layer was owned by the one below it, each member had one vote, and no outsider could buy control.[22] The whole arrangement also grew the way UP grows, because it was useful, one village at a time, with no one forced to join.[23] None of this makes Anand a part of UP, and this book never claims it does. What Anand does show is that the parts UP is built from already work, at very large scale, among farmers who began with a buffalo or two.

The co-operative movement also took the step that matters most for UP. It went beyond running good co-operatives one at a time and wrote down what made them work, so that others could recognise the pattern and join it. One of the principles it wrote down is cooperation among co-operatives, which holds that co-operatives serve their members best by working together through local, national, regional and international structures.[15] India's dairy board did the same with the Anand pattern when it named it and copied it across a country of villages. UP proposes to take that step across the whole of shared life. It names the system people already use, connects its parts and gives that system the tools to grow.[24]

Nothing in Anand required a revolution. Farmers who shared a problem organised to solve it, owned what they built and invented what they lacked, all inside the current system, with its money and its markets. That is the claim of this chapter, and the rest of the chapter tests it against the evidence. Much of what UP describes is already working, at large scale and in many countries, and each working practice turns out to be one example of a much wider pattern of people behaving in the same way. Many of the people in these stories, as the chapter will show, did the work for no pay and no prize, because the problem was there and needed solving. What the pieces have lacked is connection to one another, the tools to coordinate, and a framework built for them rather than against them.[24]

Anand also shows the limit of a practice that works alone. The union solved one problem, selling milk, for the families that sell milk to it. It was never built to solve the next problems those same families face, from their children's health to clean water and schooling, and it would be unfair to expect it to. UP's proposal is to make that next step deliberate. The habits that worked for milk, people facing a problem together, owning what they build and inventing what they lack, could be turned on purpose to the next problem, and the next. Later in this chapter, the section on what connecting the pieces would gain shows what that could mean in Gujarat itself.

To make that claim easy to test, it helps to name the parts of UP that keep turning up. UP has ten core ideas, and five of them appear again and again in the practices this chapter describes.[19,21,22,25,26] Table 1.1 sets them out in plain words, with where the chapter finds each one and what each still lacks while it works alone. Each story that follows ends by saying which of these ideas it shows, what it cannot do on its own, and what it would gain from being

[17] US Department of Agriculture, Rural Development, *Marketing Operations of Dairy Cooperatives, 2017*, Research Report 234: co-operatives marketed "77.8 percent of milk marketed by all U.S. producers" (p. 10). https://www.rd.usda.gov/files/publications/RR234MarketingOperationsofDairyCooperatives2017.pdf . Checked 30 Oct 2026.
[18] International Cooperative Alliance and Euricse, World Cooperative Monitor 2025, press release (3 Nov 2025): "By turnover relative to GDP per capita, India's Amul and IFFCO top the global list." https://ica.coop/sites/default/files/2025-11/pr_world_cooperative_monitor_en.pdf . Checked 30 Oct 2026.
[19] Core tenet: *The method: shared problem solving with evidence*.
[20] UP's agreed position that inventing solutions together is its main activity, and that a solution rises because of its results. Full wording in "The core of UP".
[21] Core tenet: *Open participation: anyone may take part; those affected decide*.
[22] Core tenet: *Power kept spread out*.
[23] Core tenet: *Freely joined, ethically grown*. Full wording in "The core of UP".
[24] UP's agreed position that it names a system people already use, connects its parts and gives it the tools to grow. Full wording in "The core of UP".
[25] Core tenet: *Open systems, shared knowledge, private persons*.
[26] Core tenet: *The aim: the health, happiness and wellbeing of all living things*.

connected to the others. The chapter then asks the question any careful reader should ask about all of them: if these practices already work, what would anyone gain from joining them into one system?

Table 1.1. Five of UP's ten core ideas, in plain words, and where this chapter finds them. The full wording of each is in "The core of UP".

UP's core idea	In plain words	Where this chapter finds it	What it lacks while it works alone
Shared problem solving with evidence	People who share a problem take it on together, test what they try, keep what works and invent what is missing	Anand's dryer; Ostrom's commons; Wikipedia and Linux; Montessori's classroom	A way to turn the same method to the next problem, and the next
Those affected decide	The people who live with a decision make it	Co-operatives; Valencia's water tribunal; participatory budgets	Decisions that last when the politics or the money changes
Power kept spread out	No person, firm or office gathers control	One member, one vote; worker ownership; open code anyone may copy	Protection against being fenced in or captured from inside
Open systems	Rules, records and knowledge are open, so anyone can check and improve them	Wikipedia; open software; OpenStreetMap; Ostrom's named principles	One shared record of what works, across every field
The wellbeing of all	Aimed at everyone, measured person by person	Blood donors; lifeboat crews; disaster volunteers; Montessori's attention to each child	Reach beyond members, to the people the current system leaves out

The same pattern, in many places

Anand is one example among many. The Introduction met a few of the others briefly: the student who started Linux as a hobby, the volunteers who wrote Wikipedia, the farmers of Valencia who still settle their water disputes outside the cathedral every Thursday, and the strangers who brought their own boats to flooded Houston. This section looks more closely at a handful more. Each is told as a story and then set beside the wider pattern it belongs to, because a single success can always be put down to luck or to one remarkable person, while the same behaviour repeated across centuries and continents tells us something about people. Each also shows a part of what UP holds, and each, as we will see, could do more if it were connected to the others.

In 1941 a newly ordained priest, José María Arizmendiarrieta, arrived in Mondragón, an industrial town in the Basque Country of northern Spain. Two years later he opened a technical school, which began with twenty-one students.[27] In 1955 he encouraged five of its former students, who by then worked for a local company, Unión Cerrajera, to leave and start a business of their own, owned and run by the people who worked in it. Their names were Luis Usatorre, Jesús Larrañaga, Alfonso Gorroñogoitia, José María Ormaechea and Javier Ortubay.[27,28] The foundation stone of their factory, Ulgor, was blessed on 14 April 1956, and its first product was a paraffin heater.[27,29]

What the young co-operatives built next matters as much as the factory. A co-operative standing alone had nowhere to borrow, no protection of its own and no one to turn to in a bad year, so they built those things together. In 1959 they founded a bank, Caja Laboral Popular, set up, in the group's own words, as a support body for the

[27] MONDRAGON Corporation, "All our history" (undated): Arizmendiarrieta "arrived in Arrasate/Mondragón in 1941, as a newly ordained priest"; the technical school "started its activities in academic year 1943-1944 with twenty-one students"; "On 14th April 1956" he was "blessing the foundation stone of Ulgor"; the founders were "Luis Usatorre, Jesús Larrañaga, Alfonso Gorroñogoitia, José María Ormaechea and Javier Ortubay"; the entry for 1959 records Caja Laboral Popular. https://www.mondragon-corporation.com/en/history/ . Checked 29 Oct 2026.

[28] MONDRAGON Corporation, timeline, 1956: in 1955 he encouraged "a group of young people to leave the factories where they were working". https://www.mondragon-corporation.com/en/timeline/1956-2/ . Fagor, "History": the founders were "five workers from the company Unión Cerrajera de Arrasate". https://www.fagor.eus/en/history/ . Checked 29 Oct 2026.

[29] Whyte W F and Whyte K K, *Making Mondragon* (Cornell University ILR Press, 1991), ch. 5: "The oil-burning heater then in production was a primitive model by later standards". https://archive.org/details/fp_Making_Mondragon-the_growth_and_dynamics_of_the_worker_cooperative_complex-1991 (full text: https://archive.org/download/fp_Making_Mondragon-the_growth_and_dynamics_of_the_worker_cooperative_complex-1991/Making_Mondragon-the_growth_and_dynamics_of_the_worker_cooperative_complex-1991_djvu.txt). Benello C G, "The Challenge of Mondragon" (1995 web copy; in Ehrlich H, ed., *Reinventing Anarchy, Again*, AK Press, 1996): the first factory was "given to the manufacture of a copied kerosene stove". https://pzacad.pitzer.edu/~dward/classes/powpart/benellomondragon.html . Mondragon's and Fagor's own pages do not name the first product. Checked at source, 31 Oct 2026.

development of the co-operatives.[30] When a ruling of 1958 left co-operative members outside Spain's general social-security system, they answered with Lagun Aro, a social-insurance co-operative of their own, and in the 1970s they set up a research centre, Ikerlan.[30,31] The group also keeps shared funds that help co-operatives in crisis, and pools part of the profits of co-operatives in the same sector.[32] Each co-operative governs itself, and each can draw on the others. Mondragon is, in miniature, a model of cooperating pieces.

From that one stove factory grew a federation that employed 71,415 people in 2025, built around some 81 self-governing co-operatives.[33] Seventy years after the first factory, the group still rests on the idea it started with, that a business can be owned and governed by the people who work in it. Not everyone who works for Mondragon today is an owner, as the next section shows, and the group has had hard years. Yet as evidence that working people can own and run production on a large scale, over a long time, Mondragon is about as clear as evidence gets.

Mondragon is the best-known case of worker ownership, but it is far from alone. In Britain the shopkeeper John Spedan Lewis signed the first of two trust settlements on 18 April 1929 and the second in 1950, handing his family's stores to the people who worked in them, and the John Lewis Partnership is still owned in trust for its employees, whom it calls Partners.[34] In Italy a law of 1985, known as the Marcora Law, set up funds to help workers buy firms that were failing and run them as co-operatives, and the movement's own research office has counted 323 of these buyouts by 2020.[35] When Argentina's economy collapsed in 2001, workers took over factories their owners had abandoned and kept them running. A university survey counted 311 of these recovered enterprises in 2013, employing 13,462 people.[36]

Studies of worker-owned firms point the same way. A review of 43 studies found that worker ownership, profit sharing and a say in decisions went along with higher productivity, and most strongly in firms the workers fully owned and controlled; only legally required co-determination went with lower productivity.[37] In France, worker co-operatives survive at least as well as other firms once they have been founded.[38] None of this shows that worker ownership suits every business, and the studies measure association rather than cause. What they do show is a pattern that keeps reappearing wherever people try it. People who own and govern their own work tend to look

[30] MONDRAGON Corporation, "All our history" and timeline pages: "Father José María Arizmendiarrieta invented Caja Laboral Popular" (1959), set up as "a support body for the development of the co-operatives"; "Lagun Aro was the co-operative response to a lack of protection", after a 1958 decision excluded co-operative members from the general social-security system; in 1973 "the process began to set up what would become the Ikerlan Research Centre"; "Solidarity has been MONDRAGON's main tool for dealing with difficult and uncertain times." https://www.mondragon-corporation.com/en/history/ ; https://www.mondragon-corporation.com/en/timeline/1959/ . The group's own account. Checked 30 Oct 2026.

[31] Mondragon Unibertsitatea, "Historical overview": "The cooperative savings bank Caja Laboral Popular was founded in 1959"; lists Lagun Aro (1967) and Ikerlan (1974) among the later co-operatives. https://www.mondragon.edu/en/recorrido-historico . Sources differ on Lagun Aro's founding year (1958 origin, 1966 or 1967), so the text gives no year. Checked 30 Oct 2026.

[32] Saioa Arando and Iñaki Arenaza Bengoa, "Inter-cooperation mechanisms in Mondragon: Managing the crisis of Fagor Electrodomésticos", in *Employee Ownership and Employee Involvement at Work: Case Studies*, Advances in the Economic Analysis of Participatory & Labor-Managed Firms vol. 18 (Emerald, 2018), pp. 7–35: the central inter-co-operation fund "also contributes to strengthening the economic situation of cooperatives in crisis"; profit pooling is "a genuine expression of solidarity of the Mondragon Group"; "Lagun Aro is another pillar in the expression of inter-cooperation within the Mondragon Group." https://cleo.rutgers.edu/wp-content/uploads/2020/02/Inter-Cooperation-Mechanisms-in-Mondragon-Managing-the-Crisis-of-Fagor-ElectrodomEsticos.pdf . Checked 30 Oct 2026.

[33] MONDRAGON Corporation, Annual Report 2025, "In figures": "71,400 PEOPLE" and sales of "€ 11.322 Bn"; the full report gives an average workforce of 71,415. https://www.mondragon-corporation.com/en/anual-report/in-numbers/ . MONDRAGON Corporation, "About us": "81 separate, self-governing cooperatives". https://www.mondragon-corporation.com/en/about-us/ . These are people employed, not worker-owners (see the note on Reuten). Checked at source on 31 Oct 2026; the report is published each year.

[34] John Lewis Partnership, "The history of the Partnership" (2 Dec 2025): "On 18 April 1929 Spedan Lewis signed the First Trust Settlement"; in 1950 he "signed the Second Trust Settlement, effectively 'giving' the Partnership to the people who work in it." https://www.jlpjobs.com/blog/the-history-of-the-partnership/ . The company's own page. Checked 30 Oct 2026.

[35] Area Studi Legacoop, "Italy's Worker Buyout Mapping. An Historical Review" (March 2020): "From the Marcora Law entering into force until today, 323 worker-recuperated companies (Tab.1) in cooperative form have been individuated." https://areastudi.legacoop.coop/wp-content/uploads/2021/02/BNs-WBOs.pdf . An earlier database tracked 257 buyouts at 31 December 2014: Marcelo Vieta, Sara Depedri and Antonella Carrano, *The Italian Road to Recuperating Enterprises and the Legge Marcora Framework* (Euricse Research Report 015, 2017), https://geo.coop/sites/default/files/2021-07/ItalyWBOReport-15_17RapportoVietaDepedriCarrano.pdf . Counts differ by database and date. Checked at source, 31 Oct 2026.

[36] Aaron Tauss, "Revisiting Argentina's Recuperated Factories - Reflections on Over a Decade of Workers' Control", *Desafíos* 27(1):185-205 (2015), reporting the fourth survey by the Programa Facultad Abierta of the University of Buenos Aires (2014), led by Andrés Ruggeri: "In 2013, 311 recuperated, worker-controlled enterprises existed all across Argentina employing a total of 13,462 workers." https://www.redalyc.org/journal/3596/359638976007/html/ . Checked at source, 31 Oct 2026.

[37] Chris Doucouliagos, "Worker Participation and Productivity in Labor-Managed and Participatory Capitalist Firms: A Meta-Analysis", *ILR Review* 49(1):58-77 (1995), abstract: "He finds that codetermination laws are negatively associated with productivity, but profit sharing, worker ownership, and worker participation in decision making are all positively associated with productivity." "All the observed correlations are stronger among labor-managed firms (firms owned and controlled by workers)". Associations, not proof of cause. https://ideas.repec.org/a/sae/ilrrev/v49y1995i1p58-77.html . Checked at source, 31 Oct 2026.

[38] Pérotin V, "What do we really know about workers' cooperatives?" (paper for the ILO and ICA research conference on co-operatives and the world of work, Antalya, November 2015): once founded, worker co-operatives in France survive as well as conventional firms; few are founded. https://ccr.ica.coop/sites/ccr.ica.coop/files/attachments/5.3Virginie%20Perotin%20What%20Do%20we%20Really%20Know%20ilo%20ica.pdf . Checked at source, 31 Oct 2026.

after it, and when they meet a problem that none of them can solve alone, they build the shared bank, the shared insurance or the shared school that solves it together.

In UP's terms, Mondragon shows two of the core ideas in Table 1.1 working together at scale. The people who do the work and live with its results are the ones who decide, and ownership spread among many hands keeps power from gathering in a few.[21,22] It also shows something more. Its bank, its insurance and its research centre are a small-scale version of what UP would add to every practice it connects: shared tools, shared records and shared support, which no single co-operative could build for itself.[24] On its own, though, that support stops at the edge of the group. A worker co-operative in Argentina or Italy cannot draw on Mondragon's bank or its research, and has to build its own or do without. Connected, any co-operative anywhere could start with the support Mondragon took decades to build.

Some of the oldest evidence comes from the mountains. In Törbel, a village high in the Swiss Alps, the villagers signed articles of association in 1483 to regulate the use of their alpine pasture, forests and common land.[39] For a long time the conventional view among economists was that resources held in common would be ruined unless they were privatised or regulated from above. Elinor Ostrom collected the cases that showed otherwise, and Törbel was the first case in the book that set out her findings.[40,39] Its farmers set their own rules, and the anthropologist Robert Netting, who studied the village, found that they had used both private and communal ownership, each where it suited the land, for at least five centuries.

What Ostrom did with those cases is exactly the step this chapter is about. She gathered commons from around the world that had lasted for generations, asked what they had in common, and named it. Her design principles, published in 1990, describe clear boundaries; rules that fit local conditions; a say in the rules for the people the rules affect; monitoring by the users themselves; penalties that start small; quick, cheap ways to settle disputes; the right to organise without interference; and, in larger systems, layers of such groups nested inside one another.[41] Twenty years later a team of researchers tested the principles against 91 later studies and found them well supported.[42] In 2009 Ostrom received the Nobel prize in economics for showing how common property can be managed successfully by the associations of those who use it.[40]

The commons she studied are still at work. Valencia's water tribunal, which UNESCO inscribed on its heritage list in 2009, is run by eight elected administrators who represent 11,691 farmers from nine irrigation communities, and it settles disputes orally, quickly and in public.[43] In Nepal, management of almost half the country's forests has been handed to some 18,000 community forest user groups, and researchers credit the programme with substantial increases in tree cover and forest area.[44] Along the coast of Maine, lobstermen organised in small harbour gangs have long defended informal fishing territories of their own, sometimes roughly, as the anthropologist James

[39] Ostrom E, *Governing the Commons* (Cambridge University Press, 1990), ch. 3, p. 61: "Our first case concerns Törbel, Switzerland" (based on Robert McC. Netting's articles of 1972 and 1976 and his book *Balancing on an Alp*, 1981); "Written legal documents dating back to 1224 provide information regarding the types of land tenure and transfers"; "On February 1, 1483, Törbel residents signed articles formally establishing an association to achieve a better level of regulation over the use of the alp, the forests, and the waste lands." P. 62: Netting showed "that for at least five centuries these Swiss villagers have been intimately familiar with the advantages and disadvantages of both private and communal tenure systems"; pp. 62-63: "the land in Törbel has maintained its productivity for many centuries. Overgrazing has been prevented by tight controls." https://archive.org/details/governing-the-commons (full text: https://archive.org/download/governing-the-commons/Governing_the_Commons_djvu.txt). Netting R McC, "What alpine peasants have in common", *Human Ecology* 4(2):135-146 (1976), https://link.springer.com/article/10.1007/BF01531217 . The Historical Lexicon of Switzerland dates earlier rules on water use to 1392 and 1400, https://hls-dhs-dss.ch/en/articles/002818/2013-12-18/ . Checked at source, 31 Oct 2026.

[40] Royal Swedish Academy of Sciences, press release (12 Oct 2009): "Elinor Ostrom has demonstrated how common property can be successfully managed by user associations"; "Elinor Ostrom has challenged the conventional wisdom that common property is poorly managed." https://www.nobelprize.org/prizes/economic-sciences/2009/press-release/

[41] Elinor Ostrom, *Governing the Commons: The Evolution of Institutions for Collective Action* (Cambridge University Press, 1990): the eight design principles (clearly defined boundaries; congruence between rules and local conditions; collective-choice arrangements; monitoring; graduated sanctions; conflict-resolution mechanisms; minimal recognition of rights to organise; nested enterprises), as listed by the Ostrom Workshop, Indiana University. https://ostromworkshop.indiana.edu/courses-teaching/teaching-tools/ostrom-design/index.html . The text paraphrases the labels. Checked 30 Oct 2026.

[42] Michael Cox, Gwen Arnold and Sergio Villamayor Tomás, "A Review of Design Principles for Community-based Natural Resource Management", *Ecology and Society* 15(4):38 (2010): "We analyzed 91 such studies to evaluate the principles empirically"; "We found that the principles are well supported empirically." https://www.ecologyandsociety.org/vol15/iss4/art38/main.html . A review of case studies, not an experiment. Checked at source, 31 Oct 2026.

[43] UNESCO, Intangible Cultural Heritage, "Irrigators' tribunals of the Spanish Mediterranean coast: the Council of Wise Men of the plain of Murcia and the Water Tribunal of the plain of Valencia", inscribed 2009: "The Water Tribunal comprises eight elected administrators" representing "a total of 11,691 members from nine communities"; the tribunals "settle disputes orally in a swift, transparent and impartial manner". https://ich.unesco.org/en/RL/the-court-of-the-waters-of-the-plain-of-valencia-00171 . Checked 30 Oct 2026.

[44] Libois F, Baland J-M, Delbart N, Pattanayak S, "Community Forestry Management: Mechanisms behind a success story in Nepal", EDI policy brief (Nov 2021): management transferred to "18 000 Community Forest User Groups (CFUG)", covering "almost 50% of Nepal forests"; "the CFUG program contributed to substantial increases in tree cover and forest area." https://edi.opml.co.uk/wpcms/wp-content/uploads/2021/11/Community-Forestry-Management-Mechanisms-behind-a-success-story-in-Nepal.pdf . See also Oldekop et al., *Nature Sustainability* 2(5), 2019. Checked 30 Oct 2026.

Acheson documented over decades.[45] Not every commons succeeds, and the next sections return to the ones that fail. Yet commons governed by their users are found on every inhabited continent.

In UP's terms, a lasting commons is shared problem solving with evidence applied to a shared resource. The users name the problem, measure the stock, set the rules, watch one another and change the rules when they stop working.[19] The people affected decide, and disputes get a fair hearing in the open, as they do in Valencia every Thursday.[46,47] Ostrom also saw how such commons can fit together. She called it polycentric governance: many centres of decision making that are formally independent of each other, yet can work together as an interdependent system.[48] That phrase comes close to describing what UP proposes for the whole of shared life. What a commons cannot do on its own is share what it has learned. The knowledge of what makes a commons last sits in books and journals, while many commons that are struggling must work out the same lessons for themselves, a gap this chapter returns to below.

Deciding together can work at the scale of a city, too. In 1989 the newly elected government of Porto Alegre, in southern Brazil, began inviting residents to decide in open assemblies how part of the city's investment budget would be spent.[49,50] Within a decade the results showed up in the pipes. By 1997 the share of homes connected to water and sewers had risen from 75% in 1988 to 98%, according to a World Bank case study.[49] That is a before-and-after figure for one city, so it cannot show cause by itself. Residents who had been on the receiving end of decisions about their streets, water and schools were given a direct part in making them, and they used it to put the money where the need was greatest.

The idea travelled. By the end of 2012, researchers had traced between about 1,300 and 2,800 participatory budgets around the world.[49] Paris has run one since 2014, and each year it sets aside about 5% of the city's investment budget for projects that residents propose and vote on; residents aged seven or over may propose a project, whatever their nationality.[51] In New York, four members of the city council began the city's first participatory budget in 2011, letting residents decide how to spend part of the capital funds the council controls.[52]

In August 1996 the Indian state of Kerala went further than most. Its People's Plan Campaign handed the state's local councils the power to plan and spend 35 to 40% of its development funds, and asked villagers to draw up the plans in open meetings.[53,54] An evaluation for India's planning bodies, based on a sample of districts, found that beneficiaries saw clear gains in housing for the poor, child feeding and drinking water, while the effects on farming

[45] Timothy Waring and James Acheson, "Evidence of cultural group selection in territorial lobstering in Maine", *Sustainability Science* 13(1):21–34 (2018), citing Acheson's work since 1988: "Harbor gangs are lobster-fishing groups that defend an unofficial territory"; gangs defend territories against intruders, sometimes by cutting traps. https://pmc.ncbi.nlm.nih.gov/articles/PMC6086256 . Checked 30 Oct 2026.

[46] UNESCO Intangible Cultural Heritage, "Irrigators' tribunals of the Spanish Mediterranean coast" (inscribed 2009): the tribunals "date back to the al-Andalus period (ninth to thirteenth centuries)". https://ich.unesco.org/en/RL/water-tribunal-of-the-plain-of-valencia-00171

[47] Core tenet: *Floors that are never crossed*. Full wording in "The core of UP".

[48] Elinor Ostrom, "Beyond Markets and States: Polycentric Governance of Complex Economic Systems", *American Economic Review* 100(3):641–672 (2010), her Nobel lecture: "'Polycentric' connotes many centers of decision making that are formally independent of each other", which may function as "an interdependent system of relations" (quoting V. Ostrom, Tiebout and Warren 1961). https://web.pdx.edu/~nwallace/EHP/OstromPolyGov.pdf . Checked 30 Oct 2026.

[49] Votto D, "What if Citizens Set City Budgets?", World Resources Institute (13 Jun 2018): in 2017 Porto Alegre "suspended participatory budgeting for two years, citing a lack of resources and the need for reforms"; "Thousands of projects approved in the 1990s and early 2000s are still pending implementation." https://www.wri.org/insights/what-if-citizens-set-city-budgets-experiment-captivated-world-participatory-budgeting . Water and sewers: Bhatnagar D and others, *Participatory Budgeting in Brazil* (World Bank, 2003): "sewer and water connections went up from 75 percent of total households in 1988 to 98 percent in 1997", a before-and-after figure for one city, https://documents1.worldbank.org/curated/en/600841468017069677/pdf/514180WP0BR0Bu10Box342027B01PUBLIC1.pdf ; a later World Bank comparison of Brazilian municipalities with and without participatory budgeting found, so far, a positive effect on access to water and sanitation (Report 40144-BR, 2008), https://openknowledge.worldbank.org/handle/10986/8042 . Worldwide count: Sintomer Y and others, *Participatory Budgeting Worldwide: Updated Version*, Dialog Global 25 (Engagement Global, 2013), p. 11: between 1,269 and 2,778 "traceable experiments" at the end of 2012, https://estudogeral.sib.uc.pt/bitstream/10316/42267/1/Participatory%20Budgeting%20Worldwide.pdf . WRI's "more than 2,700 governments" repeats the top of that range. Checked at source, 31 Oct 2026.

[50] Melgar T R, "A Time of Closure? Participatory Budgeting in Porto Alegre, Brazil, after the Workers' Party Era", *Journal of Latin American Studies* 46(1):121–149 (2014): the process weakened after the Workers' Party lost the city in 2004, and the first administration to run it was that of "Mayor Olivio Dutra (1989–92)". https://www.cambridge.org/core/product/44EC7210668F4E4CC82853961C5133E9/core-reader . Checked 29 Oct 2026.

[51] Ville de Paris, "Paris, ville citoyenne et participative" (page updated 1 July 2024): "Chaque année, 5% du budget d'investissement de la Ville y sont investis", and "Depuis sa création en 2014, en tout, ce sont donc 686 millions d'euros qui lui ont été consacrés." https://www.paris.fr/pages/paris-ville-citoyenne-et-participative-6654 . Ville de Paris, press release of 13 January 2025 on the 11th edition: "769 millions d'euros d'investissement ont été décidés par les Parisiennes et les Parisiens" since 2014; ideas may be submitted by "une Parisienne ou un Parisien de 7 ans ou plus", whatever their nationality. https://cdn.paris.fr/presse/2025/01/13/def1c48b54efde9f07410a8bca5dc09e.pdf . Checked at source on 31 Oct 2026; the figures change with each edition.

[52] New York City Council, "Participatory Budgeting": in 2011 four Council Members, Brad Lander, Melissa Mark-Viverito, Eric Ulrich and Jumaane D. Williams, launched a PB process in which residents "allocate part of their capital discretionary funds". https://council.nyc.gov/pb/ . Checked 30 Oct 2026.

[53] Government evaluation report, "Decentralized Planning Experience in Kerala" (issuer and year not shown on the page read): "Launching of the People's plan Campaign in August 1996". https://dmeo.gov.in/sites/default/files/2019-10/Decentralized%20Planning%20Experience%20in%20Kerala.pdf

[54] Comptroller and Auditor General of India, *Audit Report (Local Self Government Institutions) for the year ended 31 March 2004*, Chapter 1: local bodies to "formulate and implement at least 35 to 40 per cent of the State's plan programmes"; "35 to 40 per cent of the State's Annual Plan outlay from the year 1997-98". This is the State Plan (development) outlay, not the whole state budget. https://cag.gov.in/uploads/old_reports/local_bodies/Tabled_Legislature/Kerala/2003_2004/Chap_1.pdf

and other production were negligible, and participation varied from place to place.[55] Kerala's experiment shows both sides of deciding together at scale. It can shift spending toward what people need most, and it takes sustained effort to keep everyone involved.

Does deciding together make a measurable difference? Brazil allows a comparison, because some of its cities adopted participatory budgets and others did not. One study found that municipalities using participatory budgeting between 1990 and 2004 channelled a larger share of their budgets into sanitation and health, and that this was accompanied by a fall in infant mortality.[56] Another found the same link with health spending and infant mortality in Brazil's largest cities, growing stronger the longer the process lasted.[57] Both studies compare cities rather than run an experiment, so neither can prove that the budgets were the cause. Even so, the direction is what one would expect when the people who need the water have a say in where the pipes go.

In UP's terms, participatory budgeting is the core idea that those affected decide, put to work on public money.[21] It also shows why UP insists that the rules, records and reasons for shared decisions be public, so that anyone can check where the money went.[25] Its limit is plain. A participatory budget controls only the share of spending that politicians choose to hand over, about 5% of the investment budget in Paris,[51] and, as the next section shows, it lasts only as long as they keep handing it over. Each city also runs its process on its own records, so much of what one city learns has no easy way to reach the next. Connected through a shared, open record of what each city funded, built and achieved, more than a thousand of these processes could learn from one another, and a practice that rested on its own record of results would be harder for any one government to switch off.

Some of the oldest shared institutions are so ordinary that they are easy to miss. On 1 July 1731 Benjamin Franklin and the members of his discussion club in Philadelphia drew up articles of agreement to found a library they would share, and the Library Company of Philadelphia still exists.[58] Beginning in 1881, Andrew Carnegie, and later his foundation, gave some $56 million to build 2,509 public libraries.[59] A public library is perhaps the plainest example of what this chapter describes: a shared store that anyone may use, on the understanding that whatever is borrowed comes back for the next person. Most people have used one, and few would call it radical.

The library idea has spread well beyond books. In 1979 the public library in Berkeley, California, used a $30,000 federal grant to open a tool lending library, one of the first in the United States, so that residents could borrow tools the way they borrow books.[60] On 18 October 2009 Martine Postma organised the first Repair Café in Amsterdam, where volunteers help their neighbours mend broken things, and the foundation she started counts more than 4,000 Repair Cafés around the world.[61] Each began as one person's idea in one town. Each spread because other people, in other towns, recognised a problem they shared and copied a solution that worked.

[55] Programme Evaluation Organisation, Government of India, *Decentralized Planning Experience in Kerala* (undated evaluation study; sample of four districts, field visits June to August 2004): subsidised housing, the Anganwadi feeding programme and drinking water were rated "Considerable" in impact, while decentralised planning "failed to stir the productive sector in the sample villages"; awareness of gram sabhas "varied from 86% to 100%" among households across the sample panchayats. https://dmeo.gov.in/sites/default/files/2019-10/Decentralized%20Planning%20Experience%20in%20Kerala.pdf . Checked at source, 31 Oct 2026.

[56] Sónia Gonçalves, "The Effects of Participatory Budgeting on Municipal Expenditures and Infant Mortality in Brazil", *World Development* (2014; online 2013): municipalities using participatory budgeting during 1990–2004 "channeled a larger fraction of their budgets" "to investments in sanitation and health services"; "This change is accompanied by a reduction in infant mortality rates." https://www.peoplepowered.org/resources-content/effects-pb-municipal-expenditures-infant-mortality . Observational. Checked 30 Oct 2026.

[57] Touchton M, Wampler B, "Improving Social Well-Being Through New Democratic Institutions", *Comparative Political Studies* (2014): Brazilian cities with participatory budgeting spent more on health and sanitation and had lower infant mortality (observational evidence). https://scholarworks.boisestate.edu/polsci_facpubs/146/ (step 3 evidence).

[58] Library Company of Philadelphia, "About LCP": "It was founded in 1731 by Benjamin Franklin as a subscription library supported by its shareholders, as it is to this day." https://librarycompany.org/about-lcp/ . Library Company of Philadelphia, "Treasures from the Library Company of Philadelphia: The Junto" (blog post, 9 June 2017): "On July 1, 1731, Benjamin Franklin and members of his Junto drew up" articles of agreement "to found a library." https://librarycompany.org/2017/06/09/treasures-from-the-library-company-of-philadelphia-11/ . The library's own account. Checked at source, 31 Oct 2026.

[59] Carnegie Corporation of New York, "Andrew Carnegie's Library Legacy: A Timeline" (8 Jan 2025): beginning in 1881, Carnegie and later his foundation "gave some $56 million to build 2,509 public libraries". https://carnegie.org/our-work/article/andrew-carnegies-library-legacy . Also "Find a Carnegie Library Near You" (10 Feb 2025), https://carnegie.org/article/find-a-carnegie-library-near-you/ . Checked at source, 31 Oct 2026.

[60] Berkeley Public Library, "Tool Lending Library": "established in 1979 with $30,000 from a federal Community Development Block Grant". https://www.berkeleypubliclibrary.org/tools . City of Berkeley staff report, "Creating SHARE BERKELEY" (12 Mar 2024): "One of the first such libraries in the nation." https://www.berkeleyca.gov/sites/default/files/documents/2024-03-12%20Item%2014%20Creating%20SHARE%20BERKELEY.pdf . Earlier tool libraries existed (Hamilton, *SJSU School of Information Student Research Journal* 11(1), 2021, names Grosse Pointe as the first), so the text does not call Berkeley's the first. Checked 29 Oct 2026.

[61] Repair Café International Foundation, "About": "Martine organised the very first Repair Café in Amsterdam, on October 18, 2009." https://www.repaircafe.org/en/about/ . Foundation news, 10 September 2026: "At the end of August, we added the 4,000th Repair Café" to its world map. https://www.repaircafe.org/en/the-worlds-4000th-repair-cafe-is-in-canada/ (read in a browser). The foundation's About page still says "over 2,500", so the count is revised often. Checked at source on 31 Oct 2026; the count is revised each month.

In 2009, too, Todd Bol of Hudson, Wisconsin, built a small model of a one-room schoolhouse to hold books that anyone could borrow, the first Little Free Library. By 2025 there were more than 200,000 of these book-sharing boxes in 128 countries.[62] The same idea has been applied to toys, with the first lekotek, a toy library for children with disabilities, opening in Stockholm in 1963, and to seeds, with the Heritage Seed Library, set up in Essex in 1975 by the charity now called Garden Organic.[63,64] Tools, toys, seeds, repairs and books are different things. The behaviour is the same: a shared store that anyone may use, kept going by the people who use it.

The same behaviour runs through systems that most people never think of as cooperation at all. Blood is one. According to the World Health Organization, 80 countries collect more than 90% of their blood supply from voluntary, unpaid donors, people who give part of their own bodies to strangers they will never meet.[65] In many other countries blood still comes mainly from relatives of patients or from paid donors, so the voluntary system is a choice that societies have made and kept.[65] It runs on nothing more than a shared understanding that anyone may one day need what others have given.

Fire and rescue at sea are others. In the United States, 635,100 of the country's firefighters are volunteers, most of the total.[66] In Britain, volunteers have crewed lifeboats since 1824, and the Royal National Lifeboat Institution says they have saved more than 146,000 lives at sea.[67] Each of these meets a need that markets and governments also meet, and each works because people choose to give their time, often at real risk to themselves. Nobody designed these systems from above. They grew, town by town and harbour by harbour, because people saw a danger they shared and organised to meet it.

People also help one another recover from harms they cannot face alone. Alcoholics Anonymous began in Akron, Ohio, in 1935, and at the end of 2021 it estimated nearly two million members in more than 120,000 groups, run by the members themselves.[68] A Cochrane review of 27 studies found that structured programmes built on its twelve steps were more effective than other established treatments at helping people stay abstinent.[69] Disasters show the same impulse at its most intense. Researchers who have studied disasters for decades find that panic is far rarer than people assume, that members of the public act to help one another, and that residents themselves do much of the searching and rescuing.[70]

After the earthquake that struck Haiti on 12 January 2010, about 600 volunteers, most of them working far from Haiti, used satellite images that companies had released to build a base map of the country almost from scratch in three weeks.[71] They were working on OpenStreetMap, a map of the world that anyone may edit, begun in London in

[62] Little Free Library, "The History of Little Free Library": "In 2009, Todd Bol of Hudson, Wisconsin, built a model of a one room schoolhouse"; "In 2025, we celebrated more than 200,000 Little Free Library book-sharing boxes in 128 countries worldwide." https://littlefreelibrary.org/about/history/ . Checked 30 Oct 2026.

[63] Lekotek (National Lekotek Center), "About Lekotek": "The initial Lekotek was begun in Sweden in 1963 by moms and dads of youngsters with specials needs." https://www.lekotek.org/general-info/about-lekotek/ . Lekotek Argentina, "Historia" (Spanish): the first lekotek, at Blockhusudden, "se abrió en 1963 en Estocolmo." https://www.lekotek.org.ar/historia/ . A lekotek is a toy library for children with disabilities (the name joins Swedish lek, play, to bibliotek, library); toy lending began earlier elsewhere, so the claim is for Sweden, not the world. Both pages are written by lekotek organisations, not by the first lekotek's founders. Checked at source, 31 Oct 2026.

[64] Garden Organic, "Our history": "In 1975, we set up our Heritage Seed Library to protect hundreds of rare vegetable varieties." https://www.gardenorganic.org.uk/who-we-are/our-history . Garden Organic, "Vital importance of seeds celebrated with unique 'Seed Relay'": the relay's first leg starts at "Bocking, Essex, where the seed of the HSL was first sown". https://gardenorganic.org.uk/news/hsl-seed-relay . Garden Organic was founded as the Henry Doubleday Research Association. Garden Organic does not call the library the first seed library anywhere I could read, so the book says only that it was set up in 1975. Checked at source, 31 Oct 2026.

[65] World Health Organization, "Blood safety and availability" (fact sheet): "80 countries collect more than 90% of their blood supply from voluntary unpaid blood donations"; "in 59 countries, more than 50% of the blood supply is still dependent on family/replacement and paid blood donors". https://www.who.int/news-room/fact-sheets/detail/blood-safety-and-availability . Checked 30 Oct 2026.

[66] National Volunteer Fire Council, "Volunteer Fire Service Fact Sheet" (Feb 2026), citing the NFPA: "Of the total estimated 1,018,100 firefighters across the country, 635,100 are volunteer"; "Volunteers comprise 62% of firefighters in the United States." https://www.nvfc.org/wp-content/uploads/2026/02/volunteer-fire-service-fact-sheet.pdf . Data year 2020. Checked 30 Oct 2026.

[67] Royal National Lifeboat Institution, "Our history": "The brave volunteers of the RNLI have been saving lives at sea since 1824"; "the RNLI has saved more than 146,000 lives at sea." https://rnli.org/about-us/our-history . The charity's own count. Checked 30 Oct 2026.

[68] Alcoholics Anonymous World Services, "Estimates of A.A. Groups and Members" (SMF-53, as of 31 Dec 2021): groups 120,455; members 1,967,613; "We are aware of A.A. activity in approximately 180 countries". https://www.aa.org/sites/default/files/literature/SMF-53%20EstimatesofAAGroupsandMembers%20EN%200122.pdf . Checked 30 Oct 2026.

[69] John F Kelly, Keith Humphreys and Marica Ferri, "Alcoholics Anonymous and other 12-step programs for alcohol use disorder", *Cochrane Database of Systematic Reviews* 2020, CD012880: 27 studies, 10,565 participants; manualised AA and Twelve-Step Facilitation interventions were more effective than other established treatments for increasing abstinence. https://pmc.ncbi.nlm.nih.gov/articles/PMC7065341 . Checked 30 Oct 2026.

[70] E. L. Quarantelli, *Human and Group Behavior in the Emergency Period of Disasters: Now and in the Future*, Disaster Research Center, University of Delaware, Preliminary Paper 196 (1993): "Usually before full impact is over, survivors initiated search and rescue efforts (over 90 percent are typically rescued in this way)." https://udspace.udel.edu/server/api/core/bitstreams/cc71b2b0-b2be-4984-98ea-27767f2f427e/content . Checked at source, 31 Oct 2026.

[71] Robert Soden and Leysia Palen, "From Crowdsourced Mapping to Community Mapping: The Post-Earthquake Work of OpenStreetMap Haiti": "Over a 3-week period, 600 remotely located volunteer mapper[s] built a base layer map for Haiti nearly from scratch", using imagery companies released after the quake; "many of the major GIS users involved in the Haiti response relied upon OSM, including OCHA and UNICEF"; the paper follows the later community mapping by Haitians. Quotes re-checked against the paper by Claude on 30 Oct 2026.

2004, at a time when Britain's official map data was not freely available.[72] Aid groups used the map, and the work continued afterwards as Haitians took up mapping their own communities.[71] The strangers who brought their boats to Houston and the strangers who mapped Haiti from their desks were doing the same thing in different ways. Each saw a shared problem and gave what they had to solve it.

In UP's terms, these practices share an aim more than a method. They exist because people want others to be safe, housed, informed and well, which is the aim UP holds: the health, happiness and wellbeing of all living things, counted person by person.[26] They also meet needs that UP treats as floors that no decision may push anyone below, such as education and connection.[47] Their limit is that each meets one need, in one place, for the people it happens to reach. A tool library may know nothing of what the Repair Café down the street has learned, blood donation is far stronger in rich countries than poor ones, and the help that pours in after a disaster can fade once the emergency is over.[73] Connected through shared tools, records and designs, practices like these could become a standing way for people to help one another every day, wherever they live, and not only in a crisis.

The newest pieces work at a scale none of the older ones reached. The Introduction told how Linux began as a student's hobby and Wikipedia with a single edit. Linux now sits underneath Android, the system behind about 70% of the world's mobile web use.[74] Wikipedia is written in more than 340 languages by anyone who cares to correct it, and its English edition alone holds about seven million articles.[75] Both were built in public, both were tested by the people who used them, and both improved because anyone who found a fault could fix it.

Open-source code of this kind now runs through almost everything. An audit of commercial software in 2025 found open-source code in 98% of the codebases examined, and researchers at Harvard Business School estimated the value of open-source software to the firms that use it at about $8.8 trillion.[76,77] Some of it is written by volunteers and much of it by people whose employers pay them to contribute. What makes it open is that anyone may read it, use it and improve it, and that the improvements are shared with everyone.

In UP's terms, these projects are the clearest working model of shared problem solving with evidence, and of open systems. The definition of UP describes UP as taking the way people already build shared knowledge together and extending it to the whole of shared life.[78] In an open project anyone may raise a problem, propose a fix and show that it works; a better fix replaces a worse one; and the code, the records and the reasons are public, so every claim can be checked by anyone who looks.[19,25] They also show the strongest single reason to share: what is built once can be used by everyone, a point the chapter returns to below. Their limit is that the method has so far been applied mostly to software and reference works. UP asks what it would do for food, housing, health care and the decisions that shape a town.

Figure 1.2 places these practices in time. Some are centuries old and some only years, and they come from rich countries and poor ones, from villages and from the internet. What they share is a way of behaving. Someone names a problem that many people have; the people affected, and others willing to help, take it on together; they try things, keep what works and stay open to correction. None of them waited for a revolution, and none of them

https://cmci.colorado.edu/~palen/palen_papers/HaitiCOOP_Final.pdf . Checked 30 Oct 2026.

[72] OpenStreetMap Wiki, "History of OSM": "Steve Coast founded OpenStreetMap in 2004 while attending University College London." https://wiki.openstreetmap.org/wiki/History_of_OSM . Same page: "government-run and tax-funded projects like the Ordnance Survey created huge data sets, but failed to freely and widely distribute them." Mordechai Haklay and Patrick Weber, "OpenStreetMap: User-Generated Street Maps", IEEE Pervasive Computing 7(4) (2008): "The project, born at University College London (UCL) in July 2004, was founded by Steve Coast". https://discovery.ucl.ac.uk/13849/1/13849.pdf . The sources describe the Ordnance Survey's data as not freely distributed; they do not quote Coast giving that as his reason. Checked at source, 31 Oct 2026.

[73] World Health Organization, "Blood safety and availability" (fact sheet, 2026; data for 2023 from 153 countries): "The median blood donation rate in high-income countries is 28.9 donations per 1000 people", compared with "18.2" in upper-middle-income, "8.5" in lower-middle-income "and 4.5 donations per 1000 people in low-income countries." https://www.who.int/news-room/fact-sheets/detail/blood-safety-and-availability . Checked 31 Oct 2026.

[74] StatCounter Global Stats, "Mobile Operating System Market Share Worldwide": Android 69.31% of mobile page views in September 2026 (range 67.4% to 75.3% over the twelve months to September 2026). https://gs.statcounter.com/os-market-share/mobile/worldwide . Checked at source on 31 Oct 2026; the series is revised each month.

[75] Wikimedia Foundation, Meta-Wiki, "List of Wikipedias": 348 active language editions; the English edition has 7,257,626 articles (read on 31 Oct 2026). https://meta.wikimedia.org/wiki/List_of_Wikipedias . Checked at source on 31 Oct 2026; Wikipedia's counts change every day.

[76] Black Duck, *2026 Open Source Security and Risk Analysis Report*: "Codebases containing open source" 98%, of "947 codebases submitted to Black Duck between November 2024 and October 2025." https://www.blackduck.com/resources/analyst-reports/open-source-security-risk-analysis.html . The sample is codebases submitted for audit, not all software. Checked 30 Oct 2026.

[77] Manuel Hoffmann, Frank Nagle and Yanuo Zhou, "The Value of Open Source Software", Harvard Business School Working Paper 24-038 (2024): "We estimate the supply-side value of widely-used OSS is $4.15 billion", "but that the demand-side value is much larger at $8.8 trillion". The supply-side value is "the cost to recreate the most widely used OSS once"; the demand-side value is the cost if each firm that uses these packages had to pay a developer to rewrite them (about 3.5 times those firms' present software spending). https://www.hbs.edu/ris/Publication%20Files/24-038_51f8444f-502c-4139-8bf2-56eb4b65c58a.pdf . Modelled estimates. Checked at source, 31 Oct 2026.

[78] The definition of UP, second sentence: "It takes the way people already build shared knowledge together and extends it to the whole of shared life: meeting needs, making decisions and caring for the living world." The full definition is in "The core of UP".

was invented by UP. Together they are evidence that the behaviour UP builds on is a common human pattern, found wherever people have had room to act on it.

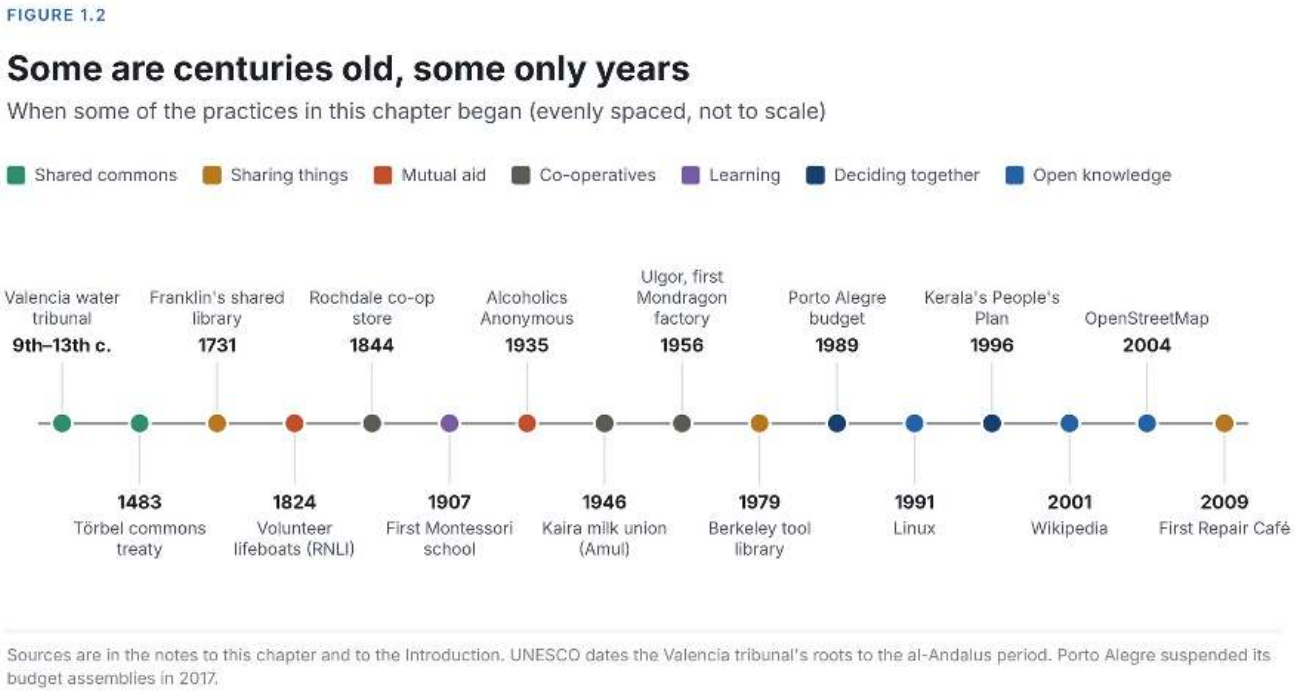


Figure 1.2. When some of the practices in this chapter began. The spacing is even, not to scale. The Valencia tribunal's roots are dated by UNESCO to the al-Andalus period. Sources are in the notes to this chapter and to the Introduction.

What children show us

Every practice so far was built by adults. The most telling evidence that UP builds on something natural in people comes from watching children, and few people watched them more carefully than Maria Montessori. She had become one of the first women in Italy to earn a medical degree, from the University of Rome in 1896.[79] For about two years around 1900 she directed a school in Rome for children who had been labelled deficient and considered uneducable, and, by her own account, her methods worked so well that a number of those children later passed a public school's examination alongside children thought to be normal.[79,80] The question that followed was a hard one. If children whom everyone else had written off could learn that much, what was ordinary schooling doing to everyone else's children?

On 6 January 1907 she got her chance to find out. A room opened for small children in a new block of flats at 53 Via dei Marsi, in San Lorenzo, a poor district of Rome.[81] Some fifty children too young for school lived in the buildings, and many were left alone all day while their parents went out to work.[81,82] Montessori was asked to take an interest in them, and she treated the room as a place to watch what children did when they were given real

[79] Association Montessori Internationale, "Timeline of Maria Montessori's Life": in 1896 she "[b]ecomes one of the first women to obtain a Doctor of Medicine degree from the University of Rome." https://montessori-ami.org/node/1821 . She is often called the first woman doctor in Italy, but Ernestina Paper had graduated in medicine at Florence in 1877 (G. Vicarelli, *Donne di medicina*, Bologna: il Mulino, 2008, as reviewed at https://rosa.uniroma1.it/rosa01/medicina_nei_secoli/article/download/397/371/753), which is why the text says "one of the first". Dates: Maria Montessori, *The Montessori Method* (1912), ch. II: her lectures to Rome's teachers "soon developed into the State Orthophrenic School, which I directed for more than two years"; she dates her work with deficient children "1898 to 1900". Britannica gives 1899 to 1901 and AMI gives 1900 for her appointment, so the text says about two years around 1900. https://digital.library.upenn.edu/women/montessori/method/method-II.html . Checked at source, 31 Oct 2026.

[80] Maria Montessori, *The Montessori Method*, trans. Anne E. George (New York: Frederick A. Stokes Company, 1912), ch. II: "I succeeded in teaching a number of the idiots from the asylums both to read and to write so well that I was able to present them at a public school for an examination together with normal children. And they passed the examination successfully." This is her own account. https://digital.library.upenn.edu/women/montessori/method/method-II.html . Checked at source, 31 Oct 2026.

[81] Association Montessori Internationale, "On This Day: First Casa dei Bambini" (6 Jan 2021), quoting Montessori's 1942 account: "It was on the 6th January 1907 that this room was inaugurated"; "There were some 50 young children who lived unsupervised in these buildings, prone to mischief"; "I was approached as a medical officer of hygiene to take an interest in this work." https://montessori-ami.org/news/day-first-casa-dei-bambini . AMI, "Timeline of Maria Montessori's Life": opened "at 53 Via dei Marsi in the San Lorenzo district of Rome". https://montessori-ami.org/node/1821 . Checked 29 Oct 2026.

choices. She was clear about her method. Child psychology, she wrote, could be established only through careful observation from outside, and she set out to work without preconceptions of any kind.[83] The children, in other words, would show her how they learned.

What they showed her surprised her. Among her materials was a wooden block with holes into which cylinders of different sizes fitted, and she watched a four-year-old girl take them out and put them back sixteen times in a row. To test how deep the girl's attention went, Montessori had the other children sing around her. The girl carried on, unmoved.[84] Montessori saw the same intense concentration again and again, in children who in an ordinary classroom would have been told to sit still and listen. What she saw suggests that the ability to concentrate, to choose a task and repeat it until it is mastered, is something children bring with them. Nobody has to put it there, and the teacher's job is to make room for it.

She then turned on the habits of the schools around her. In her first major book, published in English in 1912, she described children in ordinary classrooms fastened each to his place, "like butterflies mounted on pins".[85] She called the prize and the punishment "incentives toward unnatural or forced effort".[85] In her classrooms there were no fixed desks, no prizes and no punishments in the usual sense. Discipline, she wrote, "must come through liberty".[85] In her account, order in the classroom came from the children's absorption in work they had chosen for themselves, and liberty, as she put it, is activity.[85]

That room in San Lorenzo became the first of many. In 1949 Montessori was nominated for the Nobel Peace Prize.[86] A census published in 2022 counted 15,763 Montessori schools in 154 countries.[87] Yet the most important thing about it, for this book, is the way it was made. Montessori did not start from a theory of what children ought to be. She started from what they actually did, kept what helped them grow, dropped what did not, and judged her schools by how the children fared.

Modern research has tested her claims more rigorously than she could. In Milwaukee, a public Montessori school admitted children by lottery, which allowed a fair comparison between those who won a place and those who applied but lost. At age five the winners did better on early reading and maths, on a test of the mental flexibility that psychologists call executive function, and in understanding what other people think and believe. At age twelve they wrote more creative essays and chose more positive ways of resolving social conflicts, and they felt a stronger sense of community at school.[88] The study was small, with 59 children who won places and 53 who did not, and it covered a single school.[88]

Larger and later studies point the same way, with the caution any honest reading needs. A second lottery study, in a high-poverty American city, found that children who won places at two public Montessori schools did better over

[82] Montessori M, *The Montessori Method*, trans. A. E. George (1912), ch. III: children "who must often be left alone during the entire day while their parents went out to work"; the idea of the Children's House "is due to Edoardo Talamo, Director General of the Association" (the Istituto Romano dei Beni Stabili). Project Gutenberg #39863, https://www.gutenberg.org/ebooks/39863 , read through an excerpt at https://sites.pitt.edu/~jdnorton/teaching/HPS_2000_Teaching_Practicum/HPS_2497_Teaching_Practicum_2020/pdf/The_Montessori_Method_SELECTION.pdf . Checked 29 Oct 2026.

[83] Maria Montessori, *The Montessori Method* (1912), chapter IV: "Child psychology can be established only through the method of external observation"; "proceeding to my work without preconceptions of any kind". https://digital.library.upenn.edu/women/montessori/method/method-IV.html . Checked 30 Oct 2026.

[84] Maria Montessori, *The Montessori Method*, trans. Anne E. George (New York: Frederick A. Stokes Company, 1912), ch. XII, "Education of the Senses": she watched "a little one of four years repeat this exercise sixteen times" and, when "I had the other children sing in order to distract her", the child "continued unmoved". https://digital.library.upenn.edu/women/montessori/method/method-XII.html . A later book, *The Advanced Montessori Method*, vol. 1 (1918), is the source of a different telling, with 44 repetitions and the children marching (A. E. Jones, S. P. Henzi and L. Barrett, "A Natural History of Repetition", *Journal of Montessori Research* 5(2), 2019, https://journals.ku.edu/jmr/article/download/7407/12511); the text uses the 1912 version. Checked at source, 31 Oct 2026.

[85] Maria Montessori, *The Montessori Method* (1912), chapter I: children in ordinary schools "like butterflies mounted on pins, are fastened each to his place"; "The prize and the punishment are incentives toward unnatural or forced effort"; chapter V, "Discipline": "Discipline must come through liberty"; "liberty is activity." https://digital.library.upenn.edu/women/montessori/method/method-I.html ; https://digital.library.upenn.edu/women/montessori/method/method-V.html . Checked 30 Oct 2026.

[86] Nobel Prize nomination archive, entry 3625: Maria Montessori, nominated for the Nobel Peace Prize in 1949 by Helena Stellwag, Utrecht University. https://www.nobelprize.org/nomination/archive/show.php?id=3625 . Checked 30 Oct 2026.

[87] Debs M, de Brouwer J, Murray A K, Lawrence L, Tyne M, von der Wehl C, "Global Diffusion of Montessori Schools: A Report From the 2022 Global Montessori Census", *Journal of Montessori Research* 8(2):1–15 (2022), DOI 10.17161/jomr.v8i2.18675: "a total of 15,763 Montessori schools around the globe"; "154 countries"; "roughly 9% of which are government funded" (a rough estimate, under the broadest definition of Montessori). https://journals.ku.edu/jmr/article/view/18675 . Checked at source on 31 Oct 2026; no later census edition had appeared.

[88] Angeline Lillard and Nicole Else-Quest, "Evaluating Montessori Education", *Science* 313:1893–1894 (29 Sept 2006): "Overall, 53 control and 59 Montessori students were studied"; "Both the experimental and the control group had entered the Montessori school lottery"; at 5, Montessori children scored higher on letter-word identification, word attack and applied problems, did better on a card-sorting test of executive function and more often passed a false-belief test of theory of mind; at 12, "The Montessori students' essays were rated as significantly more creative", they were more likely to choose the positive assertive response to social dilemmas, and "Montessori children indicated having a greater sense of community". https://www.springmont.com/editoruploads/files/Evaluating%20Montessori%20Education.pdf (copy of the article); DOI https://doi.org/10.1126/science.1132362 . A natural experiment at one public school; small samples. Checked at source, 31 Oct 2026.

time, and that the usual gaps between groups of children narrowed.[89] A 2023 review of 32 studies found a meaningful and positive effect overall, though it shares an author with that lottery study, so the two are not fully independent.[90] The most striking finding concerns adults. In a survey of 1,905 adults, those who had attended Montessori schools for at least two years as children reported higher wellbeing on all four measures the researchers used, and more years in Montessori went with higher wellbeing.[91] That study cannot rule out that different kinds of families chose Montessori, and its authors say so. Even so, the method was designed around children's flourishing, and the adults it schooled report flourishing more.

What Montessori saw in her classroom shows up in research on children everywhere. Young children are relentless askers of questions, and a long study of their questions found that asking is one of the main ways they learn about the world.[92] Yet when the psychologist Susan Engel and her students watched American classrooms, they found that in any two-hour stretch a kindergarten class showed only two to five questions or explorations.[93] Engel did not blame the children. When an adult makes encouraging faces or comments, she reports, children are more likely to explore a new object, and in her own experiments children took much more interest in materials when an adult visibly showed curiosity about them.[93] Curiosity, in other words, is there to begin with. The question is whether the setting feeds it or starves it.

Expected rewards can work against it, as Montessori suspected. In a classic experiment from 1973, the title of which summed up its finding, preschool children who had expected a reward for drawing later chose to draw less on their own.[94] A review of 128 experiments found the same effect across many tasks and ages. When people expect a tangible reward for doing something they already find interesting, their freely chosen interest in it tends to fall, although praise and feedback often help.[95] Where schooling leans on grades, prizes and penalties, it would be surprising if children's own motivation were left untouched, and the evidence that follows suggests it is not.

The decline can be measured. In a 2016 survey of more than 900,000 American students, 74% of fifth-graders were engaged with school, by Gallup's measure, against only about a third of students in their last three years of high school.[96] Scores on the Torrance Tests of Creative Thinking, given to American children and adults since the 1960s, fell after 1990 even as scores on intelligence tests rose.[97] Both findings come from samples that were not

[89] Lillard A S, Heise M J, Richey E M, Tong X, Hart A, Bray P M, "Montessori Preschool Elevates and Equalizes Child Outcomes: A Longitudinal Study", *Frontiers in Psychology* 8:1783 (2017): "The final sample included 141 children"; admission was by "randomized lottery"; "over time the Montessori children fared better on measures of academic achievement, social understanding, and mastery orientation"; "Montessori preschool also equalized outcomes among subgroups that typically have unequal outcomes"; "a larger study of public Montessori preschools is warranted." https://www.frontiersin.org/articles/10.3389/fpsyg.2017.01783/full

[90] Randolph J J et al., "Montessori education's impact on academic and nonacademic outcomes: A systematic review", *Campbell Systematic Reviews* 19(3):e1330 (2023): "32 studies that met minimum standards for inclusion"; "a meaningful and positive impact on child outcomes"; some outcomes rated low quality of evidence. Angeline Lillard is an author of both this review and the lottery study, so the two are not fully independent. https://ideas.repec.org/a/wly/camsys/v19y2023i3ne1330.html

[91] Angeline S. Lillard, Megan J. Meyer, Dorina Vasc and Eren Fukuda, "An Association Between Montessori Education in Childhood and Adult Wellbeing", *Frontiers in Psychology* 12:721943 (2021): "The final sample consisted of 1905 participants in the US and Canada" (834 Montessori, 1,071 conventional); two or more years of Montessori associated with "significantly higher adult wellbeing on all four factors"; the authors note that "Unmeasured selection effects could explain the results." https://doi.org/10.3389/fpsyg.2021.721943 . Observational. Checked 30 Oct 2026.

[92] Michelle M. Chouinard, "Children's Questions: A Mechanism for Cognitive Development", *Monographs of the Society for Research in Child Development* 72(1) (2007): four studies (transcripts, a diary study of 68 parents, 112 parent-child pairs at zoos, 67 four-year-olds) on how children use questions to learn. Abstract: https://europepmc.org/article/MED/17394580 . Checked at source, 31 Oct 2026.

[93] Susan Engel, "The Case for Curiosity", *Educational Leadership* 70(5) (February 2013): "In any given two-hour stretch, we'd see anywhere from two to five questions or explorations"; "When the experimenter makes encouraging faces or comments, children are more likely to explore the interesting object"; "Experiments I've done show that children show much more interest in materials when an adult visibly shows how curious he or she is about the materials." https://ascd.org/el/articles/the-case-for-curiosity . Her fuller account is "Children's Need to Know: Curiosity in Schools", *Harvard Educational Review* 81(4):625–645 (2011), https://www.harvardeducationalreview.org/content/81/4/625 . Small, observational studies. Checked at source, 31 Oct 2026.

[94] Mark R. Lepper, David Greene and Richard E. Nisbett, "Undermining children's intrinsic interest with extrinsic reward: A test of the 'overjustification' hypothesis", *Journal of Personality and Social Psychology* 28(1):129-137 (1973). The authors' own later account says that children in nursery school classrooms who agreed to draw in order to obtain an award "subsequently spent significantly less time playing with the materials" than children who expected no award or received one unexpectedly (D. Greene, B. Sternberg and M. R. Lepper, "Overjustification in a Token Economy", *JPSP* 34(6):1219-1234, 1976, https://eclass.uowm.gr/modules/document/file.php/NURED262/%CE%A0%CE%A1%CE%A9%CE%A4%CE%9F%CE%A4%CE%A5%CE%A0%CE%91%20%CE%91%CE%A1%CE%98%CE%A1%CE%91/Greene%20et%20al%20overjustification%201976.pdf). The design and result are given here as the same authors describe them in 1976. Title and details of the 1973 article: Crossref, https://api.crossref.org/works/10.1037/h0035519 . Checked at source, 31 Oct 2026.

[95] Edward L. Deci, Richard Koestner and Richard M. Ryan, "A Meta-Analytic Review of Experiments Examining the Effects of Extrinsic Rewards on Intrinsic Motivation", *Psychological Bulletin* 125(6) (1999): "A meta-analysis of 128 studies"; tangible rewards undermined free-choice intrinsic motivation (d = −0.34), expected tangible rewards d = −0.36; positive feedback tended to enhance it. https://leeds-faculty.colorado.edu/dahe7472/deci%201999.pdf . Contested by Cameron and Pierce (1994). Checked 30 Oct 2026.

[96] unchanged, plus the definition: Valerie J. Calderon and Daniela Yu, "Student Enthusiasm Falls as High School Graduation Nears", Gallup (1 June 2017), on the 2016 Gallup Student Poll of 909,617 students (fielded 26 Sept to 28 Oct 2016): "Nearly three-quarters (74%) of all surveyed fifth-grade students are engaged"; "only about one-third of surveyed students in 10th, 11th and 12th grades are engaged." Gallup defines engagement as "students' involvement and enthusiasm with school". The data are not statistically weighted and come from schools that chose to take part. https://news.gallup.com/opinion/gallup/211631/student-enthusiasm-falls-high-school.aspx . Checked at source, 31 Oct 2026.

[97] Kyung Hee Kim, "The Creativity Crisis: The Decrease in Creative Thinking Scores on the Torrance Tests of Creative Thinking", *Creativity Research Journal* 23(4):285–295 (2011), 272,599 participants across norm samples from 1966 to 2008: "since 1990, even as IQ scores have risen, creative thinking scores

chosen at random, and neither proves what caused the change. Yet they fit what Engel saw in the classroom and what Montessori saw a century earlier.

Outside school, children's chances to play and roam on their own have shrunk as well. In the United States the share of children who walked or cycled to school fell from about 48% in 1969 to about 13% in 2009, and the school year itself grew longer.[98] Three researchers who reviewed the evidence in 2023 argue that this loss of independent activity is a major cause of the rise in anxiety and depression among the young. They are careful to add that most of the studies are correlational and that it is not the only cause.[98] Children who are rarely trusted to decide anything for themselves have little chance to practise deciding.

These capacities matter for the whole of life. A study that followed about a thousand children in Dunedin, New Zealand, from birth to the age of 32 found that those with more self-control in childhood grew into healthier, wealthier adults with fewer criminal convictions, in a smooth gradient across the whole range.[99] A review in *Science* of programmes that improve these skills in children aged four to twelve listed Montessori among them, found that the children who started furthest behind gained the most, and concluded that what works is repeated practice with steadily harder challenges, together with attention to children's emotional, social and physical development.[100] Self-control, concentration and the ability to learn how to learn can be strengthened. They can also be worn away.

Montessori is one case of a much wider pattern. In the American HighScope study, which began in 1969, children assigned to a preschool where they planned and chose their own activities were far less likely, by age 23, to have been arrested for a felony, and far less likely to have needed treatment for emotional problems during their schooling, than those assigned to scripted, teacher-led lessons.[101] The sample was only 68 children, and the authors had designed the winning curriculum, so the result needs caution. A randomised trial of another play-based curriculum, Tools of the Mind, found better classroom quality and better self-regulation among the children taught with it.[102] In Reggio Emilia, in northern Italy, parents, and later the city with the educator Loris Malaguzzi, built a celebrated system of preschools from the end of the Second World War, founded on the idea that children have a hundred languages in which to express what they know.[103] The details differ. The behaviour repeats: given room, children concentrate, cooperate and learn how to learn.

The strongest case for ordinary schooling deserves to be heard. Mass schooling helped carry the world from a time when only about one person in ten could read and write, in 1820, to one in which more than four in five can.[104] Some researchers argue that children learn basic skills faster with explicit, guided teaching than with minimal guidance, and a large American evaluation in the 1970s, Project Follow Through, concluded that teaching built on

have significantly decreased." https://doi.org/10.1080/10400419.2011.627805 . Sampling procedures not reported. Checked 30 Oct 2026.

[98] Peter Gray, David F. Lancy and David F. Bjorklund, "Decline in Independent Activity as a Cause of Decline in Children's Mental Well-being: Summary of the Evidence", *Journal of Pediatrics* (online 24 Feb 2023): US walking or biking to school fell from 47.7% (1969) to 12.7% (2009); "Most of the studies are necessarily correlational and cannot, by themselves, prove causal direction." https://www.petergray.org/_files/ugd/b4b4f9_eb922e47312e43cf94b8ba5923e9993b.pdf . A commentary summarising other studies. Checked 30 Oct 2026.

[99] Terrie E. Moffitt et al., "A gradient of childhood self-control predicts health, wealth, and public safety", *PNAS* 108(7):2693–2698 (2011): "Following a cohort of 1,000 children from birth to the age of 32 y"; in a second cohort of 500 sibling pairs, "the sibling with lower self-control had poorer outcomes". Observational. https://pmc.ncbi.nlm.nih.gov/articles/PMC3041102/ . Checked at source, 31 Oct 2026.

[100] Adele Diamond and Kathleen Lee, "Interventions Shown to Aid Executive Function Development in Children 4 to 12 Years Old", *Science* 333:959–964 (2011): reviews Montessori (Lillard and Else-Quest 2006), Tools of the Mind and other programmes; "Those with the initially poorest EFs gain the most"; benefits depend on repeated practice with increasing challenge and on attention to children's emotional, social and physical development. https://www.montessoricentermn.org/wp-content/uploads/2013/06/Science_Interventions_-2011.pdf . Checked 30 Oct 2026.

[101] Lawrence J. Schweinhart and David P. Weikart, "Why Curriculum Matters in Early Childhood Education", ASCD (March 1998), on the HighScope Preschool Curriculum Comparison Study (begun 1969; full report in *Early Childhood Research Quarterly* 12(2):117-143, 1997): "The study has followed the lives of 68 young people born in poverty", "randomly assigned at ages 3 and 4 to one of three groups"; at age 23, "Only 10 percent of the High/Scope group had ever been arrested for a felony ... as compared to 39 percent of the Direct Instruction group", and "Only 6 percent of either the High/Scope or the Nursery School group needed treatment for emotional impairment or disturbance during their schooling, as compared to 47 percent of the Direct Instruction group." Results are based on reports by the young people; the authors are from the organisation that developed the HighScope model. https://www.ascd.org/el/articles/why-curriculum-matters-in-early-childhood-education . Checked at source, 31 Oct 2026.

[102] W. Steven Barnett et al., "Educational effects of the Tools of the Mind curriculum: A randomized trial" (2008), NIEER: 88 children in Tools classrooms and 122 in control classrooms; "Teachers and students were randomly assigned"; Tools improved classroom quality and children's self-regulation (rated behaviour). https://nieer.org/research-library/educational-effects-tools-mind-curriculum . Checked 30 Oct 2026.

[103] Reggio Children, "Timeline": in May 1945 the people of Villa Cella said, of their school, "We built the walls of this school together, men and women"; the municipality founded its first preschool in 1963, with Loris Malaguzzi involved "from the start". https://reggiochildren.it/en/reggio-emilia-approach/timeline-en . Reggio Children, "Reggio Emilia Approach": "A central figure in the history is Loris Malaguzzi"; the poem by Malaguzzi is "a manifesto" of the approach, built on "a child equipped with 100 languages". https://reggiochildren.it/en/reggio-emilia-approach/ . No controlled outcome studies were found. Checked at source, 31 Oct 2026.

[104] Max Roser and Esteban Ortiz-Ospina, "Literacy", Our World in Data (text revised March 2024): "only one in ten people in the world could read and write in 1820"; "More than 4 out of 5 people are now able to read". https://ourworldindata.org/literacy . Literacy rose for many reasons, mass schooling among them. Checked 30 Oct 2026.

basic skills did best on basic-skills tests, though other researchers disputed how it reached that conclusion.[105,106] Montessori's classrooms, though, were far from unguided. Her materials were designed to teach, and her teachers prepared the room and guided each child.[82] The fair reading is that structure and freedom both matter. What conventional schooling too often gives up, in exchange for order and measurable scores, is the child's own curiosity and motivation.

This is why Montessori matters for UP. The habits UP asks of people, from raising problems and asking questions to concentrating on hard work, helping others and correcting one's own mistakes, are present in young children from the start, as Figure 1.3 shows. UP's method is shared problem solving with evidence, which asks adults to do together, and with care, what young children do naturally when they explore.[19] UP holds that education should be open to everyone at every age, so that anyone can gain the skills any work requires.[21] And it measures its aim person by person: the health, happiness and wellbeing of each, never an average that hides some children's loss.[26] Montessori designed a system by watching what served each child's wellbeing and judging it by the results.[83] That is UP's method applied to childhood.

FIGURE 1.3

The habits UP depends on are present in young children

What research finds in children, and the part of UP that depends on it



Left: capacities reported in the studies named (full references in the notes). Right: the parts of UP's core that rely on them. The pairing is the author's reading, not a finding of those studies.

Figure 1.3. On the left, capacities that research finds in young children; on the right, the part of UP's method that depends on each. Schematic; the evidence for each capacity is in the notes to this section.

In UP's terms, then, Montessori shows two things at once. It shows that the habits UP depends on are part of human nature from childhood, above all the wish to take on a problem because it is there, and that the way most schooling works can wear that wish away. It also shows UP's method, watching what happens, measuring it and improving, applied to a child's whole development.[19,26] Its limit is reach. Only about 9% of Montessori schools are

[105] Paul A. Kirschner, John Sweller and Richard E. Clark, "Why Minimal Guidance During Instruction Does Not Work", *Educational Psychologist* 41(2):75–86 (2006): "minimally guided instruction is less effective and less efficient than instructional approaches" that emphasise guidance. https://www.davidlewisphd.com/courses/EDD8121/readings/2006-Kirschner_et_al.pdf . Contested; its target is minimal guidance. Checked 30 Oct 2026.
[106] Linda B. Stebbins and others, *Education as Experimentation: A Planned Variation Model, Volume IV-A: An Evaluation of Follow Through* (Abt Associates, Cambridge, Massachusetts, 1977), ERIC ED148490, https://eric.ed.gov/?id=ED148490 . The evaluation reported that "models that emphasize basic skills succeed better"; other researchers answered that "approaches so named are no more effective than are other approaches" (E. R. House, G. V. Glass, L. D. McLean and D. F. Walker, "No Simple Answer: Critique of the 'Follow Through' Evaluation", *Educational Leadership*, March 1978, https://files.ascd.org/staticfiles/ascd/pdf/journals/ed_lead/el_197803_house.pdf). For later evidence, see Stockard and others, *Review of Educational Research* 88(4), 2018. Checked at source, 31 Oct 2026.

funded by government, so most serve families who can pay or who happen to live nearby.[87] The need is vast. In 2022 the World Bank and its partners estimated that 70% of 10-year-olds in low- and middle-income countries could not read and understand a simple text.[107] Careful comparisons of how pupils fare, like the lottery studies, are rare and slow, and their authors call for larger ones.[89]

Connected, the method could reach far more children. Open records of what helps children learn, with each family's information kept private, would let any school learn from all the others, and learning could reach beyond the classroom into the tool libraries, workshops and open projects described earlier, with mentors from anywhere.[25] The gain would not stop with children. Adults who have kept their curiosity and their habit of correcting their own mistakes are exactly the people UP's method needs.

What the current system does to them

If these practices work so well, why are they not everywhere? Mostly they are held back by the system around them. They were built to solve shared problems, but they live inside an economy that rewards what pays and a politics in which support can vanish after an election, and those conditions shape what becomes of them. The ways this happens repeat from one case to the next. That is useful to know, because a problem that repeats is a problem that can be designed for. Five patterns recur. Like the successes, each turns out to be one case of something much wider, and each points to a part of UP built to answer it.

Porto Alegre, the city where participatory budgeting began, shows how support can be withdrawn from above.[49] The process there had always depended on political support from whoever ran the city, and it began to weaken after the party that created it lost power there in 2004.[108,50] In 2017 the city suspended it for two years, citing a lack of resources and the need for reform, and in 2018 thousands of projects that residents had approved in earlier years were still waiting to be built.[49] The decision to stop came from those who controlled the budget, while the residents who used the process had kept it going for nearly three decades.

Canada shows a gentler version of the same pattern, in homelessness. In 2008 the federal government put $110 million into a research project called At Home/Chez Soi, which ran from 2009 to 2013 in five cities, from Vancouver to Moncton.[109] More than two thousand homeless people took part, and they were assigned at random either to the usual services or to Housing First, an approach that offers people a home first, with support to follow, instead of asking them to fix their other problems before they can be housed.

The results were striking. Over two years, the people offered a home first spent 73% of their time stably housed, against 32% for those who received the usual services.[110] Figure 1.4 shows the gap. Yet the trial ran on federal research money, and what happened next depended on whoever paid after it. Two years after the demonstration ended, researchers found that nine of its twelve programmes were still running and three were not.[111] The evidence carried most of the work through, but not all of it, because the programmes' future was decided by their funders, not by the people they housed.

[107] World Bank, UNESCO, UNICEF, FCDO, USAID and the Bill & Melinda Gates Foundation, *The State of Global Learning Poverty: 2022 Update* (23 Jun 2022): "an estimated 70% of 10-year-olds unable to understand a simple written text"; "This rate was 57% before the pandemic". Learning poverty is measured among 10-year-olds in low- and middle-income countries. https://www.worldbank.org/en/news/press-release/2022/06/23/70-of-10-year-olds-now-in-learning-poverty-unable-to-read-and-understand-a-simple-text . An estimate. Checked 31 Oct 2026.

[108] Abers R, Brandão I, King R, Votto D, *Porto Alegre: Participatory Budgeting and the Challenge of Sustaining Transformative Change*, World Resources Report case study (World Resources Institute, June 2018): "political commitment to the PB was key to its success"; the model "worked well for small-scale, neighborhood-level infrastructure" but "it has been less effective with larger-scale projects"; "In March 2017, a new mayor announced the PB's suspension for a two-year period". https://africa.wri.org/sites/default/files/wrr-case-study-porto-alegre_1.pdf . WRI is an advocacy organisation. Checked at source, 31 Oct 2026.

[109] Mental Health Commission of Canada, *At Home/Chez Soi* cross-site executive summary: "In 2008, the federal government invested $110 million for a five-year research demonstration project"; the cities were "Vancouver, Winnipeg, Toronto, Montréal, and Moncton"; "Data collection began in October 2009 and ended in June 2013"; "2,148 individuals were enrolled for two years of follow-up". https://mentalhealthcommission.ca/wp-content/uploads/2021/09/At2520Home2520Final2520Report2520-2520Exec2520Summary2520-2520ENG_0.pdf . Checked 29 Oct 2026.

[110] Goering P et al., *National At Home/Chez Soi Final Report* (Mental Health Commission of Canada, 2014), ch. 4, p. 17: "Over the two years of the study, participants in HF spent an average of 73 per cent of their time in stable housing compared with 32 per cent in TAU." In the last six months, 62 per cent of Housing First participants and 31 per cent of those receiving treatment as usual were "housed all of the time". The Commission's executive summary says 2,148 people were enrolled in five cities (note 109). https://mentalhealthcommission.ca/wp-content/uploads/2021/09/mhcc_at_home_report_national_cross-site_eng_2_0.pdf . Checked at source, 31 Oct 2026.

[111] Geoffrey Nelson, Rachel Caplan, Timothy MacLeod and others, "What happens after the demonstration phase? The sustainability of Canada's At Home/Chez Soi Housing First programs for homeless persons with mental illness", *American Journal of Community Psychology* 59(1-2):144-157 (2017), abstract: the study looked at the programmes "2 years after the end of the demonstration phase"; "The findings revealed that nine of the 12 HF programs (75%) were sustained". https://doi.org/10.1002/ajcp.12119 ; abstract in Europe PMC (PubMed 28134440): https://www.ebi.ac.uk/europepmc/webservices/rest/search?query=EXT_ID:28134440%20AND%20SRC:MED&resultType=core&format=json . Checked at source, 31 Oct 2026.

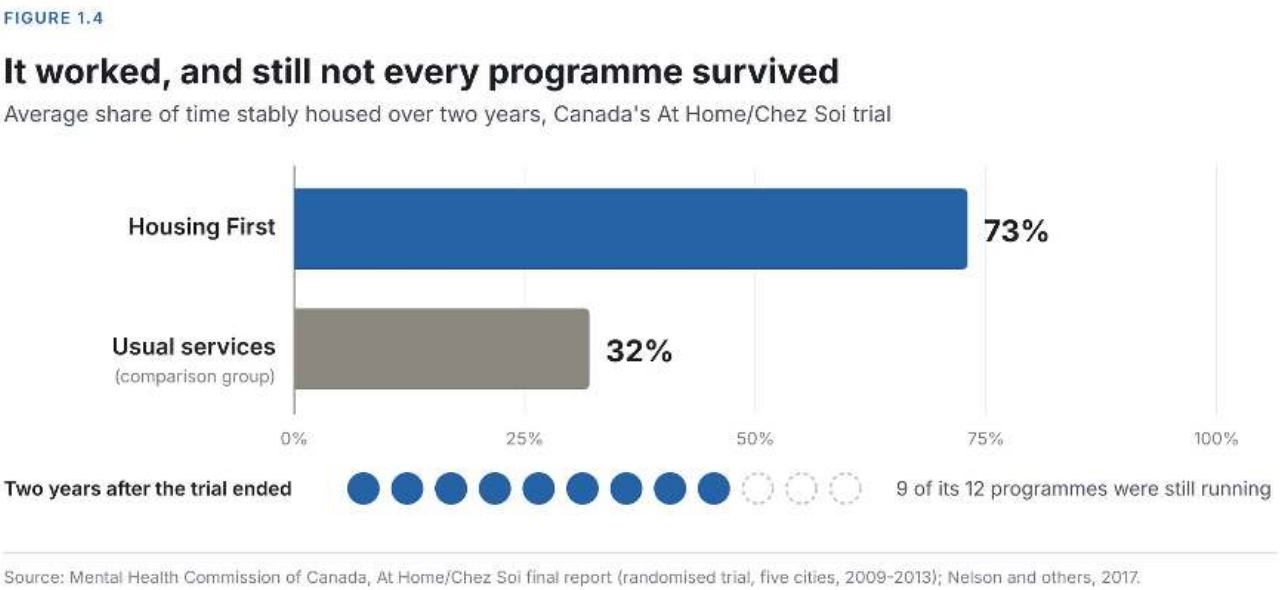


Figure 1.4. Average share of time stably housed over two years in Canada's At Home/Chez Soi trial. Sources: Mental Health Commission of Canada (results); Nelson and others, 2017 (what happened to the programmes afterwards). Both are in the notes to the paragraphs above.

Canada had seen this before. From 1974 to 1979 the town of Dauphin, Manitoba, took part in an experiment called Mincome, which guaranteed a basic income to families who needed it. It ended in 1979, after changes of government in Manitoba in 1977 and in Ottawa in 1979, when the incoming governments judged it too expensive, and the data it had gathered went unstudied for years.[112] When the economist Evelyn Forget later analysed health records from the period, she found an 8.5% fall in hospitalisations among participants compared with people outside the programme.[113] Decades later Ontario began a basic income pilot with about 4,000 low-income participants. In July 2018 the newly elected government cancelled it partway through, saying that the study was not the answer Ontario families needed.[114] Whatever one thinks of basic income, the experiment was stopped before it could finish answering its own question.

England tells a similar story about young children. Its Sure Start programme set up children's centres offering health and family services in poorer areas. Researchers at the Institute for Fiscal Studies found that it significantly reduced hospitalisations among children by the time they finished primary school, above all in poorer neighbourhoods, an effect equivalent to preventing around 5,500 hospitalisations of 11-year-olds a year.[115] Yet local authority spending on early-intervention services fell by half between 2010-11 and 2020-21, and hundreds of centres closed: the Department for Education counts around 590 closures between April 2010 and June 2019,

[112] Evelyn L. Forget, "The Town with No Poverty: The Health Effects of a Canadian Guaranteed Annual Income Field Experiment", *Canadian Public Policy* 37(3):283-305 (2011): the experiment ran "(1974 to 1979)"; hospitalisation rate down "8.5 percent ... for participants relative to controls". https://ideas.repec.org/a/cpp/issued/v37y2011i3p283-305.html . Manitoba changed government in the election of 11 October 1977 (Manitoba Historical Society, https://mhs.mb.ca/docs/events/provincialelection1977.shtml) and Canada on 22 May 1979 (Elections Canada, https://www.elections.ca/content.aspx?section=vot&dir=bkg&document=heo&lang=e). Canadian Museum for Human Rights, "Manitoba's Mincome experiment" (10 Aug 2022): "The program was considered too expensive by the incoming provincial and federal governments and was cancelled"; "All the data collected by the Mincome experiment remained unstudied until the 1980s." https://humanrights.ca/story/manitobas-mincome-experiment . (The museum page misdates Manitoba's election as 1979; the election record is used here.) Checked at source, 31 Oct 2026.

[113] Evelyn L. Forget, "The Town with No Poverty: The Health Effects of a Canadian Guaranteed Annual Income Field Experiment", *Canadian Public Policy* 37(3):283–305 (2011): "an 8.5 percent reduction in the hospitalization rate for participants relative to controls." https://ideas.repec.org/a/cpp/issued/v37y2011i3p283-305.html . Read from the abstract. Checked 30 Oct 2026.

[114] Kawartha Now, "Ford government scrapping basic income pilot project" (31 Jul 2018), quoting the government backgrounder: "The three-year study of no-strings attached payments is not the answer Ontario families need." CBC News (2018): about 4,000 low-income participants; Minister Lisa MacLeod said officials reported it was failing to help people become "independent contributors to the economy". https://kawarthanow.com/2018/07/31/ford-government-scrapping-basic-income-pilot-project/ ; https://www.cbc.ca/news/canada/basic-income-pilot-project-ford-cancel-1.4771343 . Checked 30 Oct 2026.

[115] Sarah Cattan, Gabriella Conti, Christine Farquharson and Rita Ginja, *The health effects of Sure Start* (Institute for Fiscal Studies, June 2019): "the poorest 30% of areas saw the probability of any hospitalisation fall by 11% at age 10 and 19% at age 11"; greater coverage "is equivalent to averting 5,500 hospitalisations of 11-year-olds each year"; the NHS saving is "about 0.4% of average annual spending on Sure Start" (6% of its budget with wider lifetime costs). https://dera.ioe.ac.uk//33510/1/R155-The-health-effects-of-Sure-Start.pdf . Checked at source, 31 Oct 2026.

while a 2018 study suggested that more than 1,000 might have closed.[116] The researchers were candid that the savings to the health service were small next to the programme's cost; the case for Sure Start rests on its other benefits.[115] Governments with tight budgets must choose, and this book does not pretend otherwise. Still, the choice was made by people who did not live with the results.

The pattern recurs. Good evidence is gathered, the money comes from someone who does not live with the results, and when that someone changes, the work stops or shrinks. UP answers it in two ways. Decisions stay with the people they affect, so a practice that works for them does not end because a budget holder somewhere else changed their mind.[21] And the shared record is truthful, public and lasting, so evidence like Mincome's is never left unread in a box for years.[47,25] Evidence informs the choice, and the people affected make it.[19] None of that removes the need for resources, which is why UP's middle stage is about building a productive base of its own.

Enclosure is a different danger, in which something built in the open is fenced in from above. Android is built on Linux, which anyone may use and change, but one company, Google, controlled the layer on top of it. Google placed illegal restrictions on the makers of Android phones and on mobile network operators, and in 2018 the European Commission fined it €4.34 billion for them.[117] The open core stayed open, while the power sat in the layer above it.

Enclosure is an old word for an old practice. Between 1604 and 1914 the English Parliament passed more than 5,200 acts that enclosed land, turning some 6.8 million acres that had been worked in common into private holdings.[118] The fence has since moved from fields to knowledge and code. Whether it surrounds a meadow, a body of research or a piece of software, the effect is similar. Something many people built or used together comes to be controlled by a few, and those few decide who may use it and at what price.

Scientific publishing shows how profitable control of knowledge can be: in 2023 the scientific, technical and medical business of RELX, the company that owns the publisher Elsevier, reported an adjusted operating margin of 38%.[119] Open software has been fenced in again and again. In January 2021 Elastic, the company behind the widely used search engine Elasticsearch, moved it from an open licence to more restrictive ones, and within a week Amazon announced that it would maintain an open version, which became OpenSearch.[120,121] HashiCorp did the same with its tool Terraform in August 2023, and the next month the Linux Foundation launched OpenTofu, a community-run version kept under an open licence.[122,123] In March 2024 Redis followed, and eight days later the Linux Foundation launched Valkey.[124,125] Each company had its reasons. All three said that large cloud providers

[116] Department for Education, "Number of children's centres, 2003 to 2019" (November 2019): centres "peaked at around 3,620 children's centres in 2010 and 2011" and "around 590 children's centres were identified as having closed since the 30 April 2010". https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/844752/Number_of_Children_s_Centres_2003_to_2019_Nov2019.pdf . A 2018 study, George Smith and others, *Stop Start: Survival, decline or closure? Children's centres in England, 2018*, counted registered centres and concluded that "more than 1,000 centres nationally might have closed" (https://www.suttontrust.com/wp-content/uploads/2018/04/StopStart-FINAL.pdf); the two counts differ because they count different things. Action for Children, Barnardo's, NCB, NSPCC and The Children's Society, *Stopping the spiral* (July 2022): local authority spending on early intervention "fell by £1.9 billion between 2010-11 and 2020-21, down from £3.8 billion". https://www.actionforchildren.org.uk/our-work-and-impact/policy-work-campaigns-and-research/policy-reports/stopping-the-spiral/ . Checked at source, 31 Oct 2026.

[117] European Commission, press release IP/18/4581 (18 July 2018): a €4.34 billion fine on Google for illegal restrictions on Android device makers and mobile network operators. https://ec.europa.eu/commission/presscorner/detail/en/IP_18_4581 (step 3 evidence).

[118] UK Parliament, Living Heritage, "Enclosing the land" (Enclosure by Act): "between 1604 and 1914 over 5,200 enclosure Bills were enacted by Parliament", relating to "just over a fifth of the total area of England, amounting to some 6.8 million acres". https://www.parliament.uk/about/living-heritage/transformingsociety/towncountry/landscape/overview/enclosingland/ . Checked at source, 31 Oct 2026.

[119] RELX PLC, full-year 2023 results (15 Feb 2024): Scientific, Technical & Medical segment "Adjusted operating margin 37.8% 38.0%" (2022, 2023). https://www.rns-pdf.londonstockexchange.com/rns/1979D_1-2024-2-14.pdf . The whole segment, not journals alone. Checked 30 Oct 2026.

[120] Elastic, blog post on its licensing change (14 Jan 2021): Elasticsearch and Kibana moved from "Apache 2.0-licensed source code" to "dual licensed under Server Side Public License (SSPL) and the Elastic License", to stop cloud providers "offering Elasticsearch and Kibana as a service without contributing back". https://www.elastic.co/blog/licensing-change . Elastic later added the open AGPL licence: https://www.elastic.co/blog/elasticsearch-is-open-source-again . Checked 30 Oct 2026.

[121] AWS Open Source Blog, "Stepping up for a truly open source Elasticsearch" (21 Jan 2021): "AWS will step up to create and maintain a ALv2-licensed fork of open source Elasticsearch and Kibana." https://aws.amazon.com/blogs/opensource/stepping-up-for-a-truly-open-source-elasticsearch/ . Checked 30 Oct 2026.

[122] Armon Dadgar, HashiCorp blog (10 Aug 2023): future releases move from the Mozilla Public License v2.0 to the Business Source License v1.1; "there are other vendors who take advantage of pure OSS models". https://www.hashicorp.com/en/blog/hashicorp-adopts-business-source-license . Checked 30 Oct 2026.

[123] The Linux Foundation, "Linux Foundation Launches OpenTofu: A New Open Source Alternative to Terraform" (20 Sep 2023): "OpenTofu is an open and community-driven response to Terraform's recently announced license change". https://www.linuxfoundation.org/press/announcing-opentofu . Checked 30 Oct 2026.

[124] Redis, blog (20 Mar 2024): Redis "will no longer be distributed under the three-clause Berkeley Software Distribution (BSD)"; "the majority of Redis' commercial sales are channeled through the largest cloud service providers, who commoditize Redis' investments and its open source community." https://redis.io/blog/redis-adopts-dual-source-available-licensing/ . Redis later added the AGPL licence: https://redis.io/blog/agplv3/ . Checked 30 Oct 2026.

[125] The Linux Foundation, "Linux Foundation Launches Open Source Valkey Community" (28 Mar 2024): contributors regrouped "in response to the recent license change"; "Valkey will be community-driven without surprise license changes that break trust". https://www.linuxfoundation.org/press/linux-

were selling services built on their software without contributing back, and Elastic and Redis later offered an open licence again.[120,124]

UP's answer to enclosure is built into its core. Its rules, code, records and decisions are public, and the knowledge, code, data and designs UP produces stay inside UP, where everyone taking part may use, study and improve them and no one may enclose them.[25] The software forks show the other half of the answer. Because the code was open, the people who depended on it could split off and carry on, and each split became a real-world test of two ways of running a project. UP treats splits like these as healthy, a way for rival ideas to be tested in practice instead of argued over forever.[126]

Some dangers work from the inside. Open projects can be captured by a small group, or can close themselves off while trying to protect what they have built. English Wikipedia's active editors peaked in March 2007, and researchers traced the decline that followed to the rules and automated tools built to defend the encyclopaedia's quality, which turned many well-meaning newcomers away.[127] On the Croatian-language Wikipedia, a small group of administrators took control of the project for most of a decade, from 2011 to 2020.[128] Both problems grew from inside, from the way each open project had organised itself.

Neither problem is new. In 1911 the sociologist Robert Michels, studying political parties, wrote that "democracy leads to oligarchy, and necessarily contains an oligarchical nucleus".[129] Sixty years later the American feminist Jo Freeman warned groups that rejected all formal structure that "there is no such thing as a structureless group". Refusing to write the rules down, she argued, becomes "a way of masking power", because informal elites form anyway.[130] Her warning fits the Croatian case closely. Researchers who studied it found that a preference for personal, informal ways of organising over formal ones was one of the conditions that opened the door to capture.[131]

Neither law is iron, though. A study of four long-standing British worker co-operatives found that the drift toward ordinary hierarchy is not inevitable, and that co-operatives can renew their democracy by regularly reviewing how they are run.[132] The Serbian Wikipedia, similar to the Croatian one in size and age and facing similar threats, largely avoided capture.[131] And the Wikimedia Foundation studied what had gone wrong in the Croatian edition and recommended a robust local system of governance.[133] A community that stood alone might never have been corrected. This one was part of something larger, and the larger body could see what the smaller one could not.

UP treats concentrated power, in any form, as a standing danger that everyone watches for and spreads out again.[22] It has no offices to capture, since work is shared out rather than held, and each real person has one voice.[21,134] Its records are open, so an informal elite is easier to see. And because no community in UP stands alone,

foundation-launches-open-source-valkey-community . Checked 30 Oct 2026.

[126] UP's agreed position that splits are good, because they let different ways be tested in the real world. Full wording in "The core of UP".

[127] Aaron Halfaker, R. Stuart Geiger, Jonathan T. Morgan and John Riedl, "The Rise and Decline of an Open Collaboration System: How Wikipedia's Reaction to Popularity Is Causing Its Decline", *American Behavioral Scientist* 57(5):664-688 (2013): active editors "peaked in March of 2007 at 56,400"; "a sharp decline in the retention of newcomers is the cause", with "the algorithmic tools used to reject contributions ... implicated as key causes of decreased newcomer retention". Authors' preprint: https://stuartgeiger.com/papers/abs-rise-and-decline-wikipedia.pdf . Checked at source, 31 Oct 2026.

[128] Zarine Kharazian, Kate Starbird and Benjamin Mako Hill, "Governance Capture in a Self-Governing Community: A Qualitative Comparison of the Croatian, Serbian, Bosnian, and Serbo-Croatian Wikipedias", *Proceedings of the ACM on Human-Computer Interaction* 8(CSCW1):1–26 (2024). https://doi.org/10.1145/3637338 ; title and details as recorded by Crossref, https://api.crossref.org/works/10.1145/3637338 . The preprint (arXiv:2311.03616, 2023) carries the shorter title "Governance Capture in a Self-Governing Community: A Qualitative Comparison of the Serbo-Croatian Wikipedias" and says that "between at least 2011 and 2020, the Croatian language version of Wikipedia was taken over by a small group of administrators". https://arxiv.org/abs/2311.03616 . Checked at source, 31 Oct 2026.

[129] Robert Michels, *Political Parties: A Sociological Study of the Oligarchical Tendencies of Modern Democracy* (German 1911; English trans. Eden and Cedar Paul, 1915), preface: "Democracy leads to oligarchy, and necessarily contains an oligarchical nucleus." https://archive.org/stream/politicalparties00mich/politicalparties00mich_djvu.txt . Checked 30 Oct 2026.

[130] Jo Freeman ("Joreen"), "The Tyranny of Structurelessness" (talk 1970; published 1972): "Contrary to what we would like to believe, there is no such thing as a structureless group"; "Thus structurelessness becomes a way of masking power"; "Elites are not conspiracies." https://www.jofreeman.com/joreen/tyranny.htm . Written about the women's movement. Checked 30 Oct 2026.

[131] Kharazian, Starbird and Hill (see the note on the Croatian Wikipedia above), arXiv:2311.03616: the capture arose from "the convergence of three features", including "a preference for personalistic, informal forms of organization over formal ones"; the Serbian Wikipedia, "roughly similar in size and age", "faced similar threats" and "seems to have largely avoided this fate." https://ar5iv.labs.arxiv.org/html/2311.03616 . Checked 30 Oct 2026.

[132] Chris Cornforth, "Patterns of co-operative management: Beyond the degeneration thesis", *Economic and Industrial Democracy* 16(4):487–523 (1995): "degeneration is not inevitable as cooperatives age and grow"; management structures "will need to be regularly reviewed and changed" to "give renewed expression to democracy". https://oro.open.ac.uk/15859 . Checked 30 Oct 2026.

[133] Wikimedia Foundation, "Croatian Wikipedia Disinformation Assessment-2021" (2021). https://meta.wikimedia.org/wiki/Croatian_Wikipedia_Disinformation_Assessment-2021 . The assessment found "numerous examples of systemic, deeply-rooted bias and disinformation" and called the situation "project capture" (as quoted in Z. Kharazian, K. Starbird and B. M. Hill, arXiv:2311.03616, https://ar5iv.labs.arxiv.org/html/2311.03616); The Signpost (27 June 2021) reports that the Croatian project "had been dominated by ideologically driven users" and that the community should "continue re-establishing a robust local governance system". https://signpost.news/2021-06-27/Disinformation_report . Checked at source, 31 Oct 2026.

[134] Settled alongside the core: one voice per person; every account belongs to one unique real person. Full wording in "The core of UP".

a group that is captured can be noticed and helped by the others, as the Croatian edition of Wikipedia was by its wider community. Connection, in other words, is itself a check on power.

Other practices are held back before they start, because few like them get started at all. Worker co-operatives are a good test, because they are businesses owned and run by the people who work in them. Once founded, they last: in France they survive as well as conventional firms, and in Uruguay worker-managed firms were 29% less likely to close in any given period.[38,135] The difficulty is at the beginning, since few of them are founded in the first place.[38]

The numbers in the United States show how small the base is. A 2025 census of the sector found 820 worker co-operatives employing about 13,520 people, in a country with tens of millions of small businesses.[136,137] The sector is growing, but from almost nothing. Researchers suggest one reason is money: worker co-operatives may have limited access to capital, since their owners are the people who work in them.[38] Mondragon met exactly this problem when it founded its own bank in 1959 as a support body for the co-operatives, and by 1966 the group counted thirty-six co-operatives where a decade earlier there had been one.[30] A practice that has to raise money on the current system's terms will tend to stay small. One that can draw on shared resources has a better chance.

UP's answer is to make starting easier by sharing what each start needs: open designs, shared tools, shared knowledge of what has worked and, in the middle stage, shared production.[24] Inventing solutions together is UP's main activity, and that includes inventing better ways for new practices to begin.[20] A group of neighbours who want to open a tool library, a repair workshop or a worker co-operative should not have to rediscover everything that thousands of others have already learned.

Finally there is the pull of the system around them, and Mondragon felt it sharply. The first stove factory grew over the decades into Fagor Electrodomésticos, an appliance maker with plants in several countries. After Spain's housing market deteriorated from 2007, Fagor ran large deficits, and in November 2013 it filed for bankruptcy, putting some 5,600 jobs at risk.[138,139,140] Here the co-operative difference showed. Within two months, 417 of Fagor's worker-members were already working in other Mondragon co-operatives, and older members were offered early retirement.[141] A study of the closure found that this cooperation between co-operatives helped surplus workers back into jobs quickly.[141]

Even so, the group had been growing in ways that make it look more like an ordinary multinational company. By 2019, owner-members made up only 32 to 45% of the people working in Mondragon's sectors, and about 18% of

[135] Burdín G, "Are worker-managed firms more likely to fail than conventional enterprises? Evidence from Uruguay", *ILR Review* 67(1):202–238 (2014): a 29% lower dissolution hazard for worker-managed firms. https://ideas.repec.org/a/sae/ilrrev/v67y2014i1p202-238.html (step 3 evidence).

[136] Democracy at Work Institute and US Federation of Worker Cooperatives, *State of the Sector of Worker Cooperatives and Democratic Workplaces 2025*: "We identified 820 firms that employ an estimated 13,520 workers." https://eohub.rutgers.edu/wp-content/uploads/2026/03/2025-STATE-OF-THE-SECTOR-2.pdf . A partial, self-reported census; the sector grew about a third since 2020. Checked 30 Oct 2026.

[137] US Small Business Administration, Office of Advocacy, "Frequently Asked Questions About Small Businesses 2026" (3 Feb 2026): "There are 36,207,130 small businesses in the United States." https://advocacy.sba.gov/2026/02/03/advocacy-releases-frequently-asked-questions-about-small-businesses-2026/ . Includes sole proprietors with no employees. Checked 30 Oct 2026.

[138] AFP, via Malay Mail, "Spanish appliance maker Fagor files for bankruptcy" (13 Nov 2013): "Fagor, employing 5,700 people worldwide, said today it had filed for bankruptcy"; Mondragon "announced October 30 it was refusing to pour in money to rescue the firm." https://www.malaymail.com/news/money/2013/11/13/spanish-appliance-maker-fagor-files-for-bankruptcy/561943 . A news agency report. Checked at source, 31 Oct 2026.

[139] Eurofound, European Restructuring Monitor, "Fagor, Closure in Spain" (announced 30 Oct 2013): "The company had run large deficits after the Spanish housing market had deteriorated from 2007 on"; "the restructuring will affect 2,093 workers, of which 1,603 are members of the cooperative"; "Globally, the company operates 13 sites, employing 5,630 staff." https://apps.eurofound.europa.eu/restructuring-events/detail/76090 . Checked 29 Oct 2026.

[140] Kasmir S, "The Mondragon Cooperatives: Successes and Challenges", *Global Dialogue* (International Sociological Association, 13 Feb 2016): Fagor was "a victim of the 2008 financial crisis that shocked the Spanish housing market"; "The bankruptcy threatened 5,600 jobs"; members "took early retirement or transferred to other coops". https://globaldialogue.isa-sociology.org/articles/the-mondragon-cooperatives-successes-and-challenges . Checked at source, 31 Oct 2026.

[141] CECOP-CICOPA Europe, "The Mondragon Corporation has already relocated 417 worker-members from Fagor Electrodomésticos" (9 Jan 2014): "A total of 417 members of Fagor Electrodomésticos are already working in other cooperatives"; early retirement offered "from 55 years onwards". https://www.cecop.coop/works/the-mondragon-corporation-has-already-relocated-417-worker-members-from-fagor-electrodomesticos . A co-operative federation reporting Mondragon's figures. Saioa Arando and Iñaki Arenaza Bengoa, "Inter-Cooperation Mechanisms in Mondragon: Managing the Crisis of Fagor Electrodomésticos", *Advances in the Economic Analysis of Participatory & Labor-Managed Firms* vol. 18 (Emerald, 2018), pp. 7–35: "the closure of the cooperative was largely caused by market conditions", and the mechanisms of inter-cooperation "contributed to a rapid resumption of the employment situation of surplus personnel". https://www.emerald.com/insight/content/doi/10.1108/S0885-333920180000018008 ; Crossref record with abstract, https://api.crossref.org/works/10.1108/S0885-333920180000018008 . Checked at source, 31 Oct 2026.

its workforce was in subsidiaries abroad.[142] By that measure, a movement built on worker ownership employed more people who were not owners than people who were.

Britain's building societies show how strong that pull can be. These were mutual savings and mortgage societies, owned by their members. In 1989 Abbey National converted itself into a bank owned by shareholders, and in 1997 Halifax, Alliance & Leicester, Woolwich and Northern Rock followed, with Bradford & Bingley in 2000.[143] None of them survives today as an independent bank. Some were bought by larger banks, and in February 2008 Northern Rock was taken into public ownership.[143] Institutions their members had built over generations passed, within a few years, into the ordinary system around them.

Montessori's method shows a gentler version of the same drift. It began in a single room for the children of working families in a poor district of Rome. The 2022 census estimated that only about 9% of Montessori schools today are funded by government, so in most places a way of schooling first offered to those children now depends on other sources of money.[87] In the United States the word "Montessori" is not protected as a trademark, so any school may use it, whatever its quality.[144] In the United States, about four in five of the schools counted in a national census are private.[145]

The pull seems to work through money and competition. A co-operative that must compete on the current system's terms can come to take on that system's habits, as Mondragon's growth through subsidiaries suggests, and a school that must charge fees will mostly serve those who can pay them. UP's answer is to change the terms, never to forbid the choice. Members keep the right to leave at any time and take what is theirs.[47] What UP produces stays in UP, so a later generation cannot sell off what an earlier one made in common.[25] And as more needs are met from UP's own production in the middle stage, the pressure to compete on the current system's terms would ease.[24]

Withdrawn support, enclosure, capture from within, too few beginnings and the pull of the system around them: these are the patterns that keep the pieces small. Each practice works largely alone; few share tools, records or people with the others; and each has to survive inside a system built for other goals.[24] The patterns say less about whether cooperation works than about the conditions it has had to work in. And each is a problem that repeats, which means it is a problem that can be designed for.

What connecting them would gain

Before asking what connecting these practices would add, it is worth seeing what all of them have in common, because it is the most important thing in this chapter. Look again at who did the work, and why. The farmers of Kaira refused to sell a drop of milk to the merchants for fifteen days to win a dairy of their own.[3] Volunteers have crewed Britain's lifeboats since 1824, and most of America's firefighters are volunteers.[67,66] About 600 volunteers, most of them far away, mapped a country struck by an earthquake, and in 80 countries people give their blood to strangers without being paid for it.[71,65] After disasters, much of the searching and rescuing is done by local residents.[70] In many of these cases nobody was paid, nobody was punished for staying at home, and no prize was on offer. The problem was there, it needed solving, and for a great many people that was reason enough.

The same drive shows up at the very start of life. In a study published in *Science* in 2006, psychologists set up small problems in front of 24 infants aged eighteen months, such as an adult dropping a marker and reaching for it in vain. Without being asked, and with no reward or praise, nearly all of the infants helped.[146] Two years later the same researchers found something more telling. Twenty-month-olds who were given a toy each time they helped

[142] Reuten G, "The Mondragon Worker Cooperatives' Employment Record 1983-2019", *Journal of Labor and Society* 26(3):336-375 (2023): in 2019 the co-operatives employed over 81,000 workers; "Depending on the sector, in 2019 this proportion is 32-45%" of total employment were owner-members (32-74% of employment within the co-operatives), and subsidiaries abroad employed about 14,500 (18%). https://dare.uva.nl/id/a08588f9-6866-4476-bce4-fb425bc30692 . Earlier version: Euricse Working Paper 118 (2021), https://dare.uva.nl/id/b3080656-1109-4b7e-b5c1-fa68b007dada . Mondragon's own annual reports for 2023 and 2025 give no group-wide split of members and employees. Checked at source, 31 Oct 2026.

[143] The Northern Rock plc Transfer Order 2008 (SI 2008/432), made under the Banking (Special Provisions) Act 2008 on 21 February 2008: "This Order comes into force on 22nd February 2008"; "the shares in Northern Rock are transferred to the Treasury Solicitor as nominee of the Treasury." https://www.legislation.gov.uk/uksi/2008/432/made . Building Societies Association, "List of demutualised building societies" (page dated 7 July 2026): Abbey National "Converted to a bank on 12 July 1989"; Halifax 2 June 1997; Alliance & Leicester 21 April 1997 (acquired by Santander in October 2008); Woolwich 7 July 1997 (taken over by Barclays in October 2000); Northern Rock 1 October 1997; Bradford & Bingley 4 December 2000. https://www.bsa.org.uk/information/consumer-factsheets/general-information/list-of-demutualised-building-societies . The BSA is a trade body for mutuals; the dates match the statute and the other sources read. Checked at source, 31 Oct 2026.

[144] Association Montessori Internationale/USA, "Choosing a School": "the name Montessori isn't trademarked" and "any school can use it, regardless of whether they follow Dr. Maria Montessori's educational principles." https://www.amiusa.org/choosing-a-school . Checked at source, 31 Oct 2026.

[145] Debs et al. 2022 (see the census note above): "2,728 Montessori schools have participated in the U.S. Montessori census to date"; "of these schools, 579 are publicly funded programs", so about 79% of participating US schools are private (Claude's calculation). https://journals.ku.edu/jmr/article/download/18675/16948 . Checked at source, 31 Oct 2026.

went on to help less than children who had simply been thanked or given no response at all.[147] Montessori saw it in a four-year-old who would not be distracted from her cylinders, and Susan Engel saw it in young children who explored a new object as soon as an adult encouraged them.[84,93] The drive to take on a problem and work at it with others is there before anyone has been taught to expect a reward, and, as the volunteer firefighters and disaster rescuers earlier in this chapter show, it is still there in adults facing real danger.[66,70]

Rewards and punishments can even get in the way. In a study of ten day-care centres in Haifa, Israel, economists introduced a small fine for late collection in six of them. Late arrivals rose instead of falling, to almost twice their earlier level where the fine applied, and stayed high after it was removed; the parents seem to have treated the fine as a price for being late.[148] In a survey in two Swiss communities being considered for a nuclear waste repository, about half the residents said they would accept it, but when compensation was added to the question, support fell to about a quarter.[149] In Sweden, offering women a small cash payment to become blood donors cut the share who signed up by almost half, while letting them pass the payment to charity removed the effect.[150]

The experiments on rewards described earlier in this chapter point the same way: when people expect a tangible reward for something they already want to do, they tend to want to do it less.[95] None of this means that pay and rules never work. They often do, and a review in a leading economics journal sets out when incentives work as intended and when they backfire or weaken the reasons people already had for acting.[151] But it does mean that people very often work together on a problem in spite of the rewards and punishments meant to steer them, not because of them.

Montessori's classrooms show why this matters. The desire to solve problems with others is part of human nature from birth, and a way of schooling built on fixed desks, prizes and penalties can wear it away, as the falling engagement of older pupils suggests.[85,96] UP reads the current system the same way. A system that relies mainly on money, rewards and punishment to get things done teaches people to wait for them, and leaves the drive that built every practice in this chapter to survive on its own. UP is built the other way round. No one is forced to join or to work, problems are offered as work to anyone willing to take them on, and time and money earn recognition but never power.[23,19,152] It starts from the motivation people already have, to solve a problem because it is there, and gives that motivation room, tools and company. That is the deepest reason to recognise these practices: they show that what UP needs from people is already in them.

Even so, a careful reader may still ask a blunt question. So what? Co-operatives, commons, libraries, lifeboats and open software are doing well enough in the current system. Why should anyone recognise them as parts of

[146] Felix Warneken and Michael Tomasello, "Altruistic Helping in Human Infants and Young Chimpanzees", *Science* 311(5765):1301-1303 (3 March 2006): "we presented 24 18-month-old infants with 10 different situations"; "In no case did the infant receive any benefit (reward or praise) for helping"; "22 of the 24 infants helped in at least one of the tasks"; the experimenter never asked for help. https://doi.org/10.1126/science.1121448 ; bibliographic record and abstract (children "as young as 18 months of age (prelinguistic or just-linguistic) quite readily help others"): https://scholars.duke.edu/publication/1457987 ; full text read in an archived author copy: https://web.archive.org/web/20240704025705/http://www.wisebrain.org/papers/AltruismInfantsChimps.pdf . Checked at source, 31 Oct 2026.

[147] Felix Warneken and Michael Tomasello, "Extrinsic Rewards Undermine Altruistic Tendencies in 20-Month-Olds", *Developmental Psychology* 44(6):1785-1788 (2008): "After 20-month-old infants received a material reward during a treatment phase, they subsequently were less likely to engage in further helping during a test phase as compared with infants who had previously received social praise or no reward at all"; this "suggests that even the earliest helping behaviors of young children are intrinsically motivated". The final sample was 36 German children, about 20 months old, 12 in each of three conditions (material reward, praise, no response); the reward was a toy cube handed over when the child helped. https://scholars.duke.edu/publication/1458228 (record); full text read at https://ppkdocs.elte.hu/th/felveteli/letoltheto_dokumentumok_2022/pszicho_MA_mintacikkek/Angol_nyelvu_szakcikkminta_1 . Small sample. Checked at source, 31 Oct 2026.

[148] Uri Gneezy and Aldo Rustichini, "A Fine Is a Price", *Journal of Legal Studies* 29(1):1-17 (2000): "Our data include observations of 10 day-care centers over a period of 20 weeks"; "At the beginning of the fifth week we introduced a fine in six of the 10 day-care centers" (the other four were a control group); the rate "finally settled, at a level that was higher, and almost twice as large as the initial one"; "After the fine was removed no reduction occurred". https://rady.ucsd.edu/_files/faculty-research/uri-gneezy/fine.pdf . Checked at source, 31 Oct 2026.

[149] Bruno S. Frey and Felix Oberholzer-Gee, "The Cost of Price Incentives: An Empirical Analysis of Motivation Crowding-Out", *American Economic Review* 87(4):746-755 (1997): "In spring 1993, 305 interviews were conducted in these communities", two adjacent communities in central Switzerland designated as potential sites for a repository for low- and mid-level radioactive waste; "50.8 percent of the respondents agreed to accept the nuclear waste repository without compensation", and "the level of acceptance dropped to 24.6 percent when compensation was offered"; intrinsic "motivation is partially destroyed when price incentives are introduced" (p. 746). Full text read at https://www.Gwern.net/doc/economics/1997-frey.pdf ; bibliographic record https://ideas.repec.org/a/aea/aecrev/v87y1997i4p746-55.html . Stated willingness in an interview about a hypothetical town-hall vote, not an actual vote. Checked at source, 31 Oct 2026.

[150] Carl Mellström and Magnus Johannesson, "Crowding Out in Blood Donation: Was Titmuss Right?", *Journal of the European Economic Association* 6(4):845-863 (2008): a field experiment in Sweden with three treatments (no payment; a payment of "SEK 50 (≈ $7)"; a choice between the payment and giving SEK 50 to charity); "For men the supply of blood donors is not significantly different among the three experimental groups. For women there is a significant crowding-out effect. The supply of blood donors decreases by almost half when a monetary payment is introduced"; allowing the payment to go to charity "fully counteracts the crowding-out effect". https://ideas.repec.org/a/tpr/jeurec/v6y2008i4p845-863.html . Checked at source, 31 Oct 2026.

[151] Uri Gneezy, Stephan Meier and Pedro Rey-Biel, "When and Why Incentives (Don't) Work to Modify Behavior", *Journal of Economic Perspectives* 25(4):191–210 (2011): "extrinsic incentives may come into conflict with other motivations"; "In other cases, incentives might have the desired effects in the short term, but they still weaken intrinsic motivations." https://www.aeaweb.org/articles?id=10.1257/jep.25.4.191 . Checked 31 Oct 2026.

[152] Settled alongside the core, dangers adopted in round 10: "time and money earn recognition, never power". Full wording in "The core of UP".

something larger, or work to connect them? The honest answer starts with what these practices do not do. Each one solves its own problem for its own members, and does it well. None of them is aimed at everyone, and none is linked to the others. The world has about 3 million co-operatives and an open encyclopedia written in hundreds of languages, and in 2025, 645 million people still went hungry.[16,75,153] Islands of success can sit beside large and lasting failure, and they have. UP's answer is that connecting the pieces, and doing on purpose what they now do by chance, would gain at least six things. Each is suggested by real cases in this chapter, though none is guaranteed, and the evidence is stronger for some than for others.

Reach comes first. A good practice today reaches only the places where someone happened to start it: a priest in Mondragón, a doctor in San Lorenzo, a mayor in the Rhineland.[27,81,14] When a practice is named and spread on purpose, its reach changes completely. One district union at Anand became tens of thousands of village societies with millions of members once India's dairy board set out to copy it.[10] Where no one carries a practice on purpose, the gaps stay wide. Voluntary blood donation is one of the most successful gift systems in the world, yet the median donation rate is 28.9 per 1,000 people in high-income countries and 4.5 in low-income ones.[73] What works for some children, some farmers and some towns could reach the rest only if someone sets out to carry it there.

Connection also brings survival. Practices that stand alone are cut off when their funders change their minds, fenced in by whoever controls the layer above them, captured from inside or pulled back into the system around them, as the previous section showed. Practices that are connected survive the same blows. When Fagor failed, other Mondragon co-operatives took in hundreds of its members.[141] When companies closed their open code, the people who depended on it carried on together in OpenTofu and Valkey.[123,125] When a small group captured the Croatian Wikipedia, the wider community noticed and helped.[133] Connection is a form of protection, and isolation is a form of risk.

It brings learning, too. Each practice today learns mostly from its own mistakes, and the lessons rarely travel. Ostrom named the principles of lasting commons in 1990, and researchers confirmed them against 91 studies in 2010.[41,42] Yet in 2023 the Food and Agriculture Organization judged only 62.4% of the world's assessed marine fish stocks to be within biologically sustainable levels, so more than a third were being fished beyond what they can bear.[154] Knowing what works is not the same as applying it. A shared, open record of what each practice tried, what it measured and what happened, offered to anyone, would let a fishing community, a forest group or a city budget start from what thousands of others have already learned.

Connected practices can also meet needs together. People's needs do not come in departments. In Canada's Housing First trial, giving people a home first did more than house them. For the tenth of participants who had cost public services the most when they entered the study, over the next two years every $10 spent on Housing First saved an average of $21.72 in other services, among them psychiatric and general hospital stays and time in jail or prison.[155] In Manitoba, a guaranteed income was followed by fewer hospital stays, and in England, children's centres were followed by fewer children in hospital.[113,115] In these cases the money was spent by one service and much of the benefit appeared in another, in hospitals, clinics and jails, so a budget that counts only its own costs does not see the whole gain.[155,115] A system aimed at the whole person, and at everyone, counts it, and can choose what to do first because of it.

What is built once can be used by all. Open software shows the scale of this. Researchers estimated that the widely used open-source code in the world would cost about $4.15 billion to write again, while it would cost the firms that use it about $8.8 trillion to rewrite it for themselves.[77] By that estimate, something made once and shared

[153] FAO, IFAD, UNICEF, WFP and WHO, *The State of Food Security and Nutrition in the World 2026*: "It is estimated that 645 million people faced hunger in 2025." https://www.fao.org/publications/sofi/2026 . Checked 29 and 31 Oct 2026.

[154] FAO, *The State of World Fisheries and Aquaculture 2026* (Rome, June 2026): 62.4% of assessed marine fishery stocks were within biologically sustainable levels in 2023. The figure is for stocks, not for the weight of fish landed; by landings, "In 2023, 72.6 percent of all landings originated from biologically sustainable stocks" (FAO press release, 16 June 2026). https://doi.org/10.4060/cd8357en ; https://www.fao.org/newsroom/detail/sofia-2026–global-fisheries-and-aquaculture-production-reaches-new-highs/en . The stock share was read in the Japan International Research Center for Agricultural Sciences summary, https://www.jircas.go.jp/en/program/proc/blog/20260623 ; confirm in the report before print. The 2024 edition gave 62.3% for 2021. https://openknowledge.fao.org/server/api/core/bitstreams/1273bc36-339b-43d2-8163-af4d805f2ad2/content/sofia/2024/executive-summary.html . Checked at source, 31 Oct 2026; the series is revised every two years.

[155] Mental Health Commission of Canada, *National Final Report: Cross-Site At Home/Chez Soi Project*, Main Messages: "Significant cost savings were realized for the 10 per cent of participants who had the highest costs at study entry"; "Over the two-year period following study entry, every $10 invested in HF services resulted in an average savings of $21.72"; for high needs/ACT participants the figure was "$9.60", and "$3.42" for moderate needs/ICM participants. https://mentalhealthcommission.ca/wp-content/uploads/2021/09/At2520Home2520Final2520Report2520-2520Main2520Messages2520-2520ENG_0.pdf . The Executive Summary lists the main cost offsets (psychiatric hospital stays, general hospital stays and incarceration, among others). https://mentalhealthcommission.ca/wp-content/uploads/2021/09/At2520Home2520Final2520Report2520-2520Exec2520Summary2520-2520ENG_0.pdf . Checked at source, 31 Oct 2026.

freely is worth to its users roughly two thousand times what it would cost to write again. That model has so far been applied mostly to code and to reference works. Whether sharing would pay off as well for designs for tools, houses, medical devices and repairs is an open question, and a reasonable one to test. Repair is a good place to start. In 2022 the world produced a record of more than sixty million tonnes of electronic waste, and less than a quarter of it was documented as properly collected and recycled, while Repair Cafés fix what they can, one neighbourhood at a time.[156,61] Shared designs, shared spare parts and shared repair skills, connected across thousands of towns, could do far more.

Last, and perhaps most important, comes purpose. Today these practices begin by accident, where a determined person or a hard crisis happens to start one, and they work on the problems their founders happened to have. UP makes the same work deliberate. Problems are named, measured and offered to anyone willing to take them on, the people affected decide, and work on the roots of a problem counts for the most.[19,21] The farmers of Kaira solved the problem of selling milk. Yet in Gujarat, the state where Amul was born, 39% of children under five were stunted in the national health survey of 2019–21 (Gujarat was surveyed in 2019), no lower than the 38.5% found four years earlier and a larger share than the 35.5% across India as a whole.[157] Their dairy union was never built to address that, and no one should blame it. UP is meant to be the place where the habits that solved one problem are turned, on purpose, to the next.

Taken together, these gains are the difference between scattered successes and a system aimed at everyone. The practices in this chapter show that the parts of UP already work. Connecting them would add reach, survival, learning, needs met together, things built once for all, and purpose, and those additions are exactly what the current system's failures call for. That is why recognising the pattern matters. A pattern that is never named cannot be copied on purpose, cannot learn from itself and cannot be defended when it is attacked.

If the gains are this large, why has no one connected the pieces before? Several people saw long ago that pieces like these could be joined into something larger. Jacque Fresco, who died in 2017 at the age of 101, spent decades with his partner Roxanne Meadows on the Venus Project in Florida, a design for a society in which goods and services would be available to everyone without a price tag and the earth's resources would be treated as the common heritage of all, with computers coordinating the machinery and inventory.[158,159] In 1970 Paolo Soleri broke ground on Arcosanti in the high desert of Arizona, a dense town made for walking, which he called an arcology, a fusion of architecture with ecology. It was planned for between 5,000 and 7,000 residents. An architectural history

[156] UNITAR and ITU, *Global E-waste Monitor 2024* (20 Mar 2024): "A record 62 million tonnes (Mt) of e-waste was produced in 2022"; "less than one quarter (22.3%) of the year's e-waste mass was documented as having been properly collected and recycled". https://www.unitar.org/about/news-stories/press/global-e-waste-monitor-2024-electronic-waste-rising-five-times-faster-documented-e-waste-recycling . The rest is undocumented, not necessarily dumped. Checked 31 Oct 2026.

[157] International Institute for Population Sciences and Ministry of Health and Family Welfare, Government of India, *National Family Health Survey (NFHS-5), State Fact Sheet: Gujarat*: children under 5 years who are stunted (height-for-age), 39.0% (rural 43.0%, urban 32.4%), against 38.5% in NFHS-4 (2015-16); fieldwork in Gujarat ran from June to November 2019. https://data.opencity.in/dataset/530ee93a-d24c-43df-b90b-272a067d5a4e/resource/e2bf91ce-97a2-40e0-a5ae-355fef8d0bc9/download/gujarat-nhfs.pdf (public copy of the IIPS sheet). The same figures are in Government of India, Economic Survey 2023-24, Statistical Appendix, Table 8.15, "Children under 5 years who are stunted (height-for-age) (%) across states and UTs of India". https://www.indiabudget.gov.in/budget2024-25/economicsurvey/doc/stat/tab815.pdf . All India: "Stunting has reduced from 38.4% to 35.5%" (NFHS-4 to NFHS-5), Ministry of Women and Child Development, PIB (11 Feb 2022). https://pib.gov.in/PressReleasePage.aspx?PRID=1797701 . Checked at source, 31 Oct 2026.

[158] The Venus Project, "FAQ": in its proposed society "all goods and services are made available to all people without a price tag", coordinated through "a central AI inventory management system". https://www.thevenusproject.com/learn/faq/ (archived copy: https://web.archive.org/web/20260527212742/https://www.thevenusproject.com/learn/faq/). Jeff Gore, "The view from Venus", *Orlando Weekly* (12 Oct 2011): after a survey of resources, "doling out the necessities of life would be a simple matter of mathematics, performed by an impartial 'socially integrated computer.'" https://www.orlandoweekly.com/news/the-view-from-venus-2248863/ (archived copy: https://web.archive.org/web/20251031001518/https://www.orlandoweekly.com/news/the-view-from-venus-2248863/). The Venus Project, "Jacque Fresco": "Jacque Fresco died on May 18th, 2017"; its centennial page celebrated his 100th birthday on 12 March 2016. https://www.thevenusproject.com/jacque-fresco/ ; https://www.thevenusproject.com/jacque-frescos-centennial-celebration/ . Checked at source, 31 Oct 2026.

[159] The Venus Project, "Jacque Fresco": "Founder of the Venus Project, Venus, Florida, 1994-present"; "With his associate Roxanne Meadows, he designed and built the entire twenty-one acre research facility." https://www.thevenusproject.com/jacque-fresco/ (archived copy: https://web.archive.org/web/2026/https://www.thevenusproject.com/jacque-fresco/). The Venus Project, "Roxanne Meadows": "From 1975 to the present, Roxanne Meadows has worked with renowned futurist, Jacque Fresco, to develop and promote" The Venus Project. https://www.thevenusproject.com/the-venus-project/roxanne-meadows/ . The Venus Project, "Resource Based Economy": "In a Resource Based Economy all goods and services are available to all people without the need for means of exchange" https://www.thevenusproject.com/resource-based-economy/ (archived copy: https://web.archive.org/web/2026/https://www.thevenusproject.com/resource-based-economy/). The Venus Project, "Technology": "the central cybernated systems will coordinate all of the machinery and equipment that serve the entire city" https://www.thevenusproject.com/resource-based-economy/technology/ . The Project's own pages give no founding date other than Fresco's "1994-present"; the other dates in circulation are not used. Checked at source, 31 Oct 2026.

describes it as only about ten percent complete, and a small community lives there year-round.[160,161] Both men imagined whole new places, and both found how hard it is to ask people to start again somewhere else.

Ward Cunningham took a different road. On 25 March 1995 Cunningham, a programmer in Portland, Oregon, put the first wiki online, a website that any reader could edit.[162] He built it as a companion to the Portland Pattern Repository, a site where programmers shared patterns, meaning named solutions to problems that keep coming up. The idea came from the architect Christopher Alexander, whose work on patterns Cunningham and Kent Beck had adapted to programming in 1987.[163,164] The first wiki, in other words, was built to do what this chapter describes: to recognise good solutions, give them names and let anyone find and improve them. The many wikis that followed include Wikipedia. And Maria Montessori, as this chapter has shown, built a way of schooling by watching how children actually learn. Each of them saw part of the picture.

Others tried to build the coordinating machinery itself. Between 1971 and 1973 the Chilean government of Salvador Allende worked with the British cybernetician Stafford Beer on Project Cybersyn, a network of telex machines meant to send economic data quickly from factories to the people planning the economy. During a lorry owners' strike in October 1972 the network helped the government keep supplies moving, and the project ended with the military coup of 11 September 1973.[165] Some who shared its aims criticised it as too centralised.[166] The lesson cuts both ways. Coordinating many producers by machine was possible even with the technology of the 1970s, and a coordinating system that runs through one centre puts great power in the hands of whoever controls that centre.

What none of these pioneers had was a practical way to coordinate millions of people and their resources without such a centre, and that is what has changed. Machines can now find patterns in vast amounts of information, match people to problems and keep track of who needs what. Inside the current system, the same tools threaten to replace workers and to gather power into very few hands. Inside a framework built for everyone, they could do the coordinating these earlier thinkers imagined, while people keep the decisions.[24,167] UP holds that no single AI system or operator should control that coordination; the systems it uses are open, more than one, and checked against one another.[167] The trouble lies in the framework that progress runs in, which humanity is outgrowing.[24]

[160] Arcosanti, "Arcology" (archived copy, 3 Aug 2026): "Human scale could be obtained through densely organized urban environment where pedestrians move efficiently and freely." https://web.archive.org/web/20260803090323/https://www.arcosanti.org/arcology/ . SAH Archipedia (Mark C. Vinson), "Arcosanti": "in the high desert near Cordes Junction". https://sah-archipedia.org/buildings/AZ-01-025-0005 (archived copy: https://web.archive.org/web/20251117055952/https://sah-archipedia.org/buildings/AZ-01-025-0005). Checked at source, 31 Oct 2026.

[161] SAH Archipedia (Mark C. Vinson), "Arcosanti": "Soleri conceived Arcosanti in 1963 as a model urban settlement housing between 5,000 and 7,000 residents; he and his followers began building the first structures in 1970"; "Only about ten percent complete". https://sah-archipedia.org/buildings/AZ-01-025-0005 (archived copy: https://web.archive.org/web/20251117055952/https://sah-archipedia.org/buildings/AZ-01-025-0005). Arcosanti, "FAQs": "Arcosanti has a small community of diverse people, including families, who reside there year-round." https://arcosanti.org/visit/faqs/ (read in a browser). Arcosanti, "What is Arcology?": "Arcology, in which architecture and ecology become one integral process, suggests that cities should evolve similarly." https://arcosanti.org/vision/what-is-arcology/ (archived copy: https://web.archive.org/web/2026/https://arcosanti.org/vision/what-is-arcology/). The figure of no more than 100 residents, found in secondary sources, could not be confirmed at a primary source and is no longer used. Checked at source, 31 Oct 2026.

[162] Ward Cunningham's wiki, "Wiki History": "This began on March 25, 1995." https://wiki.c2.com/?WikiHistory (read in a browser; the page is built by script). Chris Higgins, *Mental Floss* (25 Mar 2017): "On March 25, 1995, Ward Cunningham launched WikiWikiWeb". https://www.mentalfloss.com/culture/internet/day-1995-first-wiki-went-public . Jeremy Norman, History of Information: "Ward Cunningham of Portland, Oregon, established the first wiki". https://historyofinformation.com/detail.php?id=1079 . Checked at source, 31 Oct 2026.

[163] Kent Beck and Ward Cunningham, "Using Pattern Languages for Object-Oriented Programs", Technical Report CR-87-43, OOPSLA-87 workshop (17 Sep 1987): "using concepts adapted from the work of Christopher Alexander"; "We outline our adaptation of Pattern Language to object-oriented programming." https://c2.com/doc/oopsla87.html . Checked 30 Oct 2026.

[164] Ward Cunningham, c2.com: "We are proud to host and edit the Portland Pattern Repository" and "an online journal for patterns about programs and the de facto home of the extreme programming discipline." https://c2.com/ . Portland Pattern Repository: "We're writing about computer programs in a new stylistic form called pattern languages." and "We've also created a space for exploring the not-quite-yet patterns we all carry around in our heads" https://c2.com/ppr/ . Tom Roston, "An Oral History of Wikipedia, the Web's Encyclopedia" (OneZero, 14 January 2021): "He created something he called the Portland Pattern Repository for fellow programmers"; Cunningham: "I announced it in March of '95." https://www.bunkhistory.org/resources/7345 . Cunningham's own wiki pages on the history (wiki.c2.com/?WikiHistory) need a script to read and were not read here. Checked at source, 31 Oct 2026.

[165] Eden Medina, "Designing Freedom, Regulating a Nation: Socialist Cybernetics in Allende's Chile", *Journal of Latin American Studies* 38(3):571-606 (2006), abstract: Cybersyn was "an early computer network developed in Chile during the socialist presidency of Salvador Allende (1970-1973)", under the guidance of Stafford Beer, with "a network for the rapid transmission of economic data between the government and the factory floor." https://www.cambridge.org/core/journals/journal-of-latin-american-studies/article/abs/designing-freedom-regulating-a-nation-socialist-cybernetics-in-allendes-chile/4CF75E30D22554152A5EFDC9740E3440 . Kristin Wells, review of Medina, *Cybernetic Revolutionaries* (MIT Press, 2011), *International Journal of Communication* 14 (2020): Cybersyn used "existing inactive telex machines", from "its conception in 1971 to its ultimate deterioration in 1973"; its "telex network was able to service the country during El Paro de Octubre", a truck owner strike. https://ijoc.org/index.php/ijoc/article/download/14902/3074 . The strike took place in October 1972: Allende, radio and television address, 18 October 1972, https://www.marxists.org/espanol/allende/1972/octubre18bis.htm . Medina's book itself was not read. Checked at source, 31 Oct 2026.

[166] Evgeny Morozov, interviewed by Nick Serpe, "Liberty Machines and Dark Tech", *Dissent* (2023): "The project ended up being criticized by some leftists for being too centralized, and not being open enough to worker participation." https://dissentmagazine.org/online_articles/liberty-machines-and-dark-tech/ (archived copy: https://web.archive.org/web/20260219032155/https://dissentmagazine.org/online_articles/liberty-machines-and-dark-tech/). Checked at source, 31 Oct 2026.

[167] Core tenet: *Technology serves; people decide*.

The good news is that coordination without a centre has already been shown to work, many times, and this chapter has met several examples. The co-operative movement wrote down its principles so that co-operatives everywhere could recognise one another, and made cooperation among co-operatives one of them. India's dairy board named the Anand pattern and copied it across a country. Ostrom named the principles of lasting commons and described how independent centres of decision can work as one system. Mondragon built a bank, an insurance co-operative and a research centre that its co-operatives share while each governs itself. In every case, a practice that worked was recognised, given a name others could use, and connected to others like it, and it grew stronger for the connection.

The internet itself was built this way. The engineers who set its technical standards, in the Internet Engineering Task Force, describe their way of working in a line attributed to one of them, David Clark: "We reject: kings, presidents and voting. We believe in: rough consensus and running code."[168] On 30 April 1993 CERN, the European physics laboratory where Tim Berners-Lee had invented the World Wide Web, put the web's software into the public domain, so that anyone could use it without asking.[169] The Apache Software Foundation, founded in 1999, gives thousands of volunteer and company developers a shared legal and financial home for open projects that each govern themselves, and in 2020 it counted 8,022 people with the right to change its code.[170] None of these bodies owns what it coordinates. Each keeps a set of open rules and shared tools, and the pieces stay free.

UP starts from these practices rather than from a blueprint. It names the system people already use, connects its parts and gives that system the tools to grow.[24] The definition of UP makes the same point in a single sentence: UP takes the way people already build shared knowledge together and extends it to the whole of shared life, to meeting needs, making decisions and caring for the living world.[78] It also grows the way these practices grew, by being useful and by building on what people already do, using only ethical means.[23] Figure 1.5 shows the difference connection makes in the simplest possible terms.

[168] Pete Resnick, "On Consensus and Humming in the IETF", RFC 7282 (June 2014), quoting David Clark: "We reject: kings, presidents and voting. We believe in: rough consensus and running code." https://www.rfc-editor.org/rfc/rfc7282.html . Checked 30 Oct 2026.

[169] CERN, "Licensing the web": "On 30 April 1993 CERN issued a public statement stating that the three components of Web software (the basic line-mode client, the basic server and the library of common code) were put in the Public Domain"; the statement reads, in part, "CERN relinquishes all intellectual property rights to this code, both source and binary" and "permission is given to anyone to use, duplicate, modify and distribute it." https://home.cern/science/computing/the-birth-of-the-web/licensing-web/ . Checked at source, 31 Oct 2026.

[170] The Apache Software Foundation, "About the ASF": "Since 1999, we have provided an established framework for intellectual property and financial contributions"; ASF blog, "Apache in 2020 – By The Digits" (1 Jan 2021): committers "totalling 8,022". https://www.apache.org/foundation/ ; https://news.apache.org/foundation/entry/apache-in-2020-by-the . Checked 30 Oct 2026.

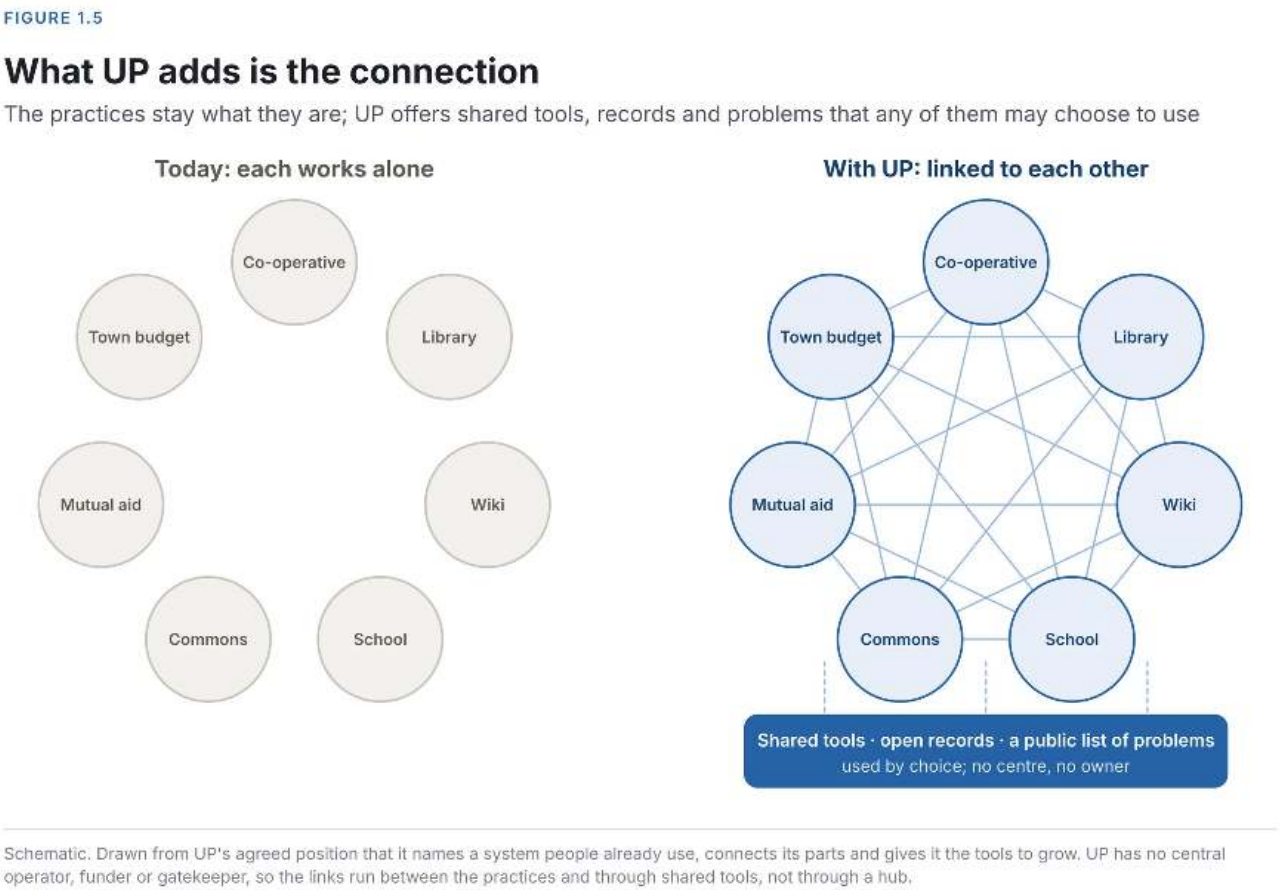


Figure 1.5. On the left, practices like those in this chapter each work alone. On the right, they share tools, records and problems through UP, and each stays what it is. Schematic; drawn from UP's agreed position on building from what already works.

What would connection add in practice? The cases in this chapter already show it, one piece at a time. A shared record of what worked, which Ostrom's commons and Brazil's budgeting cities lacked, would let each learn from all the others. Shared finance, like Mondragon's bank, would help new practices begin. Shared cover, like the jobs Mondragon found for Fagor's workers, would see them through bad years. Open designs, like the code behind Linux, would let a tool library, a repair café and a co-operative workshop build on one another's work. And many watchers, like the wider community that helped the Croatian Wikipedia, would make capture harder. Each of these already exists somewhere. What does not yet exist is a way for all of them to reach every practice that wants them.

It is easy to misread this in three ways. Naming a practice does not make it part of UP, and UP takes nothing over. A co-operative stays a co-operative and a library stays a library. What UP offers is connection, in the form of shared tools, shared records and a shared way of solving problems, which any of them may choose to use or to ignore.[24]

Nor is UP mainly a way of spreading good ideas that others have had. Its main activity is inventing solutions together.[20] The farmers' dairy at Anand did exactly that when its engineer found a way to turn buffalo milk into powder, and Mondragon did it when it built a bank, an insurance co-operative and a research centre of its own. In UP, anyone may take on a problem, propose a solution together with its evidence, and see it tested against the alternatives, and a solution rises because it works, whether or not a funder or a manager would have backed it.[19,20]

And these practices are UP's starting point, never its limit. Wikipedia showed that strangers can build shared knowledge together, at the scale of the whole world. Montessori showed that children arrive able to learn this way. UP asks what happens when the same openness is applied to food and housing, to health care and learning, and to

the decisions that shape a town. The rest of this book is an attempt to answer that question carefully, stage by stage.

How it could grow, stage by stage

The Introduction set out the three stages this book uses to judge UP. In the early stage, UP is a network of people inside the current system. In the middle stage it has its own productive base, and most of its members' needs are met from what it produces. In the completed stage, which can only be modelled, most people live mainly within UP. Every practice in this chapter belongs to the early stage, since each one runs inside the current system and depends on it in some way. The stages describe how much further they could go once they are connected to one another.

Connection would grow by stages too, and the cases in this chapter show what each stage could draw on. In the early stage, practices share open tools and records, the way thousands of volunteers shared one map of Haiti or the way Repair Cafés share a name and a method. In the middle stage, many towns build the shared institutions that Mondragon built for its co-operatives: shared finance, shared cover for bad years, shared research and shared production, each run by the people it serves. The completed stage, in which most needs are met through connected practices, can only be modelled. At every stage the practices stay what they are, and each decides for itself how far to join.[24,23]

Stages are hard to picture in the abstract, so this book follows one invented household through all three of them. The household illustrates one way UP could run, and nothing more. It is never used as evidence; the real cases in each chapter carry the argument, and the household only helps the reader see what those cases might add up to in an ordinary life.

> *Illustration: one way it could run. The early stage.*
>
> In a mid-sized town lives a household of three: a care worker, her teenage son and his grandfather. The town already has most of the pieces this chapter describes. Its public library lends drills and ladders as well as books, a food co-operative buys from farms nearby, and a group of retired teachers runs a free tutoring club on Saturday mornings. What the town lacks is any easy way for these groups to see one another's problems. In the early stage they begin to share one open tool, a place where anyone can post a problem, offer a skill or find what they need. When the grandfather's wheelchair ramp starts to rot, the care worker posts it there. A retired carpenter from the tutoring club and the maker club at her son's school take it on, using an open design that people in another town have already built, tested and improved. The family still pays rent, and the care worker still works her paid shifts. UP is a small, useful part of their week.
>
> *Illustration: the middle stage.*
>
> Some years on, several towns have linked their tool libraries, food co-operatives and workshops. They share open designs for everything from ramps to solar panels, and a regional workshop makes what each town needs. Much of the household's food now comes from farms the network supports. The teenager learns electronics through an open course, with a mentor two towns away, and helps keep the workshop's machines running. The care worker's work with older people is shared among many more hands, so she is no longer stretched alone, and the grandfather has more visitors than he used to. The household still pays for some things with money, but more of what it needs now comes from what the network produces.
>
> *Illustration: the completed stage (modelled).*
>
> In the completed stage, most of the household's needs, from food and housing to health care, learning and company, are met through connected practices like these. The grandfather's care is planned with him and shared across the community. The care worker spends her days on the work she is best at and enjoys most. Her son, grown now, gives part of his week to a regional water problem he cares about. People still disagree, sometimes sharply, and the work of keeping the system open and fair never ends.

Table 1.2 sets the same picture beside the evidence. Each row names a real precedent and the reason to think the stage is likely, and the last column names what would still go wrong.

Table 1.2. The stages of this chapter's argument. The completed stage is modelled, so it has no real precedent yet.

Stage	What changes	Real precedent	Why it is likely	What persists
Early	Existing practices connect through shared, open tools and records	Wikipedia; Linux; OpenStreetMap; tool libraries and Repair Cafés	Open systems that people could use without giving anything up grew very large	Isolation; funding cut from outside
Middle	Many towns share finance, research, cover for bad years and production	Amul and Operation Flood; Mondragon's bank, insurance and research centre	Member-owned production and shared institutions already work for millions of people	Attempts to enclose what is open; informal elites; the pull of the system around them
Completed (modelled)	Most needs are met through connected practices	None yet	The parts strengthen one another (Chapter 21)	Disagreement over values; the work of keeping it open

This chapter also introduces a tool the book keeps coming back to, the practice map. It sets each part of UP beside the practices that already embody it, the wider pattern each belongs to, and what connection would add. The full map is in the back matter, and it is one of the pages readers are most invited to improve, because no single author can know every practice that belongs on it. Table 1.3 shows some of its rows, drawn from this chapter.

Table 1.3. Some rows of the practice map. The third column names the core idea of UP that each practice already shows; the full wording of each is in "The core of UP".

Practice	One case of a wider pattern	Core idea it embodies	What connection adds
Amul; Mondragon	About 3 million co-operatives; worker ownership from John Lewis to Argentina's recovered factories	Those affected decide; power kept spread out	Shared finance, cover and research across sectors and borders
Törbel; Valencia's water tribunal; Nepal's forest groups	Commons governed by their users on every inhabited continent	Those affected decide; a fair hearing	A shared record of which rules have worked, and where
Porto Alegre; Kerala; Paris	Participatory budgets in more than a thousand places	Those affected decide; open records	Decisions that last whichever party is in power; lessons shared between cities
Public libraries; tool libraries; Repair Cafés	Shared stores, from Franklin's library to 200,000 book-sharing boxes	Basic needs such as education; open systems	Libraries of tools, designs and skills, linked across towns
Blood donors; volunteer firefighters; lifeboat crews; mutual aid in disasters	Gift systems that run on people choosing to give	The aim: the wellbeing of all	A standing way to help every day, not only in a crisis
Montessori; HighScope; Reggio Emilia	Learning built on children's own curiosity and choice	Education open to everyone; the method of shared problem solving	Open records of what helps children, and mentors anywhere
Wikipedia; Linux; OpenStreetMap	Open software in almost all commercial code	Shared problem solving with evidence; open systems	The same method applied to meeting needs and making decisions

Why this is likely, and the strongest doubts

So far this chapter has shown that the pieces exist and that the current system holds them back. A careful reader should now ask a harder question. Is there any reason to think the pieces can be joined and grown, rather than staying where they are? The best evidence comes from looking at which experiments of the past century grew very large and which stayed small, because the difference between them is striking, and it is the difference UP is built on.

The experiments that grew largest asked nobody to give anything up. Nobody had to stop using other software to try Linux, and nobody had to cancel anything to read Wikipedia. By the movement's own count, more than 12% of

humanity belongs to a co-operative.[171] In Kenya, a service called M-Pesa let people store and send money from an ordinary mobile phone, and within a few years most households were using it; one widely cited study credits it with lifting about 2% of Kenyan households out of poverty, a finding other researchers dispute.[172,173] Each of these grew alongside the current system, one useful step at a time, among people who stayed exactly where they were.

What happened when Microsoft met one of these open projects shows how strong that kind of growth can become. In 2001, Microsoft's chief executive called Linux "a cancer".[174] Fifteen years later, Microsoft joined the Linux Foundation as a platinum member,[175] and in 2018 it paid $7.5 billion for GitHub, a website where much of the world's open-source code is shared and built.[176] The simplest reading of that turn is that the open project had become too useful to keep fighting, so joining it made more sense than opposing it.

The same thing happened wherever an open alternative met a closed one. In April 1996 the Apache Group announced that Netcraft's survey had found its web server, built by volunteers and given away, to be the most popular on the internet, and by the end of 1997 Netcraft's own survey put Apache on 50% of the sites it surveyed, against about a quarter for servers built for Windows NT.[177] In March 2009 Microsoft announced that it would close Encarta, its paid encyclopedia, saying that the category of traditional reference works had changed.[178] Its statement did not mention Wikipedia, and many causes were at work. Yet the open encyclopedia kept growing after the closed one had gone, and today it is written in hundreds of languages.[75] Open systems did not win by forbidding the alternatives. They won by being useful to people who were free to choose.

Member-owned production already works for millions of people. Amul's farmer-members in Gujarat and the people who work in Mondragon's co-operatives show that ordinary people can own and run large enterprises together for decades.[8,33] They are the closest real precedents for the middle stage, in which many towns share production. The middle stage itself is a reasoned projection from cases like these. Nothing like it has yet happened across a whole region, and this book does not pretend otherwise.

The experiments that asked people to leave the world around them mostly stayed small. Israel's kibbutzim, where members once shared nearly everything, held under 4% of the country's population in the 1950s, and after a debt crisis in 1985 and a change in the law in 2005, fewer than a third remained fully collective.[179,180] Among 200 communes founded in nineteenth-century America, the religious communities were between two and four times as likely as the secular ones to survive in any given year.[181] UP reads this record as a design instruction. It is never imposed on anyone, it grows by being useful to people where they already live, and more of a person's life moves into it only as it proves itself.[23]

[171] International Co-operative Alliance, "Facts and figures" (crediting the World Cooperative Monitor, 2025): "More than 12% of humanity is part of any of the 3 million cooperatives in the world." https://www.ica.coop/en/facts-and-figures . The ICA is the co-operative movement's own body, and people who belong to several co-operatives may be counted more than once.

[172] Suri T, Jack W, "The long-run poverty and gender impacts of mobile money", *Science* 354(6317) (2016): access to mobile money lifted about 2% of Kenyan households out of poverty. https://www.jefftk.com/suri2016.pdf (step 3 evidence; verified by up-evidence-officer).

[173] A critique of the M-Pesa poverty finding: *Review of African Political Economy* 46(161):480–495 (2019). https://ideas.repec.org/a/taf/revape/v46y2019i161p480-495.html (step 3 evidence).

[174] *The Register*, "Ballmer: Linux is a cancer" (2 June 2001). https://www.theregister.com/2001/06/02/ballmer_linux_is_a_cancer/ (step 3 evidence).

[175] The Linux Foundation, "Microsoft Fortifies Commitment to Open Source, Becomes Linux Foundation Platinum Member" (2016). https://linuxfoundation.org/press-release/microsoft-fortifies-commitment-to-open-source-becomes-linux-foundation-platinum-member/ (step 3 evidence).

[176] Microsoft, "Microsoft to acquire GitHub for $7.5 billion" (4 June 2018). https://news.microsoft.com/2018/06/04/microsoft-to-acquire-github-for-7-5-billion/ (step 3 evidence).

[177] The Apache Group, press release (3 April 1996): Apache "was found by the Netcraft Web Server Survey to be the most popular server on the Internet." https://httpd.apache.org/press/04apr96.txt . Netcraft, "January 1998 Web Server Survey" (31 December 1997): "The percentage of Apache specific servers … is now 50.24"; "The percentage of NT specific servers … is now 24.72." https://www.netcraft.com/blog/january-1998-web-server-survey . Netcraft's survey pages for April 1996 and January 1999 are not online; The Register reported Apache at 54.22% and Microsoft at 23.33% in Netcraft's January 1999 survey (11 January 1999, https://www.theregister.com/1999/01/11/apache_beatsoff_ms_challenge/), which the text does not rely on. Checked at source, 31 Oct 2026.

[178] Austin Modine, "Microsoft kills MSN Encarta", *The Register* (31 Mar 2009), quoting Microsoft: "the category of traditional encyclopedia and reference material has changed." https://www.theregister.com/offbeat/2009/03/31/microsoft-kills-msn-encarta/1335460 . Microsoft's statement does not mention Wikipedia. Checked 30 Oct 2026.

[179] Kislev Y, "Agricultural cooperatives in Israel: past and present" (Hebrew University, Rehovot, 2015): kibbutzim held under 4% of Israel's population in the 1950s; fewer than a third remained collective after the 1985 crisis and the 2005 law. https://economics.agri.huji.ac.il/sites/default/files/agri_economics/files/52-2015_agcoops_past_and_present_rehovot_volume.pdf . Checked at source, 31 Oct 2026.

[180] Abramitzky R, "Lessons from the Kibbutz on the Equality–Incentives Trade-off", *Journal of Economic Perspectives* 25(1):185–208 (2011). https://ideas.repec.org/a/aea/jecper/v25y2011i1p185-208.html (step 3 evidence).

[181] Sosis R, Bressler E R, "Cooperation and commune longevity: a test of the costly signaling theory of religion", *Cross-Cultural Research* 37(2):211–239 (2003), summarising Sosis R, *Cross-Cultural Research* 34(1):70–87 (2000): "Using a data set of two hundred 19th-century U.S. communal societies, Sosis showed that religious communes are between 2 and 4 times more likely to survive in every year of their life course than their secular counterparts." https://www.cognitionandculture.net/wp-content/uploads/Sosis_2003_CommuneLongevity.pdf . Checked 29 Oct 2026.

More evidence comes from breadth. Every practice in this chapter turned out to be one case of a much wider pattern: dairy co-operatives from India to the United States, worker ownership from the Basque Country to Argentina, user-governed commons on every inhabited continent, participatory budgets in more than a thousand places, gift systems that supply most of the blood in 80 countries, and children who learn by their own curiosity wherever they are given room.[18,36,42,49,65,100] A single success can be luck. The same behaviour, appearing again and again in places with different histories, languages and economies, is better described as a human tendency. UP is a bet that a tendency this common, once it is recognised, named and connected, can grow.

The completed stage cannot be tested yet. The modelled picture is that most needs are met through connected practices whose parts strengthen one another, an argument Chapter 21 makes in full. Until then it remains a scenario to be checked as UP grows, and nothing in this book treats it as evidence. That leaves the doubts a fair-minded reader may still have, and the three strongest deserve an answer in their own terms.

One doubt is that these examples are niche. Good examples are not a system, the argument runs. The world economy runs on firms and states, and a few successes at the edges change nothing at the centre. For some of the pieces the point is fair: on desktop computers, where people tend to stay with what they already know, Linux still has less than a tenth of use.[182] But several of the pieces sit at the very centre of modern life. Unix-family systems, mostly Linux, run 92.2% of the websites whose operating system is known,[183] and Linux runs every one of the world's fastest supercomputers.[184] What the large ones have in common is that they grew without asking anyone to leave anything behind.

Another doubt is that every example in this chapter leans on the current system. Linux runs on hardware made by companies, Wikipedia runs on donations, and Amul sells its butter for money. All of that is true, and it is what the early stage looks like. UP begins inside the current system, and judging early-stage evidence as if it were the completed stage is a comparison this book tries hard to avoid.[185] What changes from stage to stage is where needs are met. In the middle stage more of them come from UP's own production, which is far less exposed to a budget decided somewhere else. The physical capacity to meet the most basic need is already there: in 2023 the world's food supply passed 3,000 kilocalories per person per day.[186] That is supply on paper rather than what people eat, and whether it reaches everyone is the subject of Chapter 13.

The oldest doubt is about human nature. When everyone shares a resource and no one owns it, the argument goes, each person takes a little more than their share until the resource collapses, and critics point to emptied fisheries and cleared forests as proof. Some commons do fail. Yet Elinor Ostrom's work showed that a commons can be managed well by the people who use it, under certain conditions, and Törbel's farmers and Valencia's irrigators have done it for centuries.[40,39] She did not show that every commons succeeds, and UP takes both halves of her finding seriously. The conditions she found are things to build in from the start, and a commons that begins to fail becomes one more problem to solve in the open, through the same method as any other.[187]

None of this makes the pieces safe. Three dangers survive every stage, and UP names them as work still to do rather than as problems already solved.[187] An open core can be fenced in by whoever controls the layer on top of it, as Android showed.[117] An open project can be captured by a small group from within, or can close itself to newcomers while trying to protect its quality, as Wikipedia's editors found.[127] And any practice can drift back toward the system around it, as the kibbutzim did and as Mondragon's growth through subsidiaries shows.[179,142] Each danger is met with open checks, public records and everyone watching for power gathering in a few hands.[22]

[182] StatCounter Global Stats, "Desktop Operating System Market Share Worldwide": Linux held between 3.3% and 8.8% of desktop page views in the thirteen months to September 2026 (4.54% in September; 5.63% in October so far). https://gs.statcounter.com/os-market-share/desktop/worldwide . Checked at source on 31 Oct 2026; the series is revised each month.

[183] W3Techs, "Usage statistics of Unix" (2026): Unix-family systems run 92.2% of the websites whose operating system is known; Linux about 63%. https://w3techs.com/technologies/details/os-unix Linux is used by 68.6% of the sites that use Unix, about 63% of all sites with a known operating system. Checked at source on 31 Oct 2026; the series is updated daily.

[184] TOP500.org, List Statistics, "Operating system Family" (https://www.top500.org/statistics/list/): for each of the 18 lists from November 2017 to June 2026 (the 67th edition, published 23 June 2026), Linux is the only operating system family shown, with 500 of 500 systems (100%). In June 2017 it was 498 systems, with 2 running Unix. The first all-Linux list was announced by The Linux Foundation, "Linux Runs All of the World's Fastest Supercomputers" (20 Nov 2017): "Linux powers every one of the world's 500 fastest supercomputers", https://www.linuxfoundation.org/blog/blog/linux-runs-all-of-the-worlds-fastest-supercomputers . Checked at source on 31 Oct 2026; TOP500 publishes a new list every June and November.

[185] UP's agreed position on judging UP as a whole system against the current system, stage by stage. Full wording in "The core of UP".

[186] FAO Statistics Division, "Food balance sheets 2010–2023" (27–28 Oct 2025): in 2023 global food supply "crossed the historic milestone of 3 000 kilocalories per capita per day." This is supply available per person, not what people eat. https://www.fao.org/statistics/highlights-archive/highlights-detail/food-balance-sheets-2010-2023

[187] Core tenet: *Self-correction: nothing is final, including this*.

Each is also met with the freedom to split off and try another way, so that rival ideas are tested in the real world instead of argued over forever.[126] None of them is ever declared gone.

That leaves one more question, and for many readers it is the first. If so much already works, and the world is in many ways better off than it has ever been, why change anything at all? Chapter 2 takes that question seriously, beginning with what the current system has achieved.

Chapter card: Chapter 1

- **Claim:** The pieces of UP already work, many of them at very large scale, and each is one case of a wider pattern of people behaving the same way. Working alone, each serves only its own members and its own problem. Connected on purpose, they would gain reach, survival, learning, needs met together, things built once for all, and a common aim: the wellbeing of everyone. Above all they show that people, from infancy on, want to solve problems together because the problems are there, often without reward and sometimes in spite of rewards and punishments. UP is built on that drive; the current system too often wears it away.
- **Core lines:** UP's agreed position that it names a system people already use, connects its parts and gives it the tools to grow; the second sentence of the definition of UP ("It takes the way people already build shared knowledge together and extends it to the whole of shared life").
- **Rule of thumb:** "Before inventing something new, ask where it already works, and in how many other places."
- **What this is not:** a claim that these practices are already UP, or that UP would take them over.
- **Check yourself:**
    1. Name three practices that UP builds on, the wider pattern each belongs to, and the part of UP each one shows.
    2. Which patterns hold these practices back, and how does UP answer each of them?
    3. If these practices already work, what would connecting them into one system gain? Give two examples from the chapter.
    4. What moved people in these stories to solve problems, and what can rewards and punishments do to that motivation?
    5. What did Montessori's classrooms show about children, and why does that matter for UP?
- **Open questions (for the wiki):** Which practices belong on the practice map? Which have already been recognised, named and connected, and what did connection add? How should results be measured, so that practices can be compared? (Improve this page.)

Chapter 2. Better Than Ever, and Still Losing the Race

Hans Rosling liked to begin with a test. He was a Swedish doctor who, from 1979 to 1981, worked as a district doctor in Nacala, in northern Mozambique, where he identified a paralysing disease that had never been described before. He went on to become a professor of international health at the Karolinska Institutet in Stockholm, and in 2005 he founded the Gapminder Foundation with his son Ola and his daughter-in-law Anna.[1] He spent much of the rest of his life asking audiences simple questions about the world, and recording how often they got the answers wrong. He died in February 2017, while finishing a book built around those questions, *Factfulness*, which his son and daughter-in-law completed and published the following year.[1,2]

Try one of his questions now, before reading on. In the last twenty years, has the share of the world's population living in extreme poverty almost doubled, stayed roughly the same, or almost halved? In 2017 Gapminder put that question, with eleven others like it, to about 12,000 people in fourteen rich countries. On the poverty question, on average only 9% of the people polled chose the right answer, which is that the share almost halved. Even in Sweden and Norway, the best-informed countries, only a quarter got it right.[3] Across all twelve questions the average person scored 2.2, which is worse than the 4 out of 12 that anyone would expect from picking answers at random. Rosling liked to point out that chimpanzees picking answers at random would have done better.[4]

Rosling was no cheerleader. He had worked as a doctor among some of the poorest people on earth, and he insisted that the world's problems were real and large. His point was that two things can be true at once. In the words of the description of his book, the world, "for all its imperfections, is in a much better state than we might think. That doesn't mean there aren't real concerns."[5] Asked whether the world is in a bad way or improving, the honest answer is both. Rosling's quarrel was with people who could see only the first half of that answer, and who concluded from the world's suffering that nothing ever improves.

Before going further, try a second test, built on Rosling's own rule, which was to check the numbers before believing a story about the world. Since 1970, has the average size of the wildlife populations that scientists monitor around the world grown, stayed about the same, or fallen by almost three-quarters? In 2025, were the world's emissions of carbon dioxide from energy lower than a decade earlier, about the same, or the highest ever recorded? And of the 139 targets for 2030 that the world's governments set themselves in 2015 and can still measure, are most on track, about half, or just over a third?

[1] Karolinska Institutet, "Hans Rosling spoke and the world listened" (8 Feb 2017): he "died on the morning of 7 February 2017"; "Hans discovered konzo, a previously unknown paralytic disease, which he described in his doctoral thesis"; "In 2005, the three founded the Gapminder Foundation". https://news.ki.se/hans-rosling-spoke-and-the-world-listened . *Socialmedicinsk tidskrift* 2017(6):649–651, a short biography of Hans Gösta Rosling (in Swedish): Hans and Agneta Rosling worked from 1979 to 1981 in the town of Nacala, in Nampula province in northern Mozambique, he as district doctor (distriktsläkare). https://publicera.kb.se/smt/article/download/38990/28877/83333 . Checked at source, 31 Oct 2026.

[2] Hans Rosling with Ola Rosling and Anna Rosling Rönnlund, *Factfulness: Ten Reasons We're Wrong About the World – and Why Things Are Better Than You Think* (New York: Flatiron Books; London: Sceptre, 2018). Hachette UK (Sceptre), "Factfulness", lists the on-sale date as "3rd April 2018". https://www.hachette.co.uk/titles/hans-rosling/factfulness/9781473637467/ . Macmillan, "Factfulness" (Flatiron Books page): "Hans Rosling with Ola Rosling and Anna Rosling Rönnlund". https://read.macmillan.com/lp/factfulness/ . Checked at source, 31 Oct 2026.

[3] Gapminder, "In the last 20 years, the proportion of the world's population living in extreme poverty has…" (answers: "Almost halved", "Remained roughly the same", "Almost doubled"): "Just 9% of our respondents on average chose the right answer!"; "Sweden and Norway scored the highest with 25% each, which is still terrible." https://www.gapminder.org/video/poverty/ . Gapminder's own count of the test: "The question comes from Gapminder Test 2017, that 12 000 people in 14 countries took." https://www.gapminder.org/ignorance/ignorance-test/results/question-3/ . Checked at source, 31 Oct 2026.

[4] Gapminder, "Gapminder Misconception Study 2017": "We asked 12 basic fact questions to the general public in fourteen rich countries, using online panels"; "But the average score for the humans was much lower: only 2.2!"; "On average a monkey picking answers randomly would score 4 out of 12 correct answers." Samples: 10,024 adults (Ipsos MORI, twelve countries), 1,221 (Norway) and 1,000 (Finland), about 12,000 in all. https://www.gapminder.org/ignorance/studies/gms/ . Checked at source, 31 Oct 2026.

[5] Gapminder Foundation, "Factfulness" (book page, quoting the book's description): "It turns out that the world, for all its imperfections, is in a much better state than we might think. That doesn't mean there aren't real concerns." https://www.gapminder.org/factfulness-book/ . The book is Hans Rosling, Ola Rosling and Anna Rosling Rönnlund, *Factfulness: Ten Reasons We're Wrong About the World – and Why Things Are Better Than You Think* (2018). Checked at source, 31 Oct 2026.

The answer to each is the third option. The monitored wildlife populations have fallen by an average of 73% since 1970.[6] Energy emissions of carbon dioxide set a new record in 2025, for the second year running.[7] And only 36% of the measurable targets for 2030 are on track or making moderate progress, while 15% have gone backwards since 2015.[8] A reader who failed Rosling's test by being too gloomy may fail this one by being too hopeful, and some readers will fail both.

Both tests are true at once, and that is the subject of this chapter. The world is better off than it has ever been on many of the measures that matter most, and on others the problems are growing faster than anything being done about them. A reader who has just finished Chapter 1 may already be asking the obvious question. If so much works, and life has never been longer or safer for most people, why change anything at all? UP takes that question seriously, because a framework that cannot answer it has no business asking anyone to build something new.

UP's answer has four parts, and the chapter takes them in order. It begins with credit. The current system has achieved more for human health, wealth and knowledge than any before it, and UP is judged against that record, never against an imaginary one.[9,10] It then measures the race, issue by issue: on the planet's limits and on most of the major issues of our time, the problems are growing faster than the reforms.[11] It asks why the race is lost where it is, and finds a pattern. The current system is very good at solving problems that pay, and weaker at the rest, and sometimes a problem's persistence is what pays.[12] Finally it asks how fast change must come, and answers that the aim is a transition, never a collapse.[13] Table 2.1 sets these four parts out in plain words.

Table 2.1. Four things UP holds about the current system, in plain words, and where this chapter shows each. The full wording of each is in "The core of UP".

What UP holds	In plain words	Where this chapter shows it	What follows for UP
Credit first	The current system brought great gains, and any alternative must beat its real record	Oral rehydration, vaccines, the long fall in child deaths and poverty, the ozone layer	UP is judged against today's record and against its own aim, stage by stage
Reform is losing the race	On the planet's limits and most major issues, the problems grow faster than the reforms	Climate, wildlife, soil and water, poverty, hunger, drug resistance, waste, weapons (Table 2.2)	UP is built for the gap between the pace of reform and the pace of the problems
Some problems pay	The current system solves what pays; sometimes a problem's persistence is what pays	Insulin, the diseases of the poor, the light bulb, climate science that was known and set aside, tax filing	UP aims at each person's wellbeing, and no one owns a problem or its solution
Transition, not collapse	The threats are urgent, and the aim is to change course without breaking what works	The stages, and what persists at each	UP grows beside the current system and keeps the quality of its core as it grows

[6] WWF, *Living Planet Report 2026* (8 Oct 2026): monitored wildlife populations "fell by 73% on average between 1970 and 2022". https://livingplanet.panda.org/en-us/ . The 2024 edition (with the Zoological Society of London) gave the same 73% for 1970–2020 across "almost 35,000" populations of 5,495 species. https://www.worldwildlife.org/press-releases/catastrophic-73-decline-in-the-average-size-of-global-wildlife-populations-in-just-50-years-reveals-a-system-in-peril . The index measures the average change in the size of monitored populations, not a count of animals or of extinctions. Checked 31 Oct 2026.

[7] International Energy Agency, *Global Energy Review 2026* (April 2026): growth in energy-related CO2 emissions slowed in 2025, "rising by around 0.4%, the slowest rate since 2021", with total emissions "reaching a new high of nearly 38.4 billion tonnes (Gt)". https://www.iea.org/reports/global-energy-review-2026/co2-emissions . *Global Energy Review 2025*: emissions "increased by 0.8% in 2024, hitting an all-time high of 37.8 Gt CO2". https://www.iea.org/reports/global-energy-review-2025/co2-emissions . Checked at source on 31 Oct 2026; revised each year.

[8] United Nations, *The Sustainable Development Goals Report 2026* (7 July 2026), key messages: "Of the 139 SDG targets with trend data, just over a third (36 per cent) are on track or making moderate progress"; "Nearly half (49 per cent) of assessable SDG targets are moving too slowly"; "15 per cent have slipped below 2015 baselines". https://unstats.un.org/sdgs/files/report/2026/SDGs_Report_Key_Messages_2026.pdf . Checked 31 Oct 2026.

[9] UP's agreed position on judging UP as a whole system against the current system: it credits the great gains the current system brought over ancient ones, holds that systems built thousands of years ago have limits we no longer need to accept, and calls for another grand experiment. Full wording in "The core of UP".

[10] Core tenet: *Self-correction: nothing is final, including this*. Full wording in "The core of UP".

[11] UP's agreed position that reform is losing the race: reform inside the current system has worked in bounded cases, but on the planetary limits and on most of the major issues of our time the problems are growing faster than the reforms; reform stalls most where it runs against profit from extraction, externalised harm and concentrated power; UP does not claim reform is impossible and is built for the gap. The claim covers exactly the issues in Table 2.2. Full wording in "The core of UP".

[12] UP's agreed position that the comparison with the current system is not symmetric: the current system often monetises a problem instead of solving it, and sometimes a problem's persistence is what pays. Full wording in "The core of UP".

[13] UP's agreed position on urgency: the threats from the current system are large and reach almost every part of civilisation, so there is urgency to build UP as quickly as possible, and the aim is a transition, not a collapse. Full wording in "The core of UP".

Along the way, the chapter explains several of the ideas at the centre of UP, each at the point where it first does some work. They are the two standards UP is judged by, the floors that no decision may cross, the accounting of real things, not only of prices, the three kinds of scarcity, the open record, and what UP calls the marketplace of problems. The chapter then follows one problem, a medicine people cannot afford, through UP's way of working from start to finish, so that the ideas can be seen together. By the end, a reader should be able to take almost any problem in the news and ask of it the questions this chapter asks.

What the current system got right

In 1971, during the war that created Bangladesh, millions of refugees crossed the border into India, and in the crowded camps cholera broke out. Cholera kills by draining the body of water and salt, and the standard treatment was to replace them through a drip, with sterile fluid fed straight into a vein. At a camp at Bangaon, in West Bengal, an Indian doctor named Dilip Mahalanabis led the medical response, and the intravenous fluid began to run short. He and his team turned to something much simpler: a solution of salt and glucose in clean water, given by mouth.[14] It worked. In his camp about 3 per cent of the cholera patients died, against 20 to 30 per cent in camps that relied on intravenous fluid alone.[15]

Mahalanabis did not invent the idea. Researchers at cholera laboratories in Dhaka and Calcutta had shown a few years earlier that glucose helps the gut to absorb salt and water.[16] What he did was put it to use on a large scale, in a war, with the means at hand, because the problem was in front of him and the usual treatment had run out. In 1978 the medical journal *The Lancet* called the discovery behind oral rehydration "potentially the most important medical advance this century".[17] One estimate puts the deaths from diarrhoea it had prevented by 2007 at 54 million.[18] When Mahalanabis died in 2022, India awarded him its second-highest civilian honour, the Padma Vibhushan.[19]

His story is one case of a much wider pattern, and the pattern accounts for some of the greatest gains in human history. On 12 April 1955, the University of Michigan announced that the polio vaccine developed by Jonas Salk was "safe, effective, and potent".[20] In an interview that year, the broadcaster Edward R. Murrow asked Salk who owned the patent. Salk said there was none, and asked, "Could you patent the sun?" Neither Salk, his employer nor the funder of the research ever applied for one.[21] In 1988, polio still paralysed an estimated 350,000 children a year

[14] Mahalanabis D, Choudhuri A B, Bagchi N G, Bhattacharya A K, Simpson T W, "Oral fluid therapy of cholera among Bangladesh refugees", *Johns Hopkins Medical Journal* 132:197–205 (1973), reprinted in *Bulletin of the World Health Organization* 79(5):473–479 (2001) as page images: https://www.scielosp.org/article/bwho/2001.v79n5/473-479/ . Location of the camp, Bangaon: Dhiman Barua, interviewed in "Miracle cure for an old scourge", *Bulletin of the World Health Organization* 87(2):91–92 (2009). https://pmc.ncbi.nlm.nih.gov/articles/PMC2636196/ . Checked at source, 31 Oct 2026.

[15] Fontaine O and Newton C, "A revolution in the management of diarrhoea", *Bulletin of the World Health Organization* 79(5):471–472 (2001): "Remarkably, the case-fatality rate in Mahalanabis's camp was about 3%" compared with "20–30% rates in the camps that used only intravenous fluids"; oral rehydration fluids were given "to all patients deemed not to be in urgent need of intravenous therapy". https://www.scielosp.org/article/bwho/2001.v79n5/471-472/ (also https://pmc.ncbi.nlm.nih.gov/articles/PMC2566417/). The 1973 paper is reprinted only as page images, so the text gives the WHO commentary's figures. Checked at source, 31 Oct 2026.

[16] Fontaine O and Newton C, *Bulletin of the World Health Organization* 79(5):471–472 (2001): oral rehydration therapy "was developed simultaneously in the last half of the 1960s in Dhaka, Bangladesh (then the Eastern Province of Pakistan) and Calcutta, India". https://www.scielosp.org/article/bwho/2001.v79n5/471-472/ . The physiological basis, the coupling of sodium and glucose transport in the small intestine, is described in the Lancet editorial of 1978, quoted in Hamilton KL, "Robert K. Crane – Na+-glucose cotransporter to cure?", *Frontiers in Physiology* 4:53 (2013), https://www.frontiersin.org/journals/physiology/articles/10.3389/fphys.2013.00053/full). Checked at source, 31 Oct 2026.

[17] Editorial, "Water with sugar and salt", *The Lancet* 312(8084):300–301 (5 Aug 1978; PubMed PMID 79090): the discovery that sodium and glucose transport are coupled in the small intestine "was potentially the most important medical advance this century". The sentence is quoted in Hamilton KL, *Frontiers in Physiology* 4:53 (2013), https://www.frontiersin.org/journals/physiology/articles/10.3389/fphys.2013.00053/full , and in Nalin DR and Cash RA, "50 years of oral rehydration therapy: the solution is still simple", *The Lancet* 392:536–537 (2018), https://ppgsp.furg.br/images/artigos/50-years-of-ORT_Nalin–Cash-Lancet-2018.pdf . The editorial's own text was not available. Checked at source, 31 Oct 2026.

[18] Nalin DR and Cash RA, "50 years of oral rehydration therapy: the solution is still simple", *The Lancet* 392:536–537 (2018): "as of 2007 it was estimated that oral rehydration therapy (ORT) alone had prevented 54 million diarrhoeal deaths". https://ppgsp.furg.br/images/artigos/50-years-of-ORT_Nalin–Cash-Lancet-2018.pdf . In an interview in the WHO Bulletin (87(2):91–92, 2009, https://pmc.ncbi.nlm.nih.gov/articles/PMC2636196/), Dhiman Barua, who had led WHO's work on oral rehydration, says that deaths from diarrhoea in children under five fell from about five million a year in the 1950s and 1960s to around two million in the mid-1980s and 1990s, and that oral rehydration therapy "may not be solely responsible for this improvement" but "certainly played a significant role in it". Estimates vary; the 54 million is one estimate. Checked at source, 31 Oct 2026.

[19] Press Information Bureau, Government of India, "Padma Awards 2023 announced" (25 Jan 2023): Padma Vibhushan, "Shri Dilip Mahalanabis (Posthumous) Medicine West Bengal". https://www.pib.gov.in/PressReleaseIframePage.aspx?PRID=1893797 . He died on 16 October 2022 (NMJI obituary, above). Checked at source, 31 Oct 2026.

[20] University of Michigan School of Public Health, "1955 Polio Vaccine Trial Announcement": on 12 April 1955 Thomas Francis Jr. reported the vaccine "safe, effective, and potent". https://sph.umich.edu/polio . Checked 31 Oct 2026.

[21] Interview with Edward R. Murrow (1955): asked who owned the patent, Salk replied: "Well, the people, I would say. There is no patent. Could you patent the sun?" Quoted in Josephine Johnston and Angela A. Wasunna, "Patents, Biomedical Research, and Treatments: Examining Concerns, Canvassing Solutions", *Hastings Center Report* 37(1), Special Report S1–S36 (2007), p. S2, which adds that "neither he, his employer, nor the funder of the research ever applied for one". https://www.thehastingscenter.org/wp-content/uploads/patents_biomedical_research_treatments_examining_concerns_canvassing_solutions.pdf (read in a browser; the site blocks scripts). History of Vaccines, "Vaccine Patents and Public Health": "In a famous 1955 interview of Jonas Salk, Edward Murrow

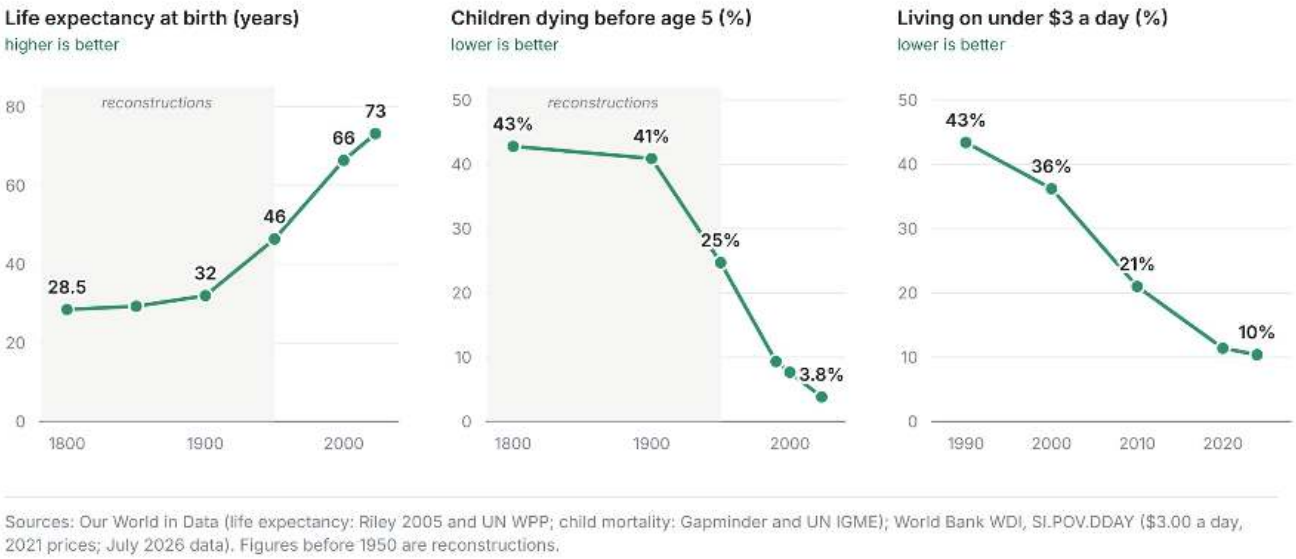
in more than 125 countries. In 2024, 99 cases of wild polio were reported, in two countries.[22] Vaccines as a whole are estimated to have saved some 154 million lives in the fifty years from 1974, 101 million of them infants, most of them through protection against measles.[23]

Taken together, gains like these have changed what it means to be born. In 1800 a newborn could expect to live, on average, to about 29, and more than two children in every five died before their fifth birthday.[24,25] By 2024 life expectancy at birth had reached 73.3 years.[26] The number of children who die before the age of five fell from about 13 million in 1990 to about 4.9 million in 2024.[27] Figure 2.1 shows three of these changes side by side. Behind each line are millions of people who lived because problems were solved and the answers were shared.

FIGURE 2.1

Better than ever, on many of the measures that matter most

World, long-run estimates. Note the different time spans.



Sources: Our World in Data (life expectancy: Riley 2005 and UN WPP; child mortality: Gapminder and UN IGME); World Bank WDI, SI.POV.DDAY ($3.00 a day, 2021 prices; July 2026 data). Figures before 1950 are reconstructions.

Figure 2.1. Left: life expectancy at birth, world, 1800 to 2023. Centre: share of children who die before their fifth birthday, world, 1800 to 2023. Right: share of the world's people living on less than $3.00 a day, 1990 to 2024. The figures before 1950 are historical reconstructions. Sources: Our World in Data (from Riley, Gapminder and the UN); World Bank. Details are in the notes to this section.

asked him who owned the patent." https://www.historyofvaccines.org/blog/vaccine-patents-and-public-health . Checked at source, 31 Oct 2026.

[22] Global Polio Eradication Initiative, general factsheet (18 Sept 2025): polio "paralyzed 350,000 children annually across 125 countries" in 1988; in 2024, "99 cases of WPV1 reported (74 in Pakistan and 25 in Afghanistan)". https://polioeradication.org/wp-content/uploads/2025/09/GPEI-general-factsheet-20250918.pdf . WHO, "Poliomyelitis" fact sheet: "Cases due to wild poliovirus have decreased by over 99% since 1988." https://www.who.int/news-room/fact-sheets/detail/poliomyelitis . Checked 31 Oct 2026.

[23] World Health Organization, "Global immunization efforts have saved at least 154 million lives over the past 50 years" (24 Apr 2024): "The vast majority of lives saved – 101 million – were those of infants"; "Nearly 94 million of the estimated 154 million lives saved since 1974, were a result of protection by measles vaccines." https://www.who.int/news/item/24-04-2024-global-immunization-efforts-have-saved-at-least-154-million-lives-over-the-past-50-years . Based on Shattock A J et al., "Contribution of vaccination to improved survival and health: modelling 50 years of the Expanded Programme on Immunization", *The Lancet* 403(10441):2307–2316 (2024). A modelled estimate. Checked 31 Oct 2026.

[24] Our World in Data, "Life expectancy" (updated 22 Oct 2025), world series from Riley J C (2005), "Estimates of regional and global life expectancy, 1800–2001", *Population and Development Review*, and from UN World Population Prospects for 1950 onward: 1800, 28.5 years; 1900, 32.0; 1950, 46.4; 2000, 66.4; 2023, 73.2. https://ourworldindata.org/life-expectancy . Figures before 1950 are reconstructions from sparse data. Checked 31 Oct 2026.

[25] Our World in Data, "Child mortality" (from Gapminder and UN IGME): share of children dying before age five, world: 1800, 42.8%; 1900, 40.9%; 1950, 24.7%; 1990, 9.35%; 2000, 7.67%; 2023, 3.83%. https://ourworldindata.org/grapher/child-mortality . Figures before 1950 are model-based reconstructions. Checked 31 Oct 2026.

[26] United Nations, Department of Economic and Social Affairs, *World Population Prospects 2024: Summary of Results*: "Globally, life expectancy at birth reached 73.3 years in 2024, an increase of 8.4 years since 1995." https://population.un.org/wpp/assets/Files/WPP2024_Summary-of-Results.pdf . Checked at source on 31 Oct 2026; revised every two years.

[27] UN Inter-agency Group for Child Mortality Estimation, as released by WHO and UNICEF (18 Mar 2026): "An estimated 4.9 million children died before their fifth birthday in 2024". https://www.who.int/news/item/18-03-2026-progress-in-reducing-child-deaths-slows-as-4.9-million-children-die-before-age-five . The 1990 figure (12.97 million) is the UN IGME estimate as published in the World Bank's World Development Indicators, SH.DTH.MORT (updated 13 July 2026). https://api.worldbank.org/v2/country/WLD/indicator/SH.DTH.MORT?format=json&date=1990:2024 . Checked 31 Oct 2026.

The current system deserves credit for much more than medicine. The share of the world's people living in extreme poverty, on less than $3.00 a day measured at 2021 prices, fell from about 43% in 1990 to about 10% in 2024.[28] A joint study by the World Bank and the Chinese government found that in China alone, over four decades, the number of people below the international poverty line fell by close to 800 million.[29] On farms, new varieties of wheat and rice, fertiliser and irrigation roughly tripled the cereal grown on each hectare of the world's farmland between 1961 and 2023, and the agricultural scientist Norman Borlaug received the Nobel Peace Prize in 1970 for having given what the committee called "a well-founded hope", the green revolution.[30,31] The rate at which women die in pregnancy and childbirth fell by 40% between 2000 and 2023, and by 2024 all but about 655 million of the world's people had electricity.[32,33] Trade, markets, companies and states organised the production and the money behind much of this, and UP, which holds that the current system brought great gains over the systems before it, says so plainly.[9]

Reform has worked too, and the cases are worth knowing by name. The Introduction told how the world found a hole in the ozone layer and, within two years, agreed a treaty to close it. Lead has gone too, though far more slowly, as the next paragraphs show. In July 2021 the last service stations in Algeria stopped selling leaded petrol, and the United Nations Environment Programme announced that its use in road vehicles had ended everywhere.[34] In the United States, the power stations covered by the Acid Rain Program cut their emissions of sulphur dioxide by 96% between 1990 and 2023.[35] Tobacco, which long seemed untouchable, has also retreated. The number of tobacco users in the world fell from 1.38 billion in 2000 to 1.2 billion in 2024, even as the population grew, though tobacco still holds about one adult in five.[36]

What separates the fast wins from the slow ones? The ozone layer is the fastest the world has managed. The legal scholar Cass Sunstein compared the Montreal Protocol, which saved it, with the Kyoto Protocol on climate, which largely failed. He found that for the United States the benefits of protecting the ozone layer dwarfed the costs, while the costs of Kyoto were judged to dwarf its benefits, and that American companies strongly supported the first treaty and sharply opposed the second. Part of the difference was that industry had made progress on safe substitutes for the chemicals that were destroying the ozone, and saw a market in them.[37] DuPont, the largest

[28] World Bank, World Development Indicators, SI.POV.DDAY, poverty headcount ratio at $3.00 a day (2021 PPP), world (series last updated 8 October 2026): 1990, 43.4%; 2000, 36.2%; 2010, 21.0%; 2020, 11.4%; 2024, 10.1%. https://api.worldbank.org/v2/country/WLD/indicator/SI.POV.DDAY?format=json&date=1990:2025 . The 2024 value was 10.4% before the September 2026 Global Poverty Update, which revised it down to 10.1% (824.3 million people) after a new survey in South Asia replaced an extrapolation. https://blogs.worldbank.org/en/opendata/september-2026-global-poverty-update-from-the-world-bank–one-in . Checked at source on 31 Oct 2026; the series is revised each year.

[29] World Bank, press release, "Lifting 800 Million People Out of Poverty – New Report Looks at Lessons from China's Experience" (1 Apr 2022): "Over the past 40 years, the number of people in China with incomes below $1.90 per day … has fallen by close to 800 million." The study, *Four Decades of Poverty Reduction in China* (2022), was a joint effort of China's Ministry of Finance, the Development Research Center of the State Council and the World Bank. https://www.worldbank.org/en/news/press-release/2022/04/01/lifting-800-million-people-out-of-poverty-new-report-looks-at-lessons-from-china-s-experience . Checked 31 Oct 2026.

[30] The Nobel Prize, Norman E. Borlaug, Facts (Peace, 1970): "for having given a well-founded hope – the green revolution". https://www.nobelprize.org/prizes/peace/1970/borlaug/facts/ . Checked 31 Oct 2026.

[31] World Bank, World Development Indicators, AG.YLD.CREL.KG (cereal yield, kg per hectare; source FAO): 1961, 1,422; 2023, 4,229. https://api.worldbank.org/v2/country/WLD/indicator/AG.YLD.CREL.KG?format=json&date=1961:2024 . Hannah Ritchie, "Yields vs. land use", Our World in Data (2017): "the world can produce almost three times as much cereal from a given area of land than it did in 1961." https://ourworldindata.org/yields-vs-land-use-how-has-the-world-produced-enough-food-for-a-growing-population . Yields rose through new varieties, fertiliser and irrigation together. Checked 31 Oct 2026.

[32] WHO, UNICEF, UNFPA, World Bank Group and UN DESA, *Trends in maternal mortality 2000 to 2023* (7 Apr 2025), joint release: "an estimated 260,000 women died in 2023"; "a 40 per cent global decline in maternal deaths between 2000 and 2023"; "the pace of improvement has slowed significantly since 2016"; "current annual rates of decline of around 1.5 per cent"; the ratio would need to fall "by around 15 per cent each year" to meet the 2030 goal. https://www.unicef.org/press-releases/aid-cuts-threaten-fragile-progress-ending-maternal-deaths-un-agencies-warn . The 40% is the fall in the maternal mortality ratio (328 to 197 per 100,000 live births). Checked 31 Oct 2026.

[33] IEA, IRENA, UN Statistics Division, World Bank and WHO, *Tracking SDG7: The Energy Progress Report 2026*, as summarised by Sustainable Energy for All: "While 89 million people gained access to electricity in 2024, population growth meant the number of people without electricity fell by just 11.5 million, leaving 655 million still without access." https://www.seforall.org/publications/tracking-sdg7 . Checked at source on 31 Oct 2026; revised each year.

[34] United Nations Environment Programme, "Inside the 20-year campaign to rid the world of leaded fuel" (30 Aug 2021): "By 2020, Algeria was the last country on earth where drivers could buy leaded petrol"; "In July, the government confirmed that service stations were no longer selling leaded petrol"; at a press conference in Nairobi, UNEP "announced the last country to use leaded petrol, Algeria, had phased out the fuel." https://www.unep.org/news-and-stories/story/inside-20-year-campaign-rid-world-leaded-fuel . The end of leaded petrol covers fuel for road vehicles. Checked at source, 31 Oct 2026.

[35] US Environmental Protection Agency, Power Sector Programs, "Progress Report: Emissions Reductions" (data through 2023): "The ARP sources reduced emissions by 15.1 million tons (96 percent) from 1990 levels." https://www.epa.gov/power-sector/progress-report-emissions-reductions . The figure covers power plants in the Acid Rain Program, not all US sulphur dioxide. Checked 31 Oct 2026.

[36] World Health Organization, "WHO tobacco trends report: 1 in 5 adults still addicted to tobacco" (6 Oct 2025): the number of tobacco users "dropped from 1.38 billion in 2000 to 1.2 billion in 2024"; tobacco "still hooks one in five adults worldwide". https://www.who.int/news/item/06-10-2025-who-tobacco-trends-report-1-in-5-adults-still-addicted-to-tobacco . Checked 31 Oct 2026.

[37] Cass R. Sunstein, "Of Montreal and Kyoto: A Tale of Two Protocols", *Harvard Environmental Law Review* 31(1):1 (2007): "To the United States, the monetized benefits of the Montreal Protocol dwarfed the monetized costs"; "the monetized benefits of the Kyoto Protocol would be dwarfed by the monetized costs"; "American companies strongly supported the Montreal Protocol while sharply opposing the Kyoto Protocol"; on substitutes, "significant progress in producing safe substitutes for CFCs" and "American producers saw that good commercial opportunities lay in the development and marketing of new products." https://journals.law.harvard.edu/elr/wp-content/uploads/sites/79/2019/07/31.1-Sunstein.pdf . Sunstein's main explanation is the cost-

maker of those chemicals, reversed its public position in March 1988. Its chairman later recalled that the decision to phase them out came three days after the definitive science reached the company, and that it was possible only because of large earlier spending on substitutes.[38] A few producers, a clear measure and a substitute ready to sell: solving the problem cost no one a large and lasting stream of income.

Lead shows what happens when it does. The fuel additive that made petrol leaded was found to work in December 1921, and in January 1926 a committee set up by the United States Public Health Service reported that there were no good grounds for banning it, provided its use was properly regulated, although scientists had warned of the danger. In the 1960s the geochemist Clair Patterson showed how far industry had raised the lead in the environment, and, by his own account, lost his funding from the oil companies as a result.[39] Leaded petrol was finally gone from the world's roads in 2021, a century after it arrived.[34] Tobacco followed a similar road. In 2006 a federal judge in Washington found that the largest American tobacco companies had known many of the facts about smoking's harm for fifty years or more, and had consistently and skilfully denied them to the public.[40] Reform won in both cases, and it deserves the credit. But where solving a problem threatened an industry's income, it won slowly and against organised resistance. The waiting had a cost. The United Nations expects the end of leaded petrol to prevent more than 1.2 million premature deaths a year, and tobacco still kills more than seven million people a year.[34,41]

In UP's terms, the great gains of the past two centuries were won largely by the method UP names. Problems were measured, solutions were tested and compared, and what worked was shared, often far beyond the people who found it.[42] Many of them were won by people who took on a problem because it was in front of them, as Chapter 1 showed people do from infancy: a doctor in a refugee camp, a researcher who sought no patent, the scientists who noticed the ozone thinning over Antarctica.[43] And the current system did what it does best, which is to organise production on a vast scale once a solution exists and someone will pay for it. That is why UP is judged against this record, and never against an imaginary one.[9,10] So what follows for UP? It cannot rest its case on contempt for the current system, and it does not try to. Its case rests on a narrower question, which the rest of this chapter answers with numbers: when the method that produced these gains meets a problem that does not pay, or one that is too large and too tangled for a single treaty, how fast does the current system move?

UP's core gives this credit a precise place, because UP itself is judged against two standards at once.[10] One is the ideal UP aims at, the health, happiness and wellbeing of all living things. That ideal is a direction, never a finish line,

benefit judgement in the United States; substitutes are a contributing factor. Pin cites to be added before print. Checked 31 Oct 2026.

[38] Richard E. Heckert, oral history interview by James J. Bohning (13 Dec 1994), Chemical Heritage Foundation, transcript 0123, p. 29: "The fact is that DuPont made the decision to phase out the worst offenders three days after the definitive study" "was made available to us"; "Prompt action was possible because of large research and development expenditures on substitutes" "begun soon after the potential problem was identified." https://digital.sciencehistory.org/downloads/orig/pdf/zp38wd69n . The date: Maxwell J and Briscoe F, "There's money in the air: the CFC ban and DuPont's regulatory strategy", *Business Strategy and the Environment* 6:276–286 (1997), cite "DuPont Policy Statement: CFCs, 24 March" 1988, and say that "Within less than a week, DuPont's senior management accepted the recommendation and announced a plan to phase out their CFC production entirely" after the Ozone Trends Panel report of March 1988. https://gwern.net/doc/politics/1997-maxwell.pdf . Checked at source on 31 Oct 2026.

[39] US Public Health Service, *Proceedings of a Conference to Determine Whether or Not There Is a Public Health Question in the Manufacture, Distribution, or Use of Tetraethyl Lead Gasoline*, Public Health Bulletin No. 158 (1925): the conference was held on 20 May 1925, Surgeon General H. S. Cumming presiding. https://www.toxicdocs.org/d/LK5LYGeBwEdb3RdJ43onX0Bvq . US Public Health Service, *The Use of Tetraethyl Lead Gasoline in Its Relation to Public Health*, Public Health Bulletin No. 163 (June 1926): the committee appointed by that conference, reporting on 17 January 1926, found "no good grounds for prohibiting the use of ethyl gasoline of the composition specified as a motor fuel" provided its distribution and use were controlled by proper regulations. https://www.toxicdocs.org/d/KGgEXbRbo6zY4yJKO70E915Qx . William Kovarik, "ETHYL: The 1920s conflict over leaded gasoline & alternative fuels", paper to the American Society for Environmental History (2003): "By Dec. 9, 1921, a compound of lead suspended in alcohol had been found to be highly effective"; and, after the refinery poisonings, Yandell Henderson of Yale: "Breathing day by day of the fine dust from automobiles will produce chronic lead poisoning on a large scale". Archived copy (the page has left Kovarik's site): https://web.archive.org/web/20230625230713/https://billkovarik.com/bio/cabi/ethyl-the-1920s-conflict-over-leaded-gasoline/ . Clair C. Patterson, "Contaminated and Natural Lead Environments of Man", *Archives of Environmental Health* 11(3):344–360 (1965): "it was discovered that there has been a profound effect by this agency on the lead content of the oceans and of the atmosphere of the northern hemisphere". https://authors.library.caltech.edu/records/btnnq-qzk72 . Patterson says in his Caltech oral history (interview by Shirley K. Cohen, March 1995) that the oil companies cut off his funding after his findings. https://digital.archives.caltech.edu/collections/OralHistories/OH_Patterson_C . Checked at source, 31 Oct 2026.

[40] *United States v. Philip Morris USA Inc.*, 449 F. Supp. 2d 1 (D.D.C. 2006), final opinion of Judge Gladys Kessler, 17 Aug 2006, Introduction, section A, "Overview": "Defendants have known many of these facts for at least 50 years or more." and "Despite that knowledge, they have consistently, repeatedly, and with enormous skill and sophistication, denied these facts to the public, to the Government, and to the public health community." Full text of the opinion: https://assets.tobaccocontrollaws.org/uploads/litigation/United%20States/US_United-States-v.-Philip-Morris-08172006.pdf . Checked at source, 31 Oct 2026.

[41] World Health Organization, "Tobacco" fact sheet (26 June 2026): tobacco is "responsible for over 7 million deaths annually". https://www.who.int/news-room/fact-sheets/detail/tobacco . UNEP's estimate for leaded petrol (more than 1.2 million premature deaths prevented a year) is in its 2021 release, cited above; both are modelled estimates. Checked 31 Oct 2026.

[42] Core tenet: *The method: shared problem solving with evidence*. Full wording in "The core of UP".

[43] Felix Warneken and Michael Tomasello, "Altruistic Helping in Human Infants and Young Chimpanzees", *Science* 311:1301–1303 (2006): "we presented 24 18-month-old infants with 10 different situations"; "In no case did the infant receive any benefit (reward or praise) for helping"; children "as young as 18 months of age (prelinguistic or just-linguistic) quite readily help others". 22 of the 24 infants helped at least once. https://doi.org/10.1126/science.1121448 ; full text read in an archived author copy: https://web.archive.org/web/20240704025705/http://www.wisebrain.org/papers/AltruismInfantsChimps.pdf . Checked at source, 31 Oct 2026.

so it can never be fully reached; it shows which way is forward and how far there is still to go.[44] The other standard is today's record, set beside what UP does, which shows whether UP is already doing better than the current system, area by area.

Holding a new idea to perfection alone is a mistake with a name, the nirvana fallacy. Every real system falls short of perfection, so judged that way any new idea loses, and UP's agreed position is that this book names the mistake rather than commit it.[9] UP's core asks for both standards together. So the current system is credited with the great gains it has brought over ancient ones, as this section has shown, and the ideal shows the distance still to close. That distance is the subject of the next section.

Where the race is being lost

In March 1958, near the summit of Mauna Loa, a volcano in Hawaii, a new instrument began measuring the carbon dioxide in the air for the American scientist Charles David Keeling. Its first reading, on 29 March, came to 313 parts per million.[45] The measurements went on, and the record that Keeling began, now known as the Keeling Curve, has been kept ever since. In 2024 the yearly average at Mauna Loa rose by more than in any year since the record began, and by 2025 the annual mean stood at about 427 parts per million, more than a third above that first reading.[46] Keeling's curve is the plainest picture there is of a race being lost, because it has kept rising through every climate treaty the world has signed.

The numbers behind the curve make the pace clear. To give a better-than-even chance of holding warming to 1.5 °C, the Intergovernmental Panel on Climate Change found, the world's emissions of carbon dioxide would need to fall by about half between 2019 and 2030.[47] Instead, emissions from fossil fuels were projected to reach a record of about 38 billion tonnes in 2025, about 1% up on 2024.[48] Only about 130 to 170 billion tonnes of carbon dioxide can still be emitted for an even chance, and at today's rate that budget runs out in three to four years.[49] The year 2024 was the first full calendar year more than 1.5 °C warmer than before the industrial age, though the Paris goal is measured over decades rather than single years.[50] On the policies governments actually have in place, the United Nations Environment Programme projects about 2.8 °C of warming this century.[51] Figure 2.2 sets the path the IPCC described beside the path the world has taken.

[44] Core tenet: *The aim: the health, happiness and wellbeing of all living things*. Full wording in "The core of UP".

[45] APS News, "March 1958: Charles Keeling begins long-term measurements of atmospheric CO2 on Mauna Loa" (Katherine Bourzac, 18 Feb 2025): "On March 29, 1958, Keeling's first Mauna Loa reading came in, measuring atmospheric CO2 concentration at 313 ppm." https://www.aps.org/apsnews/2025/02/keeling-measurements-co2-mauna-loa . Checked at source, 31 Oct 2026.

[46] Scripps Institution of Oceanography, "New Record for Annual Increase in Keeling Curve Readings" (16 Jan 2025): the 2024 yearly average was 3.58 ppm above 2023's, the fastest rise on record. https://scripps.ucsd.edu/news/new-record-annual-increase-keeling-curve-readings . Annual mean at Mauna Loa for 2025, 427.0 ppm (and 424.3 ppm for 2024), from Scripps data: Met Office, "Mauna Loa carbon dioxide forecast for 2026", Table 4. https://www.metoffice.gov.uk/research/climate/seasonal-to-decadal/long-range/forecasts/co2-forecast . The International Energy Agency also reports "record atmospheric CO2 concentrations of about 427 parts-per-million (ppm)" for 2025. https://www.iea.org/reports/global-energy-review-2026/co2-emissions . More than a third above is 427 against 313. Checked at source on 31 Oct 2026; the series is revised each year.

[47] IPCC, *Climate Change 2023: Synthesis Report*, Summary for Policymakers, section B.6 and Table SPM.1 ("Greenhouse gas and CO2 emission reductions from 2019, median and 5-95 percentiles"): pathways that limit warming to 1.5 °C (>50%) with no or limited overshoot cut CO2 emissions by a median 48% (5-95% range 36-69%) and greenhouse gases by 43% (34-60%) by 2030, relative to 2019. https://www.ipcc.ch/report/ar6/syr/summary-for-policymakers/ . Checked at source on 31 Oct 2026.

[48] Friedlingstein P et al., "Global Carbon Budget 2025", *Earth System Science Data* 18:3211–3288 (13 May 2026), DOI 10.5194/essd-18-3211-2026: fossil emissions "expected to further increase in 2025 by 1.0 % relative to 2024", to "an expected 10.4 GtC yr−1 (38.1 GtCO2 yr−1)". https://essd.copernicus.org/articles/18/3211/2026/ . Figure 2.2 uses the Global Carbon Project's data set, *Supplemental data of Global Carbon Budget 2025 (Version 1.0)*, https://doi.org/10.18160/gcp-2025 (fossil emissions net of the cement carbonation sink; 2025 is the project's projection). The 1.5 °C path in the figure is an illustration, not an IPCC series: it applies the IPCC's median 48% cut in total CO2 to fossil CO2 alone. By the same data, 2024 was about 4% above 2019. Checked at source on 31 Oct 2026; the series is revised each year.

[49] Friedlingstein P et al., "Global Carbon Budget 2025", *Earth System Science Data* 18:3211–3288 (13 May 2026), executive summary: "50 GtC, 170 GtCO2 left, equivalent to around 4 years at the 2025 emissions levels" for a 50% likelihood of limiting warming to 1.5 °C. https://essd.copernicus.org/articles/18/3211/2026/ . Forster P M et al., "Indicators of Global Climate Change 2025", *Earth System Science Data* 18:3889–3933 (11 June 2026), https://essd.copernicus.org/articles/18/3889/2026/essd-18-3889-2026.html ; the authors' indicator site gives "the remaining carbon budget from the start of 2026 is 130 Gt CO_2", "a little over 3 years at the current 42 Gt CO_2/yr CO_2 emission rate". https://indicators.climate.copernicus.eu/ . The two estimates use different methods. Checked at source on 31 Oct 2026; the series is revised each year.

[50] World Meteorological Organization, "WMO confirms 2024 as warmest year on record at about 1.55°C above pre-industrial level" (10 Jan 2025): 2024 was likely "the first calendar year with a global mean temperature of more than 1.5°C above the 1850-1900 average". https://wmo.int/news/media-centre/wmo-confirms-2024-warmest-year-record-about-155degc-above-pre-industrial-level . The Paris goal refers to long-term warming over about twenty years. Checked 31 Oct 2026.

[51] United Nations Environment Programme, *Emissions Gap Report 2025: Off Target* (4 Nov 2025): projected warming this century of about 2.8 °C under current policies, and 2.3–2.5 °C if national pledges are fully implemented. https://unep.org/resources/emissions-gap-report-2025 . Checked 31 Oct 2026.

FIGURE 2.2

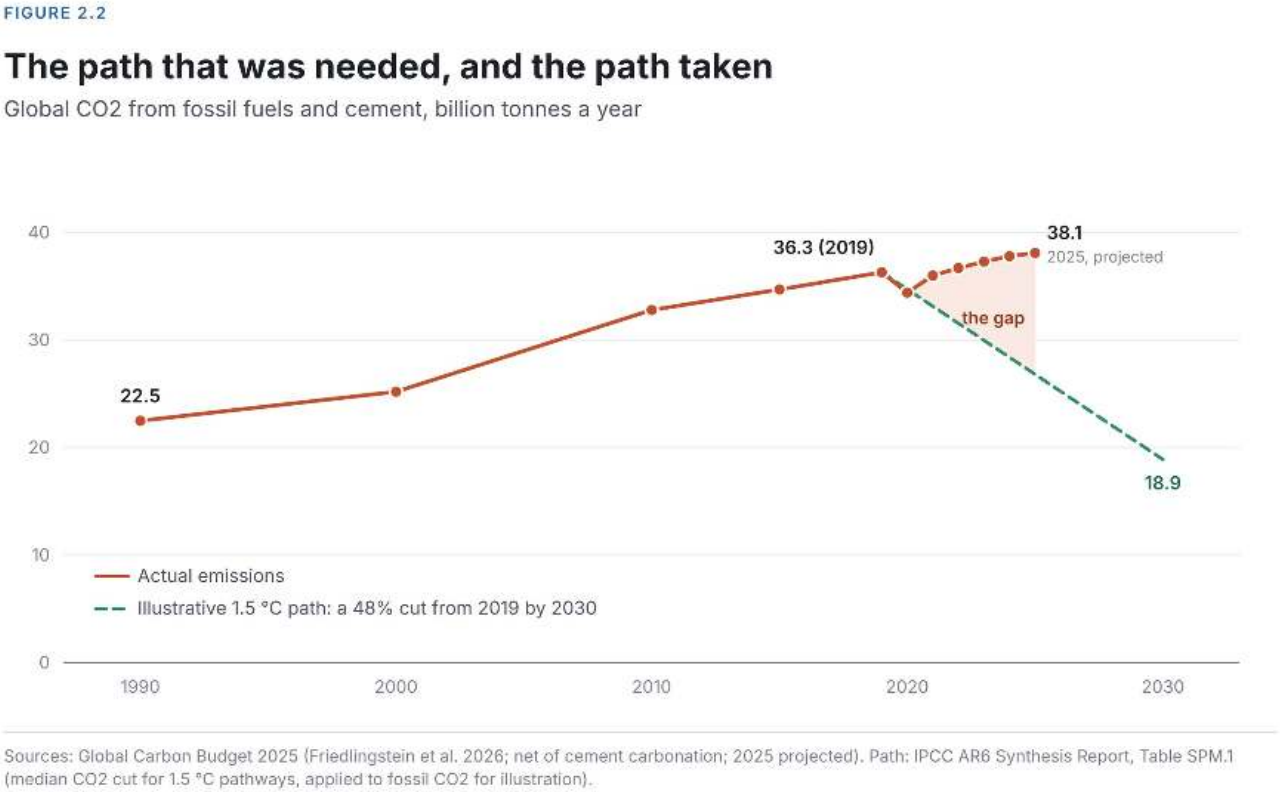


Figure 2.2. Global carbon dioxide emissions from fossil fuels and cement, in billions of tonnes a year, 1990 to 2025 (2025 projected), beside an illustrative path that falls by 48% from 2019 to 2030, the IPCC's median cut in carbon dioxide for pathways that hold warming to 1.5 °C. Sources: Global Carbon Budget 2025; IPCC Sixth Assessment Synthesis Report, Table SPM.1.

None of this means nothing is being done, and the credit here is large. In 2025 the world added a record 800 gigawatts of renewable power, more than three-quarters of it solar.[52] The cost of electricity from new solar farms fell by about 90% between 2010 and 2024.[53] And in 2025, on one careful count, renewable sources overtook coal as the largest source of the world's electricity for the first time.[54] Yet the same count shows why the race is still being lost. Wind and solar met 99% of the growth in the world's demand for electricity in 2025, while generation from fossil fuels fell by only 0.2%.[54] Clean power is now winning the race to meet new demand, but it has barely begun to push out the old. Clean energy and fossil emissions are both still rising at once.

The living world tells a similar story with less to set against it. For the decade from 2011 to 2020, the world's governments set themselves twenty targets to slow the loss of nature. When the deadline came, the United Nations found that not one of the twenty had been fully met, and six had been partly met.[55] The wildlife populations that scientists monitor around the world, some 35,000 of them, have fallen in size by an average of 73% since 1970.[6] And the world's leading assessment of biodiversity estimated that around a million species of animals and plants

[52] International Energy Agency, *Global Energy Review 2026* (2026), "Technology: solar PV and wind": "In 2025, global annual renewable capacity additions increased by 16%, reaching 800 GW"; "Solar PV accounted for more than three-quarters of new renewable capacity additions worldwide"; "This marked the 23rd consecutive year that renewables set new expansion records." https://iea.org/reports/global-energy-review-2026/technology-solar-pv-and-wind . IRENA counts 692 GW for 2025 by a different method. Checked at source on 31 Oct 2026; the series is revised each year.

[53] IRENA, *Renewable Power Generation Costs in 2024* (July 2025): the levelised cost of electricity from solar PV fell about 90%, from USD 0.417/kWh in 2010 to USD 0.043/kWh in 2024. https://www.irena.org/-/media/Files/IRENA/Agency/Publication/2025/Jul/IRENA_TEC_RPGC_in_2024_Summary_2025.pdf . Checked 31 Oct 2026.

[54] Ember, *Global Electricity Review 2026* (April 2026): in 2025 "renewables (33.8%, 10,730 TWh) overtook coal power (33.0%, 10,476 TWh)"; solar and wind "met almost all (99%) demand growth"; and fossil generation "did not rise, recording a small fall of 38 TWh (-0.2%)". https://ember-energy.org/latest-insights/global-electricity-review-2026/ . Checked at source on 31 Oct 2026; revised each year.

[55] Secretariat of the Convention on Biological Diversity, *Global Biodiversity Outlook 5* (2020), Summary for Policy Makers, p. 10: "At the global level none of the 20 targets have been fully achieved, though six targets have been partially achieved". https://www.cbd.int/gbo/gbo5/publication/gbo-5-en.pdf . Checked 31 Oct 2026.

are threatened with extinction, many within decades.[56] New targets have since been set for 2030.[57] Whether they fare better than the last will depend on the pace of the response, and nothing in the record so far suggests that pace is fast enough.

The soil and the water under our feet are being drawn down in the same way. The United Nations agency that monitors land estimates that between 20 and 40% of the world's land is degraded, and that between 2015 and 2019 at least 100 million hectares of healthy, productive land were lost every year.[58] A study of 170,000 wells around the world found that the fall in groundwater levels had accelerated over the past four decades in 30% of the world's regional aquifers, most often in dry regions with large areas of irrigated crops.[59] Above ground, 2.1 billion people, one in four, still lack safely managed drinking water, and the World Health Organization and UNICEF warn that universal coverage of safely managed water and sanitation "appears increasingly out of reach".[60] Scientists who track nine of the planet's life-support systems, from the climate to the chemistry of the oceans, judged in 2025 that seven of the nine had crossed their safe limits. Only the ozone layer and the haze of fine particles in the air remained inside them.[61]

Two studies put the human and the planetary sides of the race together. In 2018 a team of researchers compared what more than 150 countries achieve for their people with how much of the planet they use. They found that no country meets the basic needs of its people at a level of resource use the whole world could sustain, yet that physical needs such as food, sanitation and electricity could likely be met for everyone within the planet's limits.[62] A follow-up study tracked more than 140 countries from 1992 to 2015 and found that countries tend to cross planetary limits faster than they reach the social thresholds that mark a decent life. On current trends, its authors concluded, the world will deepen the ecological crisis while failing to end the shortfalls in people's lives.[63] That single finding is the race in a sentence.

The human side of the race has slowed in its own right. On 25 September 2015 the member states of the United Nations adopted seventeen goals for 2030, the first of them to end poverty in all its forms everywhere and the second to end hunger.[64] The World Bank reported in October 2026 that global progress on extreme poverty has come to a standstill. About one person in ten still lives on less than $3.00 a day, a rate the Bank says has

[56] IPBES, Global Assessment Report on Biodiversity and Ecosystem Services, media release (May 2019): "around 1 million animal and plant species are now threatened with extinction, many within decades". https://www.ipbes.net/news/Media-Release-Global-Assessment . Checked 31 Oct 2026.

[57] Convention on Biological Diversity, decision 15/4 (CBD/COP/DEC/15/4), *Kunming-Montreal Global Biodiversity Framework*, 19 December 2022, fifteenth meeting of the Conference of the Parties, Montreal: "Adopts the Kunming-Montreal Global Biodiversity Framework, as contained in the annex to the present decision"; the Framework "has 23 action-oriented global targets for urgent action over the decade to 2030". https://www.cbd.int/doc/decisions/cop-15/cop-15-dec-04-en.pdf . The Convention's page gives "4 goals for 2050 and 23 targets for 2030". https://www.cbd.int/gbf . Checked at source, 31 Oct 2026.

[58] UNCCD, *Global Land Outlook*, 2nd edition, Summary for Decision Makers (2022), p. 5: "The global extent of land degradation is estimated at between 20-40% of the total land area". https://www.unccd.int/sites/default/files/2022-04/GLO2_SDM_low-res_0.pdf . UNCCD, press release "At least 100 million hectares of healthy land now lost each year" (2023): "Between 2015 and 2019, the world lost at least 100 million hectares of healthy and productive land each year". https://www.unccd.int/news-stories/press-releases/least-100-million-hectares-healthy-land-now-lost-each-year . Checked at source, 31 Oct 2026.

[59] Jasechko S et al., "Rapid groundwater decline and some cases of recovery in aquifers globally", *Nature* 625:715–722 (25 Jan 2024): trends in "170,000 monitoring wells and 1,693 aquifer systems"; "groundwater-level declines have accelerated over the past four decades in 30% of the world's regional aquifers". Read in the authors' accepted manuscript, https://par.nsf.gov/servlets/purl/10487940 . The study also reports cases of recovery. Checked 31 Oct 2026.

[60] World Health Organization, news release on the WHO and UNICEF Joint Monitoring Programme report *Progress on household drinking water, sanitation and hygiene 2000–2024* (26 Aug 2025): "1 in 4 – or 2.1 billion people globally – still lack access to safely managed drinking water"; "universal coverage of safely managed services appears increasingly out of reach". https://www.who.int/news/item/26-08-2025-1-in-4-people-globally-still-lack-access-to-safe-drinking-water—who–unicef . The report itself: https://washdata.org/report/jmp-2025-wash-households . Checked at source on 31 Oct 2026; the series is revised every two years.

[61] Stockholm Resilience Centre, "Seven of nine planetary boundaries now breached" (24 Sept 2025), on the Potsdam Institute's *Planetary Health Check 2025*: "seven of nine planetary boundaries have now been exceeded. For the first time, this also includes the boundary for ocean acidification"; "Only Ozone Depletion and Aerosol Loading remain in the safe zone." https://www.stockholmresilience.org/news–events/general-news/2025-09-24-seven-of-nine-planetary-boundaries-now-breached . Potsdam Institute: "7 of the 9 critical Earth system boundaries have now been breached, one more than last year." https://www.pik-potsdam.de/en/news/latest-news/seven-of-nine-planetary-boundaries-now-breached-2013-ocean-acidification-joins-the-danger-zone . The 2023 assessment: Richardson K et al., "Earth beyond six of nine planetary boundaries", *Science Advances* 9(37), eadh2458 (2023): "six of the nine boundaries are transgressed". https://www.ebi.ac.uk/europepmc/webservices/rest/PMC10499318/fullTextXML . Checked at source, 31 Oct 2026.

[62] O'Neill D W, Fanning A L, Lamb W F, Steinberger J K, "A good life for all within planetary boundaries", *Nature Sustainability* 1(2):88–95 (2018): resource use compared with downscaled planetary boundaries "for over 150 nations"; "We find that no country meets basic needs for its citizens at a globally sustainable level of resource use"; physical needs such as "nutrition, sanitation, access to electricity" "could likely be met for all people without transgressing planetary boundaries." https://doi.org/10.1038/s41893-018-0021-4 (abstract read via RePEc). Checked by Claude, 31 Oct 2026.

[63] Fanning A L, O'Neill D W, Hickel J, Roux N, "The social shortfall and ecological overshoot of nations", *Nature Sustainability* 5(1):26–36 (2022): "11 social indicators and 6 biophysical indicators across more than 140 countries", 1992 to 2015; "countries tend to transgress biophysical boundaries faster than they achieve social thresholds"; "Current trends will only deepen the ecological crisis while failing to eliminate social shortfalls." https://doi.org/10.1038/s41893-021-00799-z (abstract read via RePEc). Checked by Claude, 31 Oct 2026.

[64] United Nations General Assembly, resolution 70/1 (A/RES/70/1), *Transforming our world: the 2030 Agenda for Sustainable Development*, adopted without a vote on 25 September 2015. https://digitallibrary.un.org/record/3923923 . "We are announcing today 17 Sustainable Development Goals with 169 associated targets which are integrated and indivisible." https://sdgs.un.org/2030agenda . Goal 1, "End poverty in all its forms everywhere"; Goal 2, "End hunger, achieve food security and improved nutrition and promote sustainable agriculture". https://sdgs.un.org/goals . Checked at source, 31 Oct 2026.

essentially not changed since the pandemic, and without stronger growth per person the Bank projects that the number of people in extreme poverty will be higher in 2030 than it is today.[65] Hunger has fallen for three years running, which is real progress. Yet the share of the world going hungry is only just below where it was in 2015, and around half a billion people are projected to be hungry in 2030, the very year by which the world's governments promised to end hunger.[66] Rosling was right that these numbers are far better than most people think.[3] They are also far from what the world promised itself.

The same slowing shows up in the lives of mothers and children. Child deaths are still falling, but the pace of the fall has slowed by more than 60% since 2015.[67] Deaths in pregnancy and childbirth have been falling by about 1.5% a year since 2016, when the world's goal for 2030 would need about ten times that pace.[32] Across all of the targets for 2030, the picture is the one the second test at the start of this chapter revealed. Of the targets that can still be measured, just over a third are on track or making moderate progress, nearly half are moving too slowly, and about one in seven has gone backwards since 2015.[8] On human needs, the race is being run too slowly to finish on time, which is a different kind of losing from the climate's.

Some problems are growing faster than the efforts to contain them. Infections that resist antibiotics directly caused an estimated 1.14 million deaths in 2021, and on current trends that number is projected to reach 1.91 million a year by 2050.[68] Meanwhile the number of new antibacterial treatments in clinical development is shrinking, and the World Health Organization describes the pipeline as facing a dual crisis of scarcity and lack of innovation.[69]

Waste tells the same story in material form. Electronic waste reached a record 62 million tonnes in 2022, and between 2010 and 2022 the amount generated grew about five times faster than the amount documented as properly recycled. The share documented as recycled, 22.3% in 2022, is expected to fall to 20% by 2030.[70] Figure 2.3 shows how the two have moved. Plastic waste more than doubled between 2000 and 2019, to 353 million tonnes, and only 9% of it is recycled.[71]

[65] World Bank, *Poverty, Prosperity, and Planet Report 2026* and press release "More and Better Jobs Key to Putting Poverty Reduction Back on Track" (26 Oct 2026): "Global progress on reducing extreme poverty has come to a standstill"; in 2026 "about 811 million people" or "one in ten globally" live "on less than $3.00 per person per day, a rate that has essentially not changed since the pandemic"; "Without stronger per capita growth, the number of people in extreme poverty is projected to be higher in 2030 than it is today." https://www.worldbank.org/en/news/press-release/2026/10/26/more-and-better-jobs-key-to-putting-poverty-reduction-back-on-track . Checked at source on 31 Oct 2026; the series is revised each year.

[66] FAO, IFAD, UNICEF, WFP and WHO, *The State of Food Security and Nutrition in the World 2026* (21 July 2026): "It is estimated that 645 million people faced hunger in 2025"; "7.8 percent of the global population faced hunger in 2025"; about 510 to 520 million projected for 2030. https://fao.org/publications/sofi ; joint release via WFP USA, https://www.wfpusa.org/?p=27718 . The 2015 rate, 8.0%: UN Statistics Division, *SDG Extended Report 2026*, Goal 2, "slightly below the 2015 level of 8.0 percent". https://unstats.un.org/sdgs/report/2026/extended-report/Extended-Report-2026_Goal-2.pdf . Hunger has fallen each year since 2022. Checked 31 Oct 2026.

[67] WHO and UNICEF, "Progress in reducing child deaths slows as 4.9 million children die before age five" (18 Mar 2026): "since 2015, the pace of reduction in child mortality has slowed by more than 60 per cent". https://www.who.int/news/item/18-03-2026-progress-in-reducing-child-deaths-slows-as-4.9-million-children-die-before-age-five . Checked 31 Oct 2026.

[68] GBD 2021 Antimicrobial Resistance Collaborators, "Global burden of bacterial antimicrobial resistance 1990–2021: a systematic analysis with forecasts to 2050", *The Lancet* 404(10459):1199–1226 (2024): "1.14 million (1.00–1.28) deaths attributable to bacterial AMR" in 2021; "1.91 million (1.56–2.26) deaths attributable to AMR" forecast for 2050. Abstract read via IHME, https://healthdata.org/node/12105 . "Attributable" deaths are those directly caused; a wider count of deaths "associated" with resistance is 4.71 million (2021). Deaths among children under five fell by more than half between 1990 and 2021, while deaths among people over seventy rose. Checked 31 Oct 2026.

[69] World Health Organization, "WHO releases new reports on new tests and treatments in development for bacterial infections" (2 Oct 2025): agents in clinical development fell from 97 (2023) to 90 (2025); "The pipeline faces a dual crisis: scarcity and lack of innovation." https://www.who.int/news/item/02-10-2025-who-releases-new-reports-on-new-tests-and-treatments-in-development-for-bacterial-infections . Checked 31 Oct 2026.

[70] ITU and UNITAR, *The Global E-waste Monitor 2024*, executive summary (March 2024): "in 2022, a record 62 billion kg of e-waste was generated globally"; "It is projected that 82 billion kg of e-waste will be generated in 2030"; "the amount of e-waste has grown 5 times faster than compliant collection and recycling since 2010"; documented formal collection and recycling "will decline to 20 per cent in 2030" from "22.3 per cent in 2022" on current trends. In 2010 the world generated 34 billion kg and documented 8 billion kg as formally recycled; in 2022, 13.8 billion kg. https://ewastemonitor.info/wp-content/uploads/2024/03/GEM_2024_18-03_web_executive-Summery.pdf . A billion kilograms is a million tonnes. The comparison of "5 times faster" is between the tonnes added (28 against 5.8), not growth rates. Checked at source, 31 Oct 2026.

[71] OECD, *Global Plastics Outlook* (22 Feb 2022): "Global plastic waste generation more than doubled from 2000 to 2019 to 353 million tonnes"; "Only 9% of plastic waste is recycled." https://www.oecd.org/newsroom/plastic-pollution-is-growing-relentlessly-as-waste-management-and-recycling-fall-short.htm . Checked 31 Oct 2026.

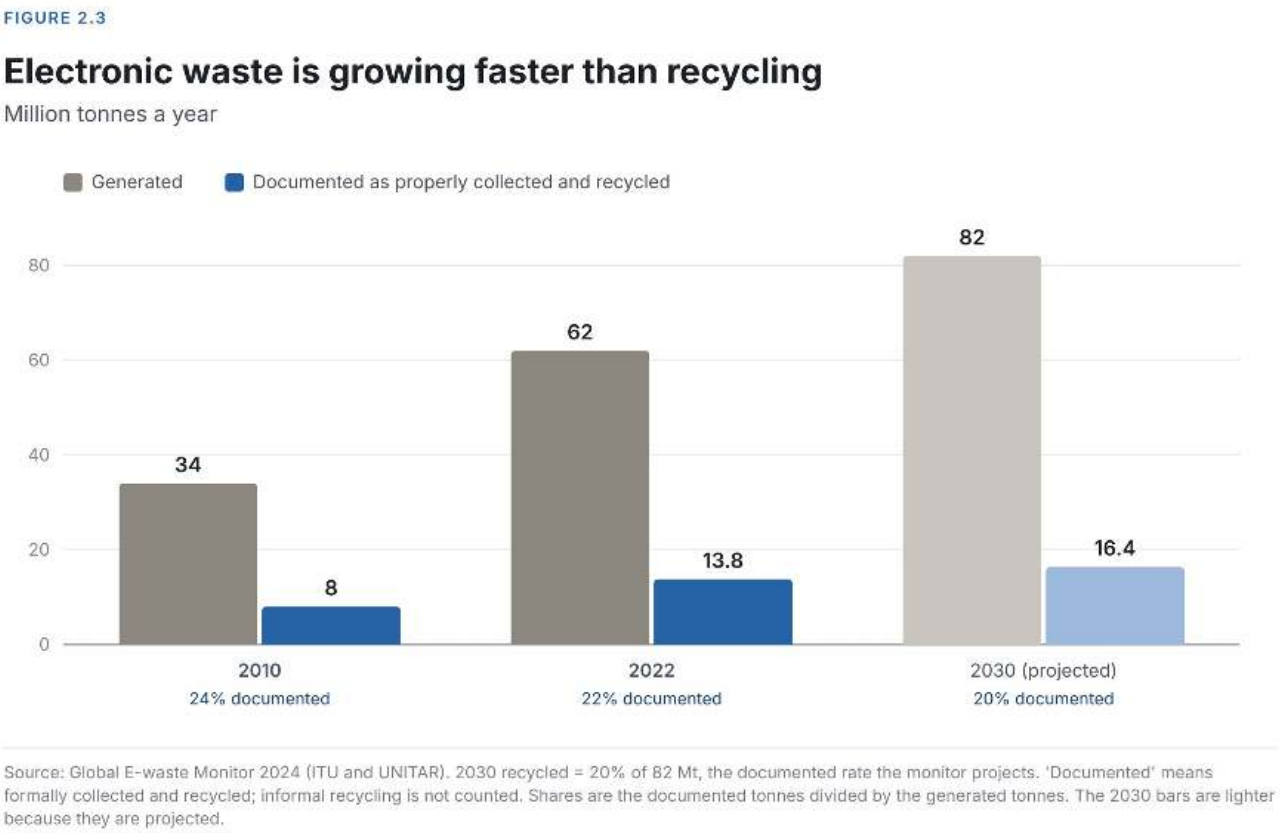


Figure 2.3. Electronic waste generated worldwide, and the amount documented as formally collected and recycled, in millions of tonnes, 2010, 2022 and 2030 (projected). The 2030 recycled amount is 20% of 82 million tonnes, the rate the monitor projects. Source: Global E-waste Monitor 2024 (ITU and UNITAR).

The means of destruction are growing too. World military spending reached $2,887 billion in 2025, its eleventh rise in a row, and the number of nuclear warheads held in military stockpiles for possible use rose again, as all nine nuclear-armed states continued to modernise or enlarge their arsenals.[72,73] Researchers at Uppsala University counted 65 armed conflicts involving states in 2025, the most since their records begin in 1946.[74] There is a real counter-trend here, and it belongs in the record. In 2025 the number of people forced from their homes fell for the first time in a decade, as 14.7 million displaced people went back to their areas or countries of origin, many of them under pressure and to precarious conditions. Even so, one person in every 70 on earth is still displaced.[75] And wealth remains concentrated at the top. The richest tenth of the world's adults own three-quarters of its wealth, while the poorer half own about 2%, a share that has barely moved since the early 2000s.[76]

[72] SIPRI, "Global military spending rise continues" (27 Apr 2026): world military expenditure of "$2887 billion" in 2025, "an increase of 2.9 per cent in real terms over 2024", "the 11th year of consecutive rises". https://www.sipri.org/media/press-release/2026/global-military-spending-rise-continues . Checked 31 Oct 2026.

[73] SIPRI Yearbook 2026, world nuclear forces (8 June 2026): an estimated 12,187 warheads in January 2026, of which "about 9745 were in military stockpiles for potential use" (9,614 a year earlier); the nine nuclear-armed states "continued programmes to modernize and enhance their nuclear arsenals in 2025". https://www.sipri.org/node/7895 . The total inventory fell slightly as retired warheads were dismantled. Checked 31 Oct 2026.

[74] Uppsala University, "UCDP: record number of conflicts between states" (9 June 2026): "UCDP registered 65 conflicts in which states were involved on one or both sides during 2025", "the highest number since statistics began to be recorded in 1946". https://www.uu.se/en/press/press-releases/2026/2026-06-09-ucdp-record-number-of-conflicts-between-states . Davies S, Pettersson T, Öberg M, "Organized violence 1989–2025", *Journal of Peace Research* 63(4) (2026). Checked 31 Oct 2026.

[75] UN News, "Refugee numbers drop for first time in a decade, but millions remain trapped" (10 June 2026), on UNHCR's *Global Trends* report: "Global forced displacement has decreased for the first time in a decade"; "14.7 million displaced people went back to their areas or countries of origin in 2025"; UNHCR "cautioned that many occurred under pressure and to precarious conditions". https://news.un.org/en/story/2026/06/1167693 . UNHCR, "Global Trends": "One in every 70 people, or 1.4 per cent of the entire world's population, is now forcibly displaced"; "At the end of 2025, 41.6 million people were refugees." https://www.unhcr.org/global-trends . Checked at source on 31 Oct 2026; revised each year.

[76] Chancel L, Piketty T et al., *World Inequality Report 2026* (World Inequality Lab), executive summary: "the top 10% own three-quarters of global wealth, while the bottom half holds only 2%"; the bottom 50% wealth share "has stagnated since the early 2000s at around 2%." https://wir2026.wid.world/www-site/uploads/2025/11/WIR26_Executive_Summary_English.pdf . Checked 31 Oct 2026.

Table 2.2 puts these issues side by side. For each, it gives the direction the problem is moving, the pace of the response and a plain verdict. UP's claim that reform is losing the race covers exactly the issues in this table and no others, and the table includes the cases where the response is winning, so that the claim can be checked against them.[11]

Table 2.2. The race, issue by issue. "Losing" means the problem is growing faster than the response, or the response is far too slow for the goal the world has set itself. The source of every figure is given in the note.[77]

Issue	Which way the problem is moving	How fast the response is moving	Verdict
Climate	Fossil emissions at a record, about 38 billion tonnes in 2025, still rising about 1% a year	Record renewables; clean power met almost all new demand, but fossil generation fell only 0.2%; a cut of about half by 2030 was needed	Losing
Wildlife and nature	Monitored populations down 73% on average since 1970; about a million species threatened	None of the 20 targets for 2020 fully met	Losing
Land and soil	20 to 40% of land degraded; at least 100 million hectares lost a year (2015 to 2019)	Some countries report recovery; the global loss continues	Losing
Fresh water	Groundwater declines accelerating in 30% of regional aquifers; 2.1 billion without safely managed drinking water	Access improving, but safe water for all by 2030 "increasingly out of reach"; the poorest countries need seven times the pace	Losing
The planet's limits overall	Seven of nine boundaries crossed in 2025, one more than in 2023	The ozone layer back inside its limit	Losing, with one win
Extreme poverty	811 million (2026), a rate unchanged since 2019	Projected to be higher in number in 2030 than today	Losing
Hunger	645 million (2025), falling for three years	Rate barely below 2015; about 515 million still hungry in 2030 against a goal of zero	Improving too slowly
Child deaths	4.9 million (2024), still falling	Pace of reduction slowed by more than 60% since 2015	Improving too slowly
Deaths in childbirth	260,000 (2023), falling	About 1.5% a year, against about 15% a year needed	Improving too slowly
Drug-resistant infections	1.14 million deaths (2021), projected 1.91 million a year by 2050	Drugs in clinical development fell from 97 to 90 (2023 to 2025)	Losing
Electronic waste	Record 62 million tonnes (2022), heading for 82 million by 2030	Grew about five times faster than documented recycling since 2010; recycling share falling	Losing
Plastic waste	More than doubled, 2000 to 2019	9% recycled	Losing
Weapons and war	Military spending up eleven years in a row; 65 state conflicts in 2025, a record	Forced displacement fell in 2025, the first fall in a decade	Losing, with one gain
Wealth	Top tenth owns 75% of the world's wealth; bottom half	Bottom half's share flat since the early 2000s	Losing

[77] Sources for Table 2.2, by row (all are in the notes to the paragraphs above). Climate: notes 48, 49, 52, 54 and 47. Wildlife and nature: 6, 56 and 55. Land and soil: 58. Fresh water: 59 and 60. The planet's limits: 61. Extreme poverty: 65. Hunger: 66. Child deaths: 27 and 67. Deaths in childbirth: 32. Drug-resistant infections: 68 and 69. Electronic waste: 70. Plastic waste: 71. Weapons and war: 72, 74 and 75. Wealth: 76. The world's goals for 2030: 8. Ozone layer: 78.

Issue	Which way the problem is moving	How fast the response is moving	Verdict
	about 2%		
The world's goals for 2030	139 measurable targets	36% on track or moderate; 15% gone backwards	Losing
Ozone layer (for comparison)	Recovering	Nearly 99% of banned chemicals phased out; recovery expected by about 2040 to 2066	Winning

In UP's terms, this is what it means to say that reform is losing the race. UP does not claim that reform is impossible, and the last row of the table shows that it is not.[78] It claims that on the planet's limits and on most of the major issues of our time, the problems are growing faster than the reforms, and that UP is built for the gap between the two.[11] The table also shows something about method. Every row rests on a measure with a fixed definition, kept over years, and that is exactly the kind of record UP's method depends on. UP holds that problems should be measured with fixed definitions kept over time, ranked by measured harm rather than by how loud they feel, and checked independently.[79] So what does the table add? It turns a feeling, that things are better and somehow worse at once, into a list of specific problems with specific paces, each of which can be offered as work.

The table also shows why UP keeps floors. Two of the floors in UP's core bear on almost every row. One is everyone's basic needs, such as food, water, shelter, health care, education and connection, which no gain for others can buy. The other is the living world's capacity to recover.[80] In the current system, the protections in this section took the form of targets. Governments set them, and they can be missed, as the targets for nature in 2020 were missed and as most of the measurable targets for 2030 are off track.

In UP a floor is a limit that no decision may cross. The collective may clarify a floor or raise it, but no decision may lower it or push anyone below it.[80] A floor binds what UP may decide. It is not a promise that no one will ever fall short, because UP does not promise a world without problems.[9] UP's agreed position adds a rule for the hardest cases. Damage that cannot be undone, such as a drained aquifer, a lost species or lost topsoil, is never traded for a short-term need, and the need is met another way.[81] Three rows of Table 2.2, the wildlife, the land and the groundwater, measure damage of the kind that can become irreversible. UP treats such losses as its motivation as well as its threat, because choices made within a few decades have already destroyed what people could otherwise have enjoyed for thousands of years.[81]

How would anyone know where the planet's limits lie? UP's agreed position points to the tool that the science in this section already uses. The planetary boundaries, the well records and the land surveys are physical accounts. They count real things, such as tonnes of carbon dioxide, hectares of healthy soil and metres of water below ground, rather than what those things cost. Physical accounting of this kind, from energy budgets and carbon caps to water footprints and the full life-cycle of materials, sets the planet's hard limits. Inside those limits several measures are used together, and choices between different needs are made openly by the people affected, never by an efficiency score.[82] The difference matters. A price records what a thing costs the person who buys it, and the next section shows how often that leaves the larger cost out. A physical account records what a thing takes from the world, so it shows when a limit is near whatever the price says. The next question is why the race is being lost on these issues and won on others.

[78] UNEP and WMO, joint release on the *Scientific Assessment of Ozone Depletion: 2022* (9 Jan 2023): the phase-out of "nearly 99%" of banned ozone-depleting substances; recovery to 1980 values expected by about 2066 over the Antarctic and 2040 for most of the world. https://www.unep.org/news-and-stories/press-release/ozone-layer-recovery-track-helping-avoid-global-warming-05degc (checked for the Introduction). A new assessment is due at the end of 2026.

[79] UP's agreed position on measures: problems are measured with fixed definitions kept over time and ranked by measured harm, not by how loud they feel, and every headline measure has an independent check. Full wording in "The core of UP".

[80] Core tenet: *Floors that are never crossed*: everyone's basic needs and protected freedoms; the living world's capacity to recover; the right to leave; a truthful shared record; freedom of the mind; and a fair hearing. The collective may clarify or raise the floors, but no decision may lower them or push anyone below them. Full wording in "The core of UP".

[81] UP's agreed position that people come first and that irreversible damage is never traded: meeting everyone's needs and protecting the living world are both floors; if a decision cannot wait, people come first, in the smallest way and for the shortest time, while restoration continues, except that damage that cannot be undone, such as a drained aquifer, a lost species or lost topsoil, is never traded for a short-term need, and the need is met another way. Such damage is UP's motivation as well as its threat. Full wording in "The core of UP".

[82] UP's agreed position that physical accounting sets the limits and people weigh the choices: energy budgets, carbon caps, water footprints, materials and life-cycle assessment set the planet's hard limits; inside them several measures are used together, and choices between different needs are made openly by the people affected, never by an efficiency score. Full wording in "The core of UP".

Why the race is lost where it is

The race is not lost evenly. Reform has won where a problem was bounded and solving it threatened no large, lasting income, and it stalls, in the words of UP's agreed position, most where it runs against profit from extraction, harm pushed onto others and concentrated power.[11] UP adds a sharper point. The comparison between UP and the current system is not symmetric, because the current system often turns a problem into a source of income instead of solving it, and sometimes a problem's persistence is exactly what pays.[12] That is a strong claim, and the Introduction has already shown one case of it, the company that made a needed antibiotic and went bankrupt. A few more cases show how the pattern works and how wide it runs. None of them needs a villain. Each needs only a system in which what pays decides what gets solved.

Insulin shows the pattern over a full century. In April 1922, the Toronto researchers who had just shown that insulin could treat diabetes wrote to the president of their university about a patent. It would be used, they said, for no other purpose than to stop anyone else from taking one out; once the method was published, anyone would be free to make insulin, but no one could secure a profitable monopoly. Frederick Banting, Charles Best and James Collip then assigned their patent to the University of Toronto for one dollar, and the university licensed manufacturers and kept control of quality.[83] Like Mahalanabis and Salk, they solved a problem because it was there, and tried to make sure the solution could not be fenced in.

A century later the same medicine was a byword for cost in the United States. A report by the staff of the Senate Finance Committee in 2021 found that the list prices of the main insulins had "risen steeply". One pen of a common insulin went from $323 in 2013 to $530 in 2017, and one manufacturer's board had voted down a proposed price cut because of its financial downsides.[84] In 2018, according to the RAND Corporation, the average American price for a standard unit of insulin was often five to ten times the price in other wealthy countries.[85] At one Yale diabetes clinic, about one in four of the patients who answered a survey said that in the past year the cost had led them to use less insulin than prescribed, or to stretch, skip or put off their insulin in some other way.[86]

The fair reading includes the other side. Much of the rise in list prices went to rebates and middlemen rather than to the makers, whose net price for one leading insulin actually fell slightly between 2015 and 2018, but people without good insurance paid the list price.[84] And the system did correct, eventually. From 2023, Medicare capped insulin at $35 a month, and that year all three main makers announced deep cuts in their list prices.[87] It took a century, and a Senate inquiry along the way, to bring closer to reach a medicine whose patent had been signed away for a dollar.

Where a problem cannot pay at all, the pattern is starker. Between 2000 and 2011, regulators approved 336 new chemical entities, the genuinely new medicines. Only four of them, about 1%, were for the neglected diseases of

[83] University of Toronto Libraries, Thomas Fisher Rare Book Library, *Insulin 100* exhibit: letter of 12 April 1922 from Banting, Best, Collip, Macleod and Fitzgerald to President Falconer: "The patent would not be used for any other purpose than to prevent the taking out of a patent by other persons"; "When the details of the method of preparation are published anyone would be free to prepare the extract, but no one could secure a profitable monopoly." https://fisherdigitus.library.utoronto.ca/exhibits/show/insulin100/manufacture-of-insulin . The assignment of the patent to the Governors of the University of Toronto for one dollar: the exhibit says the document was "signed December 19, 1922" (https://fisherdigitus.library.utoronto.ca/exhibits/show/insulin100/archival-highlights); the catalogue item is dated 1 Jan 1923 (https://fisherdigitus.library.utoronto.ca/document/7143). The two pages disagree, and the text gives no date. The university licensed other firms and took royalties for a research fund, and required "that strict supervision over its production be exercised by us" (Connaught Laboratories history, https://connaught.research.utoronto.ca/history/article3/). Checked at source, 31 Oct 2026.

[84] US Senate Committee on Finance, staff report, *Insulin: Examining the Factors Driving the Rising Cost of a Century Old Drug* (January 2021): "The WAC prices of long- and short-acting insulins have risen steeply"; Eli Lilly's "Humalog 50-50 Kwikpen, had a WAC of $530 in 2017 compared to $323 in 2013"; "Novo Nordisk's board of directors voted down a proposed insulin price decrease due to financial downsides"; Lilly's average net price for Humalog KwikPen "had declined slightly from $28 per pen in 2015 to $24 per pen in 2018". https://www.govinfo.gov/content/pkg/GOVPUB-Y4_F49-PURL-gpo150934/pdf/GOVPUB-Y4_F49-PURL-gpo150934.pdf . WAC is the list price set by the manufacturer. Checked at source, 31 Oct 2026.

[85] Mulcahy A W, Schwam D, Edenfield N, *Comparing Insulin Prices in the United States to Other Countries*, RAND Corporation RR-A788-1 (6 Oct 2020): average US manufacturer price per standard unit in 2018, $98.70, "often five to ten times higher" than in other OECD countries, and "about four times higher" after allowing for potential rebates. https://www.rand.org/pubs/research_reports/RRA788-1.html . Checked 31 Oct 2026.

[86] Herkert D, Vijayakumar P, Luo J et al., "Cost-Related Insulin Underuse Among Patients With Diabetes", *JAMA Internal Medicine* 179(1):112–114 (2019): "Of these patients, 51 (25.5%) reported cost-related insulin underuse." Survey at the Yale Diabetes Center, June–August 2017; 199 of 354 eligible patients responded. Underuse meant any of six things done because of cost in the past year, from using less insulin than prescribed to not filling a prescription. https://pmc.ncbi.nlm.nih.gov/articles/PMC6583414 . Checked 31 Oct 2026.

[87] US Department of Health and Human Services, ASPE, Data Point HP-2023-02 (24 Jan 2023): Medicare Part D "copayment cap of $35 per month supply of each covered insulin product" from 1 Jan 2023. https://aspe.hhs.gov/sites/default/files/documents/0f2503da0e1a31fb2b81d91b20660b0b/aspe-insulin-affordibility-datapoint.pdf . Eli Lilly, release (1 Mar 2023): list prices of Humalog and Humulin cut "by 70%". https://investor.lilly.com/news-releases/news-release-details/lilly-cuts-insulin-prices-70-and-caps-patient-insulin-out-pocket . Novo Nordisk, release (14 Mar 2023): "lowering the U.S. list prices of several insulin products by up to 75%", effective 1 Jan 2024. https://www.prnewswire.com/news-releases/novo-nordisk-to-lower-us-prices-of-several-pre-filled-insulin-pens-and-vials-up-to-75-for-people-living-with-diabetes-in-january-2024-301771409.html . Sanofi, release (16 Mar 2023): "Sanofi cuts U.S. list price of Lantus®, its most-prescribed insulin, by 78%", effective 1 Jan 2024. https://www.sanofi.com/en/media-room/press-releases/2023/2023-03-16-20-06-43-2629188 . The Medicare cap is current policy (Medicare.gov, "Insulin": "No more than $35 for a one-month supply of each Part B- and Part D-covered insulin product"). https://www.medicare.gov/coverage/insulin . Checked 31 Oct 2026.

the poor, such as malaria, tuberculosis and the diarrhoeal and tropical diseases, which together accounted for about 11% of the world's burden of disease in the World Health Organization's figures for 2004.[88] The researchers who counted them found a slight improvement on earlier decades, and expected new products to nearly double in the coming years, which they put down to changes in how research is organised, including new partnerships set up to fill the gaps the market left.[88] Even a medicine that already exists can disappear when it pays too little. Benzathine penicillin, the standard injection for syphilis and for preventing the rheumatic fever that damages children's hearts, costs about 11 US cents a dose in poorer countries. The World Health Organization found that its low price, set against the expense of sterile manufacture, limits the enthusiasm of companies to make it, and 39 of the 95 countries it surveyed between 2014 and 2016 reported shortages.[89] None of this requires anyone to act in bad faith. A company that spent its money on medicines its customers could not pay for would soon have no money left to spend.

Where people have organised to solve such problems anyway, the results show what is possible. Sleeping sickness is a fatal parasitic disease found in Africa. As recently as the late 2000s, one of the doctors who treats it recalled in 2018, it was still being treated with an arsenic compound that killed about one patient in twenty. A promising medicine, fexinidazole, had been developed by the German company Hoechst in the 1980s and then abandoned for strategic reasons. In 2005 the Drugs for Neglected Diseases initiative, a non-profit research organisation founded two years earlier, rediscovered it while searching for drugs against parasites. It then carried the medicine through its trials in a ten-year partnership with Sanofi, which by then owned Hoechst's work.

In November 2018 the European Medicines Agency gave a positive opinion on fexinidazole, the first treatment taken entirely by mouth to work against both stages of the disease.[90] In UP's terms, this is shared problem solving with evidence, aimed at a disease the market had neglected, using a medicine a company had set aside, and done by people who took the problem on because it needed doing.[42] Its limit is the one Chapter 1 found in every practice that works alone. A single non-profit, however good, can carry only a few such medicines at a time, and the 1% of new medicines made for the diseases of the poor shows how far that is from enough.

Sometimes the problem is designed in. On 23 December 1924 the leading makers of light bulbs met in Geneva and founded a cartel known as Phoebus. By early 1925 its members had agreed a standard life of 1,000 hours for an ordinary household bulb, down from the 1,500 to 2,000 hours that had been common, and a factory whose bulbs lasted longer or shorter than the standard had to pay a fine.[91] The members argued that their bulbs were brighter and more efficient, and how much of the standard was engineering and how much was sales is still argued.[91] Annie Leonard, whose book *The Story of Stuff* is one of the sources UP draws on, calls the wider practice "designed for the dump", and quotes the industrial designer who popularised the term in the 1950s, Brooks Stevens, defining it as "instilling in the buyer the desire to own something a little newer, a little better, a little sooner than is necessary."[92]

[88] Pedrique B, Strub-Wourgaft N, Some C et al., "The drug and vaccine landscape for neglected diseases (2000–11): a systematic assessment", *Lancet Global Health* 2013 Dec;1(6):e371–9, doi:10.1016/S2214-109X(13)70078-0: "Only four new chemical entities were approved for neglected diseases (three for malaria, one for diarrhoeal disease)", "accounting for 1% of the 336 new chemical entities approved during the study period"; the Discussion puts the global burden of these diseases at "11%" and the Results at "about a tenth" in 2004 (WHO figures); "these and other data show a slight improvement during the past 12 years in new therapeutics development and registration". The authors attribute the "anticipated near-doubling of new products in the coming years" to "substantial changes to the research and development landscape", including "product development partnerships". https://doi.org/10.1016/S2214-109X(13)70078-0 ; full text read at https://www.msf.org/sites/default/files/ed0f-piis2214109×13700780.pdf . Checked at source, 31 Oct 2026.

[89] World Health Organization, "Shortages of benzathine penicillin. How big is the problem? And why it matters" (26 Dec 2017): "As an off-patent medication, BPG is currently sold at a very low price", about US$0.11 for a 1.2 million IU dose in low- and middle-income countries (CHAI estimate); sterile manufacture "require[s] significant financial investment"; "This economic position limits the enthusiasm for commercial manufacturers to enter or even continue in the BPG market"; "Of these 95 countries, 39 (41%) reported a BPG shortage". https://www.who.int/news/item/26-12-2017-shortages-of-benzathine-penicillin.-how-big-is-the-problem-and-why-it-matters . WHO also names quality problems, minimum orders and poor forecasting. Checked 31 Oct 2026.

[90] Drugs for Neglected Diseases initiative, "European Medicines Agency recommends fexinidazole, the first all-oral treatment for sleeping sickness" (Geneva and Paris, 16 Nov 2018): fexinidazole is "the first all-oral treatment that has been shown to be efficacious for both stages of sleeping sickness"; Dr Victor Kande: "Less than ten years ago we were still treating this disease with an arsenic derivative that killed 5% of all patients"; the compound was developed by Hoechst (now Sanofi) in the 1980s, abandoned for strategic reasons and rediscovered by DNDi in 2005; "a 10-year partnership between the Drugs for Neglected Diseases initiative (DNDi), Sanofi"; DNDi has worked since 2003. https://dndi.org/2018/press-releases/ema-recommends-fexinidazole-first-all-oral-treatment-sleeping-sickness . The opinion was given under Article 58, for medicines used outside the EU. The history is the organisation's own account of its work. Checked by Claude, 31 Oct 2026.

[91] Markus Krajewski, "The Great Lightbulb Conspiracy", *IEEE Spectrum* 51(10):56–61 (October 2014; web page dated 24 Sept 2014): "On 23 December 1924, a group of leading international businessmen gathered in Geneva" and "founded the Phoebus cartel"; "By early 1925, this became codified at 1,000 hours for a pear-shaped household bulb", a reduction "from the 1,500 to 2,000 hours that had previously been common"; a factory whose bulbs lasted "longer or shorter than the regulated life span" was "obliged to pay a fine"; members claimed their bulbs were "of a higher quality, more efficient, and brighter burning". https://spectrum.ieee.org/the-great-lightbulb-conspiracy ; record of volume, issue and pages: https://ieeexplore.ieee.org/abstract/document/6905492 . A historian's account. Checked at source, 31 Oct 2026.

[92] Annie Leonard with Ariane Conrad, *The Story of Stuff* (New York: Free Press, 2010), chapter 4, "Consumption": "Another name for planned obsolescence is 'designed for the dump.' Brooks Stevens, an American industrial designer who is widely credited with popularizing the term in the 1950s, defined it as 'instilling in the buyer the desire to own something a little newer, a little better, a little sooner than is necessary.'" Read in the UP library (collection universal-pragmatism, parts 206–207). Checked 31 Oct 2026.

The monitors of electronic waste name shorter product life cycles, limited options for repair and shortcomings of design among the reasons that the mountain of discarded electronics is growing faster than it is recycled.[93]

Harm pushed onto other people is another way a problem can pay. Between 1977 and 2003, scientists at ExxonMobil and its predecessor companies made their own projections of how much the world would warm. In 2023 three researchers checked those projections against what then happened, and found that 63 to 83% of them were accurate, with an average projected warming of about 0.2 °C per decade. Over the same years, the researchers found, the company's public statements about climate science contradicted its own scientific data.[94] Meanwhile the price of fossil fuel leaves much of its cost out. The International Monetary Fund estimates that fossil fuels were subsidised by about $7 trillion in 2022, 7.1% of the world's economic output. Only about $1.3 trillion of that was money spent or tax forgone directly; most of the rest is the cost of the warming and the air pollution that fuel causes and that no price at the pump includes.[95] A problem whose costs fall on others sends no price signal to the people who could solve it, so it can grow for decades while the market around it works exactly as designed.

The clearest case of a problem whose persistence pays is also one of the most ordinary. In the late 1980s Denmark began sending its citizens tax returns already filled in with the figures the government held, and by 2020, 28 member countries of the Organisation for Economic Co-operation and Development, nearly three-quarters of its members, pre-filled returns with at least some kinds of income.[96] In the United States, a law of 1998 directed the tax authority to develop a return-free system for eligible taxpayers, starting in 2008. It never produced one.[97] An investigation by ProPublica in 2019 found a presentation to the board of Intuit, the maker of the leading tax software, which noted that for a decade, proposals for government tax software or a return-free system had been made and that "All were stopped." Intuit's position is that a government-run system would be fraught with conflicts of interest, and that it has always been clear and fair with its customers.[98]

In 2022 Intuit agreed to pay $141 million to settle claims by all fifty states and the District of Columbia over its "free" advertising, without admitting wrongdoing.[99] The government did build a free service, Direct File, which had about 141,000 returns accepted in 2024 and about 297,000 in 2025. The Treasury suspended it in October 2025 and, as the Associated Press reported on 5 November, the tax authority told the states that it would not be offered in 2026; the Treasury Secretary said it had not been used very much and that the private sector could do a better job.[100] No

[93] UNITAR, "Global E-waste Monitor 2024: Electronic Waste Rising Five Times Faster than Documented E-waste Recycling" (20 Mar 2024): "Challenges contributing to the widening gap include technological progress, higher consumption, limited repair options, shorter product life cycles, society's growing electronification, design shortcomings". https://unitar.org/about/news-stories/press/global-e-waste-monitor-2024-electronic-waste-rising-five-times-faster-documented-e-waste-recycling . Checked by Claude, 31 Oct 2026.

[94] Geoffrey Supran, Stefan Rahmstorf and Naomi Oreskes, "Assessing ExxonMobil's global warming projections", *Science* 379, eabk0063 (13 Jan 2023), abstract: the projections were "documented by-and in many cases modeled by-Exxon and ExxonMobil Corp scientists between 1977 and 2003"; "the company's public statements about climate science contradicted its own scientific data." Europe PMC record, PMID 36634176: https://www.ebi.ac.uk/europepmc/webservices/rest/search?query=EXT_ID:36634176%20AND%20SRC:MED&resultType=core&format=json . Harvard Gazette, on the study (12 Jan 2023): "depending on the metric used, 63-83 percent of the global warming projections reported by Exxon scientists were consistent with actual temperatures"; Exxon projected "0.20 degrees Celsius of global warming per decade, with a margin of error of 0.04 degrees". https://news.harvard.edu/gazette/story/2023/01/harvard-led-analysis-finds-exxonmobil-internal-research-accurately-predicted-climate-change . Checked at source, 31 Oct 2026.

[95] Black S, Liu A A, Parry I W H, *IMF Fossil Fuel Subsidies Data: 2023 Update*, IMF Working Paper 23/169 (August 2023): "Globally, fossil fuel subsidies were $7 trillion in 2022 or 7.1 percent of GDP. Explicit subsidies (undercharging for supply costs) have more than doubled since 2020 but are still only 18 percent of the total subsidy, while nearly 60 percent is due to undercharging for global warming and local air pollution." https://www.imf.org/en/publications/wp/issues/2023/08/22/imf-fossil-fuel-subsidies-data-2023-update-537281 . Eighteen per cent of $7 trillion is about $1.3 trillion. "Implicit" subsidies are unpriced damage, not cash paid out. Checked at source, 31 Oct 2026.

[96] Tax Policy Center (Urban-Brookings), "What are prepopulated tax returns?" (updated Jan 2024): "In the late 1980s, Denmark became the first country to prepopulate taxpayers' returns with available information from independent third parties, such as employers"; "By 2020, 28 countries belonging to the Organisation for Economic Cooperation and Development (OECD)—nearly three-quarters of OECD members—prefilled returns with some types of income". https://taxpolicycenter.org/briefing-book/what-are-prepopulated-tax-returns . Checked at source, 31 Oct 2026.

[97] Congressional Research Service, Gary Guenther, *Prefilled Individual Income Tax Return Filing: What It Is and Policy Issues*, IN11992 (22 Aug 2022): the IRS Restructuring and Reform Act of 1998 directed the IRS to develop a return-free system for eligible taxpayers starting in 2008; "The IRS never produced such a system." https://www.everycrsreport.com/reports/IN11992.html . Checked 31 Oct 2026.

[98] Justin Elliott and Paul Kiel, "Inside TurboTax's 20-Year Fight to Stop Americans From Filing Their Taxes for Free", ProPublica (17 Oct 2019): a 2007 Intuit board presentation: "For a decade proposals have sought to create IRS tax software or a ReturnFree Tax System; All were stopped." Intuit's response: a "government-run pre-filled tax preparation system" is "fraught with conflicts of interest", and it "has at all times been clear and fair with its customers". https://www.propublica.org/article/inside-turbotax-20-year-fight-to-stop-americans-from-filing-their-taxes-for-free . Investigative journalism; the board document is quoted as ProPublica reports it. Checked 31 Oct 2026.

[99] Tennessee Attorney General, press release PR22-14 (4 May 2022): "$141 million in restitution"; "All 50 states and the District of Columbia have signed onto the agreement." https://www.tn.gov/attorneygeneral/news/2022/5/4/pr22-14.html . Intuit's own statement, as reported by NPR (4 May 2022): "As part of the agreement, Intuit admitted no wrongdoing, agreed to pay $141 million to put this matter behind it". https://www.npr.org/2022/05/04/1096612276/turbotax-free-tax-filing-intuit-settlement . The Federal Trade Commission found the "free" advertising deceptive in January 2024; on 20 March 2026 the Fifth Circuit vacated that order on the constitutional separation of powers, without ruling on the advertising: "Intuit's petition for review is GRANTED; the FTC's order is VACATED". https://www.ca5.uscourts.gov/opinions/pub/24/24-60040-CV0.pdf . Checked at source, 31 Oct 2026.

[100] Jason Bramwell, "IRS Says Direct File Won't Be Around for 2026 Tax Filing Season", *CPA Practice Advisor* (5 Nov 2025), reporting the Associated Press: in an email to comptrollers in the 25 partner states the IRS said the programme "won't be provided next year", and "no launch date has been set for the future"; Treasury Secretary Scott Bessent, also acting IRS commissioner, said that "it wasn't used very much" and that "the private sector can do a better

source shows that lobbying caused that decision, and this chapter does not claim it. The point is simpler. Filing taxes is a problem that much of the wealthy world has largely solved, and in one wealthy country an industry earns much of its living from the problem staying unsolved.

Look again at the people who solved problems in this chapter. A doctor in a refugee camp gave cholera patients what he had.[14] Three researchers in Toronto signed their patent away for a dollar so that no one could make a monopoly of it.[83] A scientist asked who owned the patent on his vaccine said there was none, and asked whether one could patent the sun.[21] They behaved the way Chapter 1 showed people behave from infancy, taking on a problem because it was there, often without a reward and sometimes in spite of one.[43,101] What the current system decided was something else: which problems would draw money and effort, which solutions would reach people, how fast, and at what price. Where a solution also paid, it spread. Where it did not, as with medicines for the poor, it stalled, and where a problem itself paid, as with tax returns and light bulbs, the problem had defenders. The drive to solve problems is there in people. The current system decides where it is pointed.

In UP's terms, this is why the comparison between UP and the current system is not symmetric.[12] The cases in this section fall into five patterns, and UP's core and agreed positions speak to each. Table 2.3 sets them side by side, and the paragraphs after it explain the ideas one at a time.

Table 2.3. How a problem can pay, and how UP answers. The full wording of each idea is in "The core of UP".

How the problem pays	Cases in this chapter	The UP idea, in plain words	What it changes inside UP
Someone owns the only solution	Insulin's list prices	No one owns a problem or its solution; what UP makes stays open to everyone in UP, and no one may fence it in[42,102]	No one may fence a fix in and hold it back
No one can pay for the solution	Medicines for the diseases of the poor; benzathine penicillin	Each person counts; problems are ranked by measured harm, not by how loud they feel[44,79]	Harm, not the ability to pay, is what draws effort
Failure is designed in	The Phoebus cartel; products made to be replaced	Artificial scarcity is named and worked against with open design and physical accounting[103]	Building a product to last is not a lost sale, and physical accounting can show what a product takes over its life
The cost falls on others	Fossil-fuel costs left out of prices; climate science set aside	A truthful shared record; physical accounting; the living world's floor[80,82]	The cost is in an open record where anyone can see it
The problem's persistence pays	Tax filing in the United States	Problems are offered as work to anyone; money earns recognition, never power; power is kept spread out[42,104,105]	Delay earns no power, and concentrations of power are watched for and spread out again

The first and third rows rest on what UP calls artificial scarcity. UP's agreed position distinguishes three kinds of scarcity. Some is physical: at any moment there is only so much energy and so much material to go round. Some is

job". It reports 296,531 accepted returns for 2025, "up from the 140,803 submitted accepted returns in 2024", from an IRS evaluation obtained by the Center for Taxpayer Rights. https://www.cpapracticeadvisor.com/2025/11/05/irs-says-direct-file-wont-be-around-for-2026-filing-season/172448/ . Congressional Research Service, *The IRS Direct File Program*, In Focus IF13314 (17 Sept 2026): "The Department of the Treasury (Treasury) suspended the DF program in October 2025", citing high costs and limited participation; it counts 141,000 returns used to file in 2024 and "over 309,000" in 2025, a different measure from accepted returns. https://www.everycrsreport.com/files/2026-09-17_IF13314_7a5be865820f33882647d91cc0cadc376e538af6.html . No page of the IRS or the Treasury announcing the end of the programme could be opened. Checked at source, 31 Oct 2026.

[101] Felix Warneken and Michael Tomasello, "Extrinsic Rewards Undermine Altruistic Tendencies in 20-Month-Olds", *Developmental Psychology* 44(6):1785–1788 (2008): "After 20-month-old infants received a material reward during a treatment phase, they subsequently were less likely to engage in further helping during a test phase as compared with infants who had previously received social praise or no reward at all"; this "suggests that even the earliest helping behaviors of young children are intrinsically motivated". 36 children, 12 per condition. https://scholars.duke.edu/publication/1458228 . Small sample. Checked 31 Oct 2026.

[102] Core tenet: *Open systems, shared knowledge, private persons*, as amended in round 13b: UP's technology stays only in UP, where everyone taking part may use, study and improve it and no one may enclose it. Full wording in "The core of UP".

[103] UP's agreed position on the three kinds of scarcity: much of today's scarcity is artificial (planned obsolescence, patents and other enclosures, hoarding, money rationing and failures of distribution); some is physical (energy and materials) and some positional (prime places, specialised skills, time and attention). UP ends artificial scarcity with open design and physical accounting, reduces physical scarcity with automation, renewable energy and circular systems, and shares positional goods by rotation or a decision of the stakeholders, never by price; it will not be perfect at this and is judged against what happens now. Full wording in "The core of UP".

[104] Settled alongside the core, dangers adopted in round 10: "time and money earn recognition, never power". Full wording in "The core of UP".

positional: there are only so many homes by the sea and so many hours in a skilled surgeon's week. And much of today's scarcity is artificial, created by planned obsolescence, by patents and other enclosures, by hoarding, by rationing through money and by failures of distribution.[103] A light bulb designed to fail after 1,000 hours is scarce because someone made it so, and so is a medicine whose price, rather than its making, puts it out of reach. UP answers each kind differently. It works to end artificial scarcity with open design and physical accounting, reduces physical scarcity with automation, renewable energy and materials that are used again and again, and shares positional goods by rotation or by a decision of the stakeholders, never by price. UP's agreed position adds that it will not be perfect at this, and that it is judged against what happens now.[103]

The second row shows the limit of a price. A price tells a maker how much people can pay for something, which is useful information, and it says nothing about how badly they need it. UP's agreed position is that a price only

signals; it does not make a rare thing less rare. When many people want the same thing, UP treats that as a signal

and a problem to solve, and works to make more of it.[106]

Because UP counts its aim person by person, a child with rheumatic heart disease in a poor country counts as much as a child anywhere else, and the harm, measured with fixed definitions, shows where effort is most needed.[44,79] UP calls the result a marketplace of problems. The bigger a problem, the more people it affects and the more attention and effort it draws, so the biggest problems come first, and any area where UP is not yet doing better than the current system gets attention first of all.[107] It works like a market in one way, since effort flows toward the biggest problems. It differs in the way that matters here, since a problem's size is counted in harm, not in money.

The fourth row is a problem of records. Most of the fossil-fuel subsidy that the International Monetary Fund counts is cost that nobody is billed for, and the projections made by Exxon's own scientists did not stop the company's public statements from contradicting them.[95,94] UP's core and agreed positions speak to both. A truthful shared record is one of UP's floors, so facts, measures and decisions are never falsified.[80] UP's rules, records, decisions and reasons are public, so anyone can check them.[108] And physical accounting puts a tonne of carbon into the record whether or not anyone pays for it.[82] A problem whose cost sits in an open record is easier for everyone who could solve it to see. Openness will not find every problem, and UP names the risks that it cannot catch.[108]

The last row is the hardest to fix from inside, because the people who gain from a problem's persistence also have the money to defend it. UP works against that route in three ways. Problems are named, measured and offered as work to anyone willing to take them on, and no problem belongs to the person who raised it, so no one can hold a problem back by owning it.[42] Time and money earn recognition in UP, never power, and buying the power to delay a fix is exactly what that rule is there to prevent.[104] And concentration of power in any form, whether wealth, position, information, access, expertise or machines, is treated as a standing danger that everyone in UP watches for and spreads out again.[105] UP's agreed position sums up the result. In UP anyone can try anything that might solve a problem, the result carries the power, and an idea that works rises because of its results, not because a funder chose it.[109] Evidence proposes and people decide, so the people affected still make the call.[42]

So what does that design gain? It works against the most direct reasons for keeping a problem alive: in UP no one owns a problem or its solution, what UP makes may not be enclosed, and money and time earn recognition, never power. It also changes what a person gets for solving a problem. In UP, contribution records are feedback: they inform, and they never decide whether anyone's needs are met, and each person controls their own information.[110,108] Chapter 1 showed why that matters: rewards that control people tend to crowd out the motivation they bring themselves, while feedback that informs, and the freedom to choose, keep it alive.[110] None of this makes UP's people better than anyone else, and power that gathers informally remains a danger that everyone in UP watches for and answers as work.[105,111] What changes is what draws effort: in UP, the bigger a problem, the more attention and effort it draws.[107]

One problem through UP's loop

Ideas like these are easiest to judge when they are seen working together on a single problem. Insulin makes a good test, because this chapter has already followed its whole history, from a patent signed away so that no one could fence the medicine in, to a century in which people still went without it. What follows shows one way UP's method could handle that problem. It is an illustration, never a plan: the collective decides how UP actually works,

[105] Core tenet: *Power kept spread out*.

[106] UP's agreed position on scarcity: when many people want the same thing, UP treats it as a signal and a problem to solve; a price only signals and does not make a rare thing less rare. Full wording in "The core of UP".

[107] UP's agreed position on judging UP as a whole system: problems are linked in trees that show their common roots; the bigger a problem, the more people it affects and the more attention and effort it draws, so the system works like a marketplace of problems, biggest first, and any area where UP does not yet do better than the current system gets attention first. Full wording in "The core of UP".

[108] Core tenet: *Open systems, shared knowledge, private persons*: the rules, code, records, decisions and reasons of UP are public, so anyone can check them; UP's technology (the knowledge, code, data and designs UP produces) stays only in UP, where everyone taking part may use, study and improve it and no one may enclose it; each person controls their own information. Openness helps people find problems, but it will not find all of them, so UP also names the risks that openness alone cannot catch. Full wording in "The core of UP".

[109] UP's agreed position that inventing solutions together is its main activity, and that a solution rises because of its results, whether or not a funder would have backed it. Full wording in "The core of UP".

[110] UP's agreed position on rewards and motivation: money that controls people crowds out the motivation they bring themselves, while feedback that informs, and the freedom to choose, keep it alive; UP's contribution records are feedback, which inform and never decide whether anyone's needs are met. Full wording in "The core of UP". The research is in Chapter 1, "What children show us", and its notes.

[111] UP's agreed position that informal power, and the work of checking UP's own loop, are workload: watched for by everyone and answered with open checks, such as open-source code and open sensor data. Full wording in "The core of UP".

and the people a problem affects decide its outcome.[42,112] Most of its steps, though, have counterparts in what real people have already done, and the notes say where. What UP adds is the same thing Chapter 1 found it adds everywhere. It connects steps that today happen apart, and points them at harm instead of at what pays.[113]

In one version of the loop, a first step is to name the problem and measure it, with a definition that stays fixed over time.[42,79] Here the World Health Organization has already done much of the work. It reports that about nine million people with type 1 diabetes depend on insulin to stay alive, that more than 60 million people with type 2 diabetes need it, and that one out of every two people who need insulin for type 2 diabetes does not get it.[114] UP could state the problem in terms of harm, counted person by person: for example, how many people who need insulin go without enough of it, where they live, and what that costs them in health. How harm is measured is for the collective to define and refine.[44,115] The survey at the Yale clinic, where about one in four of the patients who answered had cut back on their insulin in some way because of its cost, shows that the harm reaches even one of the richest countries in the world.[86] UP would keep that record open, publish its method and have it independently checked.[108,79]

A second step is to trace the problem to its roots. UP's method gives the most weight to work on the roots, though a problem can be worked from any angle.[42] Figure 2.4 draws the kind of tree UP uses for this. The direct causes of insulin's price are well documented. Three multinational companies control more than 90% of the world's insulin market, according to the World Health Organization.[114] One of them filed 74 patent applications on its leading insulin in the United States, 69 of them after the medicine was approved, which an organisation that studies drug patents estimates could delay competition for 37 years.[116] The cost of making it does not explain the price. One study estimated that a profitable maker of copies of human insulin could sell a year's supply for no more than about 72 dollars, and a year of the newer kinds for no more than about 133 dollars.[117] Below these causes lies a root that insulin shares with the other problems in this section: what pays often decides what gets solved. That is why the tree matters. Work at the root could help with many of them at once.[107]

[112] Core tenet: *Open participation: anyone may take part; those affected decide*.

[113] UP's agreed position that it names a system people already use, connects its parts and gives it the tools to grow, and that the problem is not progress but the framework progress runs in. Full wording in "The core of UP".

[114] World Health Organization, "New WHO report maps barriers to insulin availability and suggests actions to promote universal access" (12 Nov 2021), on *Keeping the 100-year-old promise: making insulin access universal*: insulin "turns a deadly disease into a manageable one for nine million people with type 1"; "For more than 60 million people living with type 2 diabetes, insulin is essential"; "one out of every two people needing insulin for type 2 diabetes does not get it"; "Three multinational companies control more than 90% of the insulin market". https://www.who.int/news/item/12-11-2021-new-who-report-maps-barriers-to-insulin-availability-and-suggests-actions-to-promote-universal-access . The "one in two" figure comes from modelling, not a count, and is WHO's latest statement of it. Checked at source, 31 Oct 2026.

[115] UP's agreed position on harm: harm is measured by its effect on health, happiness and wellbeing, and it is defined, graded and refined continually from information, input and research by the collective. Full wording in "The core of UP".

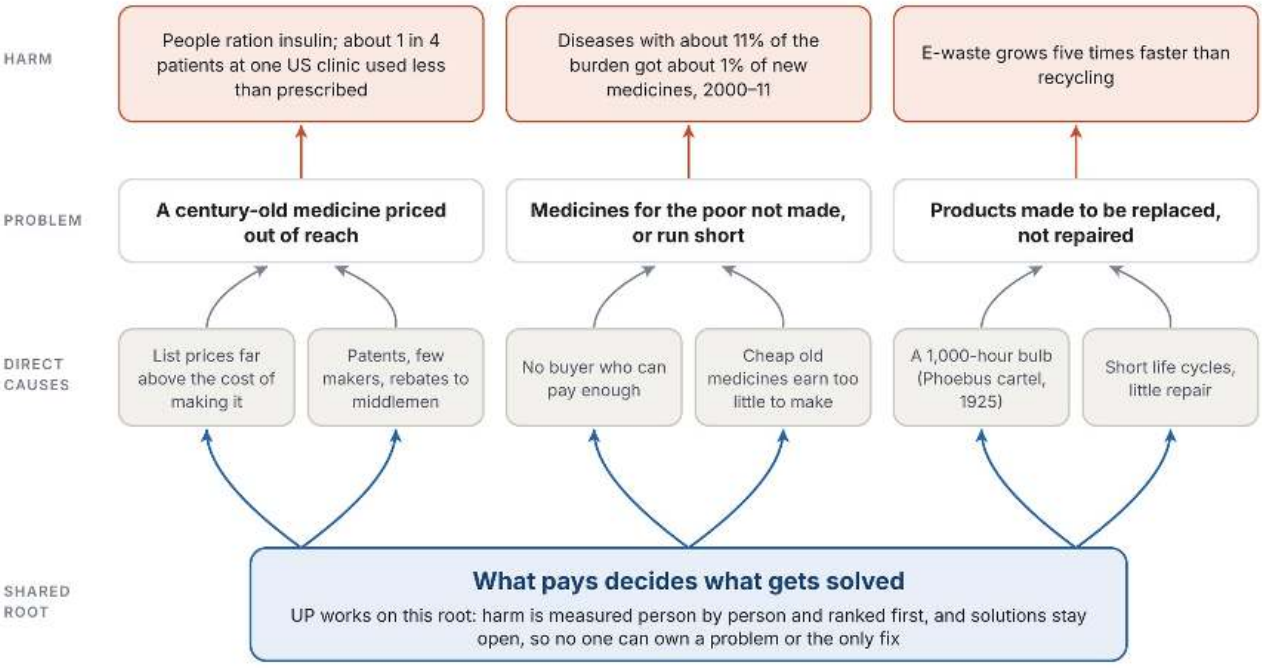
[116] Initiative for Medicines, Access and Knowledge (I-MAK), *Overpatented, Overpriced Special Edition: Lantus (insulin glargine)* (October 2018): "74 patent applications have been filed on Lantus in the U.S., which have the potential to delay competition for 37 years." Sixty-nine of the 74 were filed after the medicine's approval in 2000. These are applications, not patents granted, and I-MAK is a non-profit that campaigns on drug patents. https://www.i-mak.org/wp-content/uploads/2018/10/I-MAK-Lantus-Report-2018-10-30F.pdf . Checked at source, 31 Oct 2026.

[117] Gotham D, Barber M J, Hill A, "Production costs and potential prices for biosimilars of human insulin and insulin analogues", *BMJ Global Health* 3(5):e000850 (2018): "Treatment with biosimilar RHI and insulin NPH could cost ≤US$72 per year and with insulin analogues ≤US$133 per year." These are estimated prices for a profitable maker of 10 mL vials, including a margin for costs and profit, not measured costs of any company. https://pmc.ncbi.nlm.nih.gov/articles/PMC6157569 . Checked at source, 31 Oct 2026.

FIGURE 2.4

Three problems, one root

A problem tree, the way UP draws one: harms at the top, causes below them, and a root the problems share



Schematic, for illustration: the tree shows how UP links problems by their causes, and is not a finding.
Facts from the notes to "Why the race is lost where it is" (US Senate Finance Committee 2021; Herkert et al. 2019; Pedrique et al. 2013; WHO 2016 on benzathine penicillin; Krajewski on Phoebus; Global E-waste Monitor 2024).

Figure 2.4. A problem tree, the way UP draws one. It is a schematic: the facts in it are from this chapter's notes, and the tree shows how UP links problems by their causes.

A third step could be to offer the problem as work to anyone willing to take it on, whether or not it affects them.[42] A small version of this already exists. In 2015 Anthony Di Franco launched the Open Insulin Project at Counter Culture Labs, a community biology laboratory in Oakland, California. It has since become a non-profit that coordinates three laboratories, with the aim of developing "the first practical, small-scale, community-centered model for insulin production".[118] Progress has been slow, and the project says so plainly. In the latest report from it that could be found, from August 2025, it had made insulin glargine in yeast in the laboratory, in amounts it described as inconsistent, and it had not yet made a medicine.[118] In UP a group like this could begin without waiting for a funder's or a patent-holder's permission, anyone could check and improve its work, and its failures would be fed back as the next problems to solve.[42,10] The people the problem affects, those who need insulin, would decide its outcome.[112]

A fourth step is to propose solutions with their evidence, test them and compare them, so that a better idea replaces a worse one.[42] Several approaches have already been tried, and each teaches something. California chose a non-profit maker. In March 2023 the state announced that Civica, a non-profit drug company founded in 2018 by hospital systems and charities, would make insulin under the state's own label for no more than $30 a vial and $55 for a box of five pens, from a new plant in Virginia.[119]

[118] Open Insulin Foundation, home page: its mission is to "develop the first practical, small-scale, community-centered model for insulin production to make insulin accessible to all". https://openinsulin.org/ . "2023 Recap" (22 Nov 2023): "Open Insulin has become an independent nonprofit corporation that coordinates work among 3 labs." https://openinsulin.org/2023-recap/ . "Recent insulin glargine results from Counter Culture Labs" (5 Aug 2025): glargine expressed in yeast in three runs, but expression "is not consistent"; no medicine has been made. https://openinsulin.org/recent-insulin-glargine-results-from-counter-culture-labs/ . On the founding in 2015 by Anthony Di Franco: Burningham G, *TIME* (24 Oct 2019). https://time.com/5709241/open-insulin-project/ . No later report was found. Checked at source, 31 Oct 2026.

What arrived was smaller. Since January 2026 the state's insulin has been sold at $55 for five pens, made under contract by another company; the state says vials will come later, and the money it had set aside for a factory in California was cut in its 2025–26 budget.[120] For the diseases of the poor, the non-profit DNDi says it has developed 17 treatments for six deadly diseases since 2003, among them a malaria medicine made with Sanofi and released at 50 cents a course for a child and a dollar for an adult.[121] And since 2010 the Medicines Patent Pool, founded by the global health agency Unitaid, has negotiated licences that let other manufacturers make cheaper versions of patented medicines for poorer countries, saving an estimated $2.6 billion by its own count.[122]

In UP, approaches like these could be compared openly on measures such as how many of the people who need insulin get enough of it, at what quality, and at what cost in energy, materials and hours of work, counted as real things as well as prices.[82] The better approach would replace the worse because of its results, whoever had backed it, which is what UP means when it says that the result carries the power.[109] Evidence proposes, and the people affected decide.[42] The comparison would include the current system's own answers. Medicare's cap of $35 a month and the makers' price cuts of 2023 helped many people, and a fair record would show how many.[87,10] UP also does more than compare what others have built. Inventing solutions together is its main activity, and an open, small-scale way of making insulin, the very thing the Oakland laboratory is still trying to perfect, is exactly the kind of work it exists to carry.[109]

A fifth step is to share what works inside UP and keep it from being enclosed. The Toronto researchers tried to do this in 1922 with the only tool they had, a patent held so that no one else could hold one.[83] In UP, the knowledge, code, data and designs that UP produces stay inside UP, where everyone taking part may use, study and improve them and no one may enclose them.[102] As one illustration, physical goods such as food, water and durable goods are shared within the communities that make them, and insulin could be one such good.[123] Inside UP, that works to end the artificial scarcity in Figure 2.4. What is left is physical scarcity, such as factories, cold storage, energy and materials, and positional scarcity, such as skilled work and the time and attention of the people who check quality. UP's agreed position is to reduce physical scarcity with automation, renewable energy and circular systems, and to share positional goods by rotation or a decision of the stakeholders.[103] UP shows its progress in the open, because every community that works this way publishes its energy, materials and needs met.[124]

The floors apply throughout. In the core's starting example of basic needs, health care is one of them, and no gain for others can buy a basic need. Because UP guarantees needs, though not every want, the need for insulin would be treated as a floor, to be met as UP's capacity to make it grows.[80,124] None of this happens at once. Table 2.4 follows the same problem through UP's stages, using the format this book uses for every claim about UP's future: what changes, the real precedent, why it is likely and what persists.[125]

Table 2.4. Insulin, by stage, as an illustration. The early stage rests on today's evidence. The middle and completed stages are projections, and the completed stage is only modelled, so it has no real precedent yet.

[119] Civica Rx, "California Selects Civica Rx as Its Insulin Manufacturing Partner" (18 Mar 2023): expected prices of "no more than $30 per 10 mL vial and no more than $55 for a box of five 3 mL pre-filled pens", from a "140,000 square-foot manufacturing plant, being built in Petersburg, Virginia". Civica was founded in 2018 by health systems and philanthropies. https://civicarx.org/california-selects-civica-rx-as-its-insulin-manufacturing-partner/ . Checked at source, 31 Oct 2026.

[120] State of California, CalRx, "Biosimilar Insulin Initiative": insulin glargine pens "priced at just $55 for a five-pack of 3 mL pens beginning January 1, 2026"; the $50 million for an in-state manufacturing facility "was eliminated in Fiscal Year 2025/2026 due to budget savings measures". https://calrx.ca.gov/biosimilar-insulin-initiative/ . Patient flyer (2026): "vials will be available at a later date." https://calrx.ca.gov/uploads/2026/01/CalRx_Insulin_Glargine_Patient-Flyer-1.pdf . Civica, release (15 Oct 2025): the pens "will be manufactured by Biocon Biologics". https://civicarx.org/civica-to-launch-long-acting-insulin-glargine-in-the-us-in-january-2026/ . Checked at source on 31 Oct 2026; the programme is changing, so check again before print.

[121] Drugs for Neglected Diseases initiative, "Treatments delivered": "We've developed 17 treatments for six deadly diseases since 2003." https://www.dndi.org/achievements/ . DNDi, "ASAQ" (artesunate-amodiaquine for malaria, registered 2007, developed with Sanofi): "Released at a cost of only US $0.50 for children, US $1.00 for adults". https://dndi.org/achievements/asaq/ . These are DNDi's own counts. Checked at source on 31 Oct 2026; the count rises as treatments are registered.

[122] Unitaid, "Medicines Patent Pool": Unitaid "founded the Medicines Patent Pool (MPP) in 2010 and remains its primary funder". https://unitaid.org/project/medicines-patent-pool/ . Medicines Patent Pool, release on its 2025 annual report (22 May 2026): "US$2.6 billion saved by the global community"; "44 products licensed through MPP's agreements with 22 innovators". https://medicinespatentpool.org/news-publications-post/from-innovation-to-access-mpps-2025-annual-report-highlights-strong-progress-partnership-value-and-growing-global-impact . The savings are MPP's own modelled estimate; MPP has no insulin licence. Checked at source on 31 Oct 2026; revised each year.

[123] Settled alongside the core (round 11, amended round 13b): software, AI and tools that UP makes stay in UP; physical goods such as food, water and durable goods are shared within the communities that make them. These are illustrations, not tenets. Full wording in "The core of UP".

[124] UP's agreed position that abundance means enough for everyone, shown in the open: UP guarantees needs, not every want; what counts as enough is set together and rises as capacity grows; every community that runs this way publishes its energy, materials and needs met, so abundance is a measured target shown in practice, not a promise. Full wording in "The core of UP".

[125] UP's agreed position on judging UP by stage, beside the current system: the early stage rests on today's evidence; the middle and completed stages are reasoned projections from cited mechanisms, labelled as such. Full wording in "The core of UP".

Stage	What could change	Real precedent	Why it is likely	What persists
Early	Members could keep an open record of who goes without insulin and what it costs, join open research and back non-profit makers	WHO's target of affordable insulin for everyone with type 1 diabetes by 2030[126]; published price surveys[127]; Open Insulin; Civica and CalRx	A year's supply of human insulin could be sold at a profit for about $72 or less[117]; the method has been public for a century	Most people still buy insulin at market prices; UP changes the record and the research more than the supply
Middle	UP could make insulin from open processes in its own facilities, and the members who need it could be supplied from UP's own production	Non-profit and contract manufacture (Civica); DNDi's partnerships with drug makers; the Medicines Patent Pool's licences	The cost of making it is low; UP's members include both the people who need it and people with the skills to make it	Approval, quality control and the cold chain remain hard work; people outside UP still depend on the current system
Completed (modelled)	Insulin could be made and shared inside UP wherever it is needed, and for most people the shared root in Figure 2.4 would no longer decide	None yet	The parts strengthen one another (Chapter 21)	Diabetes itself; the work moves on to prevention and cures

In UP's terms, this loop is one way of showing UP's method and its self-correction at work on one problem: name it and measure it, trace its roots, open the work to everyone, test and compare the answers, share what works and keep it from being enclosed, and feed every failure back as the next problem.[42,10] So what does the illustration show? Hardly any of its steps is new. A health agency measures the problem, volunteers research it in the open, a non-profit makes a medicine at a published price, another develops medicines for diseases the market neglects, and a patent pool licenses them for poorer countries. What none of them has is the others. Each works separately from the others, with its own funders and its own limits, which is the isolation Chapter 1 found in every practice that works. UP's claim is that connecting them, and pointing all of them at harm counted person by person, changes what they can do together.[113] Beyond the early stage that claim is a projection, and this book treats it as one.[125]

Why not simply reform faster?

A fair-minded reader may accept every number in this chapter and still doubt the conclusion. The strongest doubts deserve an answer in their own terms, and five of them come up again and again.

The first doubt is that reform is working and only needs time. The ozone layer is healing, lead has left petrol, acid rain has eased and smoking has fallen, so why not expect the same of climate, nature and poverty?[128] The answer lies in what the fastest of those wins had in common. Each problem had a small number of producers, a clear measure and a substitute ready to hand, and fixing it cost no one a large and lasting stream of income; where it did, as with lead and tobacco, the win took the better part of a century. The problems now losing the race have few of those features. Climate change runs through almost every part of the world economy, the loss of wildlife has thousands of causes, and the stalled fight against poverty runs into every way in which income and power are shared out.

There is also the matter of time itself. At current rates of emission, the carbon budget for holding warming to 1.5 °C runs out in three to four years.[49] Reform that would win eventually is losing if the damage it was meant to prevent

[126] World Health Organization, "The WHO Global Diabetes Compact" (launched 2021): one of five global coverage targets for 2030 is that "100% of people with type 1 diabetes have access to affordable insulin and blood glucose self-monitoring". https://www.who.int/initiatives/the-who-global-diabetes-compact . The targets were adopted at the 75th World Health Assembly in May 2022. A target is not an outcome; no report that it is on track was found. Checked at source, 31 Oct 2026.

[127] Health Action International, *Government Procurement of Insulin: Case Studies in 11 Low- and Middle-Income Countries* (May 2025): "prices of Novo Nordisk human insulin ranged from US$1.28 – 5.65 per vial". https://knowledge-action-portal.com/sites/default/files/2026-02/Goverment%20Procurement%20of%20Insulin%20Report%202025.pdf . Health Action International has published surveys of insulin prices and supply since its ACCISS study (2017). https://haiweb.org/publication/acciss-study-report-access-insulin-current-challenges-constraints/ . Checked at source, 31 Oct 2026.

[128] The evidence for these wins is in the notes to "What the current system got right" and "Where the race is being lost": the ozone layer (note 78), leaded petrol (notes 34 and 39), acid rain (note 35) and tobacco (notes 36 and 40).

arrives first. UP takes nothing away from reform. It does not oppose it, and in its early stage it lives inside the same system that reform works on. It adds a second route for the problems that reform keeps losing.[11]

The second doubt is that markets will solve scarcity, as they always have. When something becomes scarce its price rises, people use less of it, and inventors are rewarded for finding a substitute. Markets deserve real credit here, and this chapter has given some. The cost of electricity from new solar farms fell by about 90% between 2010 and 2024, and by 2024, 91% of new renewable power projects were cheaper than any new fossil-fuel alternative.[53,129] Yet a price only signals. It does not make a rare thing less rare, and it signals only the wants of people who can pay.[106] The diseases of the poor send almost no price signal, which is why so few new medicines are made for them, and the harm from burning coal sends almost none either, which is one reason so much of it is still burned. UP treats scarcity the way it treats any other problem. When many people need or want the same thing, that is a signal, and the response is to share it fairly and to work on making more of it.[106]

The third doubt is that technology will save us, if only we wait for it. Technology is indeed central to UP, which is defined as people solving shared problems together "using evidence and technology".[130] But the striking thing about many of the failures in this chapter is how much of the technology already exists. The International Energy Agency has found that technologies available today can deliver more than 80% of the cuts in emissions needed by 2030.[131] In 2023 the world's food supply passed 3,000 kilocalories a day for every person alive.[132] The researchers who found that no country meets its people's needs within the planet's limits also found that physical needs such as food, sanitation and electricity could likely be met for everyone without crossing those limits.[62] What is missing in these cases is less an invention than the organisation to use what has already been invented, for everyone. UP's agreed view is that the trouble lies in the framework that progress runs in.[113] UP's core also says what the place of technology is inside that framework. AI and automation coordinate, propose and do work, but they never govern: people can always correct, pause or switch them off, and no single AI system or operator controls the coordination.[133]

The fourth doubt is the most human. Is this not one more counsel of gloom, of the kind Hans Rosling spent his life correcting? Rosling's warning matters to UP, for a reason that goes beyond optimism. People's sense of a problem is a poor guide to its size. In a series of experiments published in 2018, a team of psychologists found that when blue dots became rarer, volunteers began to call purple dots blue, and the same thing happened with threatening faces and unethical requests.[134] In the laboratory, as a problem became rarer, people widened their idea of it, and the authors suggest that the same may happen with social problems, so that a world that is improving can still feel as if it is getting worse. UP's answer is to measure problems with fixed definitions kept over time, to rank them by measured harm rather than by how loud they feel, and to give every headline measure an independent check.[79] That rule protects the reader from gloom, and it also protects UP from comfort, because the same numbers that show the gains also show the race. UP's own results will be judged by them too.[10]

The fifth doubt is political. If reform is too slow, why not elect leaders who will make it faster? Better government can help, and many of the gains in this chapter came from governments that acted. But Chapter 1 showed how often good programmes were stopped or cut back when a government changed: Porto Alegre's budget assemblies

[129] IRENA, press release "91% of New Renewable Projects Now Cheaper Than Fossil Fuels Alternatives" (22 July 2025): "Notably, 91% of new renewable power projects commissioned last year were more cost-effective than any new fossil fuel alternatives." https://www.irena.org/News/pressreleases/2025/Jul/91-Percent-of-New-Renewable-Projects-Now-Cheaper-Than-Fossil-Fuels-Alternatives (read in the Internet Archive's copy, https://web.archive.org/web/2025/https://www.irena.org/News/pressreleases/2025/Jul/91-Percent-of-New-Renewable-Projects-Now-Cheaper-Than-Fossil-Fuels-Alternatives , because irena.org blocks automated reading). "Last year" is 2024. Checked at source, 31 Oct 2026.

[130] The definition of UP, first sentence: "Universal Pragmatism is a way for people to solve shared problems together, using evidence and technology, for the health, happiness and wellbeing of all living things: open to everyone, correcting itself as it learns, keeping power spread out, and never crossing a small set of floors that protect people and the living world." The full definition is in "The core of UP".

[131] International Energy Agency, *Net Zero Roadmap: A Global Pathway to Keep the 1.5 °C Goal in Reach* (2023 update), executive summary: technologies available today deliver more than 80% of the emissions cuts needed by 2030. https://www.iea.org/reports/net-zero-roadmap-a-global-pathway-to-keep-the-15-0c-goal-in-reach/executive-summary (UP step 3 evidence, checked 24 Oct 2026).

[132] FAO Statistics Division, "Food balance sheets 2010–2023" (27–28 Oct 2025): in 2023 global food supply "crossed the historic milestone of 3 000 kilocalories per capita per day." This is supply available per person, not what people eat. https://www.fao.org/statistics/highlights-archive/highlights-detail/food-balance-sheets-2010-2023

[133] Core tenet: *Technology serves; people decide*: AI and automation coordinate, propose and do work; they never govern, and people can always correct, pause or switch them off; no single AI system or operator controls coordination. Full wording in "The core of UP".

[134] David E. Levari, Daniel T. Gilbert, Timothy D. Wilson et al., "Prevalence-induced concept change in human judgment", *Science* 360(6396):1465–1467 (29 June 2018): "When blue dots became rare, participants began to see purple dots as blue; when threatening faces became rare, participants began to see neutral faces as threatening; and when unethical requests became rare, participants began to see innocuous requests as unethical"; "Social problems may seem intractable in part because reductions in their prevalence lead people to see more of them." https://doi.org/10.1126/science.aap8731 ; abstract read in the University of Amsterdam repository, https://dare.uva.nl/id/5b2ab242-5f7b-488e-b160-5905dd26be5d . Laboratory experiments; the link to social problems is the authors' suggestion. Checked at source, 31 Oct 2026.

were suspended, Canada's experiments with a guaranteed income were cancelled, and local spending on early-intervention services in England, Sure Start among them, fell by half in a decade.[135] The incentives that slow reform also reach into politics itself. In the United States, spending on lobbying the federal government reached about $5 billion in 2025, a record.[136] Reform depends on who holds power at the moment, and on what that power is lobbied to protect. UP does not compete with good government, and its early stage lives inside the same laws. What it adds is a way of solving shared problems that neither waits on an election nor ends with one, because the people a problem affects decide its outcome, and, as UP grows, their needs are met from what they produce together rather than from budgets that someone else controls.[112,137]

Transition, not collapse

If the problems are outrunning the reforms, how fast must the answer come? UP's agreed view is that there is real urgency, because the threats from the current system are large and reach into almost every part of civilisation, and that the aim is a transition, not a collapse.[13] The word matters. A collapse would destroy the very gains this chapter began with, the vaccines, the harvests, the power lines and the schools, and it would fall hardest on the people the current system already fails. A transition keeps what works while the alternative grows beside it, so that people move their work and their needs only as fast as the new way proves itself. UP's core backs that aim with rules about how UP itself acts. UP is never imposed: no one is forced to join it, to work or to give up what is theirs, and it grows by being useful and acts only by ethical means, which UP defines as means that serve the health, happiness and wellbeing of all and cross none of the floors. UP never starts harm against anyone, and what counts as ethical is refined by the collective.[138]

How fast that is cannot be decreed. UP's agreed position is that it grows naturally, perhaps quickly and perhaps slowly, and that the speed is not for anyone to decide. What matters is that it keeps the quality of its core values and tenets as it grows, so that growth stays healthy and does not run into consequences nobody intended.[139] That is also why this book judges UP by stage, beside the current system, and never like for like with a programme that the current system funds, cuts and steers.[125]

What would UP bring to a race that reform is losing? Its agreed positions point to several differences, each answering a reason the race is lost. Problems are ranked by measured harm and offered as work to everyone, so the biggest problems draw the most people and effort, and any area where UP is not yet doing better than the current system gets attention first.[107] UP widens the base of people, and of AI systems, who can contribute to a problem, which speeds invention, frontier science included; Chapter 1 showed how quickly open work grows when anyone may join it, in Wikipedia and Linux.[140] No one owns a problem or its solution, which works against the most direct reason to keep a problem alive.[42] As UP grows, its members' floors are met from what they produce together, rather than from budgets that someone else can cut.[137] And every failure, UP's own included, is fed back as the next piece of work, so the method keeps improving without a revolution.[10] None of these is proven at scale, and this book labels them as what they are: the design, built from practices that already work, for closing the gap that this chapter has measured.

[135] See Chapter 1, "What the current system does to them", and its notes: Porto Alegre suspended its participatory budget in 2017; Manitoba's Mincome ended in 1979 after changes of government; Ontario cancelled its basic income pilot in 2018; local authority spending on early-intervention services in England, including Sure Start, fell by half between 2010-11 and 2020-21.

[136] OpenSecrets, "Lobbying spending reached a record $5 billion in 2025" (chart, nominal dollars): up about 14% from 2024. https://datawrapper.dwcdn.net/hkW9e/8/ . LegiStorm, "Lobbying spending tops $5 billion in 2025" (2 Feb 2026): "The lobbying industry reported a combined $5.24 billion in spending", "a $768 million increase from 2024". https://legistorm.com/pro_news/4371/lobbying-spending-tops-5-billion-in-2025.html . Bloomberg Government (15 Apr 2026): "A record $5.3 billion was spent on lobbying in 2025". https://news.bgov.com/bloomberg-government-news/record-5-3-billion-in-lobbying-driven-by-firms-with-trump-ties . Totals differ by method and are not adjusted for inflation; the series is revised each year. Checked at source, 31 Oct 2026.

[137] UP's agreed overall claim on the twelve failures, by stage (round 12c), with the staged claims for climate (F1), basic needs (F2) and violence (F10): early on, members cut their own emissions and prove what works, a small effect on the climate; in the middle stage, needs are met from UP's own production and demand moves out of the current system with its people; the middle stage is the most exposed to force from outside UP, and that force shrinks as cities and nations join and convert their weapons and armies into law enforcement, emergency aid and rapid response; damage already locked into the climate persists. Full wording in "The core of UP".

[138] Core tenet: *Freely joined, ethically grown*: UP is never imposed; no one is forced to join, to work or to give up what is theirs; it grows by being useful and acts only by ethical means, and it never starts harm against anyone. Full wording in "The core of UP".

[139] UP's agreed position on growth: UP grows naturally, fast or slow, which is not for anyone to decide; what matters is to keep the quality of the core values and tenets as it grows, so that growth stays healthy. Full wording in "The core of UP".

[140] UP's agreed position that the comparison with the current system is not symmetric, which also holds that UP widens the base of people and AI who can contribute, and that this speeds invention, frontier science included. Full wording in "The core of UP".

The race looks different at each stage. In the early stage, UP is a network of people inside the current system. Its members can cut their own emissions, repair what they own, grow and share some of their food and help one another learn, and they can prove what works, but the effect on the world's totals is small.[137] In the middle stage, UP has its own productive base, and most of its members' needs are met from what it produces. Here the race begins to change, because demand moves out of the current system along with the people, and floors are met in real goods rather than from budgets that someone else can cut. The completed stage, in which most people live mainly within UP, can only be modelled, and nothing in this book treats it as evidence.[125]

Some things do not change with scale, and UP names them openly. Warming already locked into the climate will go on raising the seas for centuries; even if warming is held to 1.5 °C, the Intergovernmental Panel on Climate Change projects that global sea level will rise by about two to three metres over the next two thousand years, though it gives that projection low confidence.[141] Force used by those outside UP is the danger the middle stage is most exposed to, and it shrinks as cities and nations join and convert their weapons and armies into law enforcement, emergency aid and rapid response.[137] And UP is not magic. Suffering will continue while its biggest causes fall, and whatever persists becomes the next piece of work.[142]

Stages are easier to see in a single life, so this book returns to the household it met in Chapter 1. As before, it is an illustration of one way UP could run, and never evidence.

Illustration: one way it could run. The race, seen from one kitchen.

In the early stage, a summer heatwave reaches the household's town. The care worker cannot leave her paid shift to check on her father, so she posts a request on the town's open tool, and two neighbours from the tutoring club take turns calling in. The same tool shows which streets have older people living alone, and a volunteer list grows from it. The town's emissions barely move, but the neighbours have learned something worth sharing.

In the middle stage, the town's homes run partly on solar panels made in the regional workshop from an open design, and the household's food comes mostly from farms the network supports. The heat still comes, and so do the neighbours.

In the completed stage, which can only be modelled, the town's energy and food come mainly from production that its people share and measure in the open, and the record of every heatwave is used to plan the next summer. The seas are still rising, because the warming already done cannot be undone, and the town is planning for that too.

Table 2.5 sets the same picture beside the evidence, using the climate and basic needs as examples.

Table 2.5. The race, by stage. The completed stage is modelled, so it has no real precedent yet.

Stage	What changes	Real precedent	Why it is likely	What persists
Early	Members cut their own emissions and meet part of their needs directly; they prove what works	Repair Cafés, tool libraries and food co-operatives (Chapter 1)	Renewable power is now usually the cheapest new power[129]; repair and sharing need no new invention	The world's totals barely move[137]; the current system's trends continue
Middle	Needs are met from UP's own production; demand leaves the current system with its people	Amul and Mondragon (Chapter 1); renewables built at national scale	The capacity to feed and power everyone already exists[132,62]; what is missing is organisation and distribution	Warming already locked in; force from outside UP, shrinking as nations join and convert their armies
Completed (modelled)	Most demand and most needs are met inside UP	None yet	The parts strengthen one another (Chapter 21)	Locked-in sea-level rise; disagreement over values; the work of keeping it open

[141] IPCC, *Climate Change 2021: The Physical Science Basis*, Summary for Policymakers, B.5.4: "In the longer term, sea level is committed to rise for centuries to millennia" (high confidence); "Over the next 2000 years, global mean sea level will rise by about 2 to 3 m if warming is limited to 1.5°C" (low confidence). https://www.ipcc.ch/report/ar6/wg1/chapter/summary-for-policymakers/ . Checked 31 Oct 2026.

[142] UP's agreed position that UP is not magic: suffering continues while its biggest causes fall, and what persists is named openly as work. Full wording in "The core of UP".

That leaves the question with which a doubtful reader began this chapter. On many measures things are better than they have ever been, and the current system deserves the credit for much of it. Yet on the issues that will decide the century, the problems are winning the race, and they are winning most clearly where solving them would cost someone profit or power. UP does not ask anyone to tear down what works. It asks people to build, beside it and starting now, a way of solving problems that is aimed at everyone and does not depend on whether a solution pays. If that sounds like communism, or like the Venus Project, or like a commune in the hills, the next chapter takes those comparisons one at a time.

Chapter card: Chapter 2

- **Claim:** The current system has brought enormous gains, and UP is judged against that record and against the ideal it aims at. On the planet's limits and on most of the major issues of our time, though, the problems are growing faster than the reforms, and reform stalls most where it runs against profit from extraction, harm pushed onto others, or concentrated power. Some problems are sold rather than solved. UP is built for that gap: no one owns a problem or its solution, harm is counted person by person, costs appear in an open record of real things, and some floors are never crossed. The aim is a transition, not a collapse.
- **Core lines:** UP's agreed positions that the current system's gains are credited and UP is judged against its record; that reform is losing the race; that the comparison is not symmetric, because some problems pay; and that the aim is to transition, not collapse. The ideas explained here, from UP's core and its agreed positions: the two standards (today's record and the ideal); the floors, including the rule that damage which cannot be undone is never traded; physical accounting; the three kinds of scarcity; the open, truthful record; problem trees and the marketplace of problems; and the result carrying the power.
- **Rule of thumb:** "Ask three questions of any problem: is it getting better, is it getting better fast enough, and who gains if it stays?"
- **What this is not:** a claim that the world is getting worse, that reform never works, or that the people inside the current system are to blame.
- **Check yourself:**
    1. Name three great gains of the past two centuries, and what the reforms that worked fastest had in common.
    2. What are the two standards UP itself is judged against, and what mistake does each one prevent?
    3. Pick two issues from Table 2.2. Which way is each moving, and how does the pace of the problem compare with the pace of the response?
    4. How is a floor in UP different from a target in the current system? Which rows of Table 2.2 measure damage that UP would never trade for a short-term need?
    5. Name UP's three kinds of scarcity. Which kind is a light bulb built to fail, and how does UP answer it?
    6. Give one example of a problem that was sold rather than solved, and explain which idea in Table 2.3 would remove the reason it was kept alive.
    7. Draw a small problem tree for a problem near you. What is the shared root, and what would work on it change?
    8. Follow one problem through UP's loop. At which step does each existing precedent fit, and what still has to be invented?
    9. What does "transition, not collapse" mean, and what persists at every stage?
- **Open questions (for the wiki):** Which issues belong in the race table, and which measure is fairest for each? How often should the table be refreshed, and who checks it? Where is reform winning faster than this chapter shows? (Improve this page.)

Chapter 3. What UP Is Not, and What It Builds On

In March 1933 a young Welsh journalist named Gareth Jones, after a visit to Moscow, set out on foot through the villages of Soviet Ukraine. He was twenty-seven, he had, as even his critics acknowledged, "taken the trouble to learn Russian", and he meant to see the countryside for himself. "I tramped through a number of villages in the snow of March," he wrote a few days later. By his own count he visited twenty villages, in Ukraine and in the black-earth region, which had once been, as he put it, "the richest farm land in Russia".[1] What he found there he reported from Berlin on 29 March. "Russia today is in the grip of a famine," his statement began, and in village after village he had heard the same words: "There is no bread. We are dying."[2] Two days later the London *Evening Standard* printed his account under the headline "Famine Rules Russia", and he wrote in it, "I saw children with swollen bellies."[3]

On the same day, the *New York Times* printed a reply from its Moscow correspondent, Walter Duranty, who had won a Pulitzer Prize in 1932 for his reporting from the Soviet Union. "There is no actual starvation or deaths from starvation," Duranty wrote, "but there is widespread mortality from diseases due to malnutrition."[4] Jones answered in a letter the *Times* printed in May: "I stand by my statement that Soviet Russia is suffering from a severe famine."[5] He was right. The famine of 1932–33 killed millions. No official toll exists, and scholarly estimates differ with their methods: demographers' estimates of the excess deaths in Ukraine range from about 2.6 to 5 million, and a 2015 reconstruction puts them at 3.9 million; Britannica gives a figure of at least five million across the Soviet Union between 1931 and 1934.[6] Many governments and parliaments, among them the European Parliament in 2022, recognise the famine, which Ukrainians call the Holodomor, as a genocide; others, including the British government, have not, and Russia disputes that it was intended. Historians who agree that it was a catastrophe still

[1] Rob Phillips, "JONES, GARETH RICHARD VAUGHAN (1905-1935), journalist", *Dictionary of Welsh Biography* (22 Feb 2023): "After visiting Moscow he spent several days walking through eastern Ukraine". https://biography.wales/article/s14-JONE-VAU-1905 ; Gareth Jones, "Famine Rules Russia", *Evening Standard* (London, 31 March 1933): "I tramped through a number of villages in the snow of March." https://www.garethjones.org/overview/article33-12.htm ; Jones, press statement, Berlin (29 March 1933): "I tramped through the black earth region because that was once the richest farm land in Russia". https://www.garethjones.org/overview/exposure.htm ; Jones, letter to the *New York Times* (printed 13 May 1933): "on this occasion alone I visited in all twenty villages, not only in the Ukraine, but also in the black earth district". https://www.garethjones.org/Soviet_articles/jones_replies.htm ; Walter Duranty, *New York Times* (31 March 1933), on Jones: "Mr. Jones is a man of a keen and active mind, and he has taken the trouble to learn Russian." https://www.garethjones.org/Soviet_articles/russians_hungry_not_starving.htm . No source read gives the exact dates of the walk. The biography and the archive record were checked at source; the newspaper texts were read at transcriptions on garethjones.org, the Jones family's website, not at images of the newspapers. Read at a copy of the published text, 31 Oct 2026.

[2] Gareth Jones, press statement issued in Berlin on 29 March 1933 and printed in the *New York Evening Post* (headline as transcribed: "Famine grips Russia Millions Dying. Idle on Rise, Says Briton"), the *Manchester Guardian* and other papers: "BERLIN, March. 29th , - Russia today is in the grip of a famine"; "Everywhere was the cry, 'There is no bread. We are dying." (the transcription lacks the closing quotation mark; the cry is "There is no bread. We are dying."). The cry is the peasants' words as Jones reported them. https://www.garethjones.org/overview/exposure.htm (transcription of the *Evening Post* Foreign Service text on garethjones.org, the Jones family's website). Read at a copy of the published text, 31 Oct 2026.

[3] Gareth Jones, "Famine Rules Russia", *Evening Standard* (London, 31 March 1933), headline "FAMINE RULES RUSSIA", subheadline "The 5-year Plan Has Killed the Bread Supply.": "I tramped through a number of villages in the snow of March."; "I saw children with swollen bellies." https://www.garethjones.org/overview/article33-12.htm (transcription on garethjones.org, listed at https://garethjones.org/overview/contents.htm as "Famine Rules Russia", London Evening Standard, 31 March 1933). Read at a copy of the published text, 31 Oct 2026.

[4] Walter Duranty, "Russians Hungry, But Not Starving", *New York Times* (31 March 1933; datelined Moscow, 30 March): "There is no actual starvation or deaths from starvation, but there is widespread mortality from diseases due to malnutrition." Read at a transcription on garethjones.org: https://www.garethjones.org/Soviet_articles/russians_hungry_not_starving.htm . The *Times*'s own archive page (https://www.nytimes.com/1933/03/31/archives/russians-hungry-but-not-starving-officials-and-peasants-alike-pull.html) could not be opened, and TIME's report of 10 April 1933 gives the word as singular, death; the newspaper's archive is not reachable from here, so the wording follows the published transcription. On the prize: the Pulitzer Board's statement of 21 Nov 2003, which declined to revoke Duranty's 1932 prize for 13 articles from 1931: "Mr. Duranty's 1931 work, measured by today's standards for foreign reporting, falls seriously short". https://www.pulitzer.org/news/statement-walter-duranty . Read at a copy of the published text, 31 Oct 2026.

[5] Gareth Jones, letter headed "Mr. Jones Replies:", dated London, 1 May 1933, *New York Times* (13 May 1933): "I stand by my statement that Soviet Russia is suffering from a severe famine." https://www.garethjones.org/Soviet_articles/jones_replies.htm (transcription on garethjones.org). Read at a copy of the published text, 31 Oct 2026.

[6] House of Lords Library, briefing for the Lords debate of 23 Nov 2023: "No official death toll for the Holodomor exists." https://lordslibrary.parliament.uk/ukrainian-holodomor ; O. Rudnytskyi, N. Levchuk, O. Wolowyna, P. Shevchuk, A. Kovbasiuk, "Demography of a man-made human catastrophe: The case of massive famine in Ukraine 1932-1933", *Canadian Studies in Population* 42(1-2) (2015), pp. 53-80, abstract: "Total losses are estimated at 4.5 million, with 3.9 million excess deaths and 0.6 million lost births."; p. 55, estimates "that are derived from demographic data vary between 2.6 and 5 million (Conquest 1986; Maksudov 1989; Vallin et al. 2002)."; p. 68, on Meslé and Vallin: "Their results are quite different from ours: 2.6 million direct losses and 1.1 million indirect losses, compared to our 3.9 million and 600,000, respectively." PDF copy read at https://shevchenko.org/wp-content/uploads/2017/09/Demography-of-a-man-made-human-catastrophe.pdf (journal record: https://journals.library.ualberta.ca/csp/index.php/csp/article/view/21772 , DOI 10.25336/P6FC7G); Encyclopaedia Britannica, "Holodomor": "Between 1931 and 1934 at least 5 million people perished of hunger all across the U.S.S.R."; "Among them, according to a study conducted by a team of Ukrainian demographers, were at least 3.9 million Ukrainians." https://www.britannica.com/event/Holodomor . Checked at source, 31 Oct 2026.

differ on its scale, on how much weight to give state policy and other causes, and above all on intent.[7] Jones did not live to see the argument settled. On 12 August 1935, the day before his thirtieth birthday, he was murdered by kidnappers in northern China.[8]

What Jones walked through was the end of a policy that had begun with a promise. From the winter of 1929–30, the Soviet government set out to replace the country's individual peasant farms with large collective farms, as part of a five-year plan that concentrated on heavy industry and on collectivising agriculture. Peasants were "forced to give up their individual farms and join large collective farms", in Britannica's words, and many "slaughtered their livestock and destroyed their equipment".[9] A decree of 7 August 1932 made the theft of collective-farm property punishable by shooting, with confiscation of all property, or by at least ten years in prison where there were extenuating circumstances.[10] A passport system introduced on 27 December 1932 required internal passports in the cities, and none were issued to the rural population, and in January 1933, as three economists put it, "Moscow ordered the closure of the borders between Ukraine and the North Caucasus to prevent a mass migration of peasants".[11] People were made to join, made to give up their farms and their animals, and then stopped from leaving.

This chapter begins here because many readers carry this history with them, and they are right to. UP talks about meeting everyone's needs, about sharing what communities make, about technology that coordinates production. So did the planners of 1929. A reader who hears the echo is entitled to ask whether UP is simply the same promise in new words, and to ask the same of the other systems UP is often mistaken for: rule by experts, the Venus Project, the commune, the cult and the market left to itself. UP's answer has two parts. The first is that UP is none of them, and the difference can be stated precisely, because it is written into UP's core. Its tenth tenet, *Freely*

[7] European Parliament, resolution of 15 December 2022 on the 90th anniversary of the Holodomor, 2022/3001(RSP), adopted by 507 votes to 12 with 17 abstentions: "Parliament recognises the Holodomor, the artificial famine of 1932-1933 in Ukraine" … "as a genocide against the Ukrainian people." https://oeil.europarl.europa.eu/oeil/en/procedure-document-summary/pdf?id=1728089 ; House of Lords Library, briefing for the Lords debate of 23 Nov 2023: "Various governments and parliaments across the world have recognised the Holodomor as genocide"; Russia "has disputed that the Soviet regime caused the famine intentionally"; the UK government's position is that "a competent court should make the decision on whether a genocide has been committed", and it does not recognise the Holodomor as genocide. https://lordslibrary.parliament.uk/ukrainian-holodomor ; editors' introduction to the roundtable "Soviet Famines", *Contemporary European History* 27(3) (August 2018), pp. 432-434, on the "debate over Ukraine's tragic famine" and "the stakes in classifying this as a genocide rather than by other terms such as 'mass murder' or 'mass death.'" https://www.cambridge.org/core/product/E69466C419B4E1575EE3F42F72E38767 ; for two sides of the debate, Michael Ellman, "Stalin and the Soviet Famine of 1932-33 Revisited", *Europe-Asia Studies* 59(4) (2007), pp. 663-693, abstract: "It is argued that in 1932 – 33 Stalin pursued a multi-pronged policy of state terror against the population of the USSR." (https://ideas.repec.org/a/taf/ceasxx/v59y2007i4p663-693.html), and R. W. Davies and S. G. Wheatcroft, "Stalin and the Soviet Famine of 1932-33: A Reply to Ellman", *Europe-Asia Studies* 58(4) (2006), pp. 625-633, abstract: "there are no serious grounds for Ellman's view that Stalin pursued a conscious policy of starvation of the peasants." (https://ideas.repec.org/a/taf/ceasxx/v58y2006i4p625-633.html; both abstracts read at IDEAS/RePEc). Checked at source, 31 Oct 2026.

[8] Rob Phillips, "JONES, GARETH RICHARD VAUGHAN (1905-1935), journalist", *Dictionary of Welsh Biography* (22 Feb 2023): "Gareth Jones was born on 13 August 1905"; "he was kidnapped and held for sixteen days"; "He was shot dead in Chahar Province, China, on 12 August 1935, the eve of his thirtieth birthday." https://biography.wales/article/s14-JONE-VAU-1905 ; Paul Scheffer, *Berliner Tageblatt* (evening edition, 16 August 1935): "Gareth Jones, who for 18 days had been in the hands of bandits on the Mongolian frontier, has been shot by his kidnappers." https://www.garethjones.org/overview/article33-14.htm (text as given in a transcription on garethjones.org). The sources differ on how long he was held, and none establishes who was behind the kidnapping. Checked at source, 31 Oct 2026.

[9] Encyclopaedia Britannica, "collectivization": "Intensive collectivization began during the winter of 1929–30."; "the peasantry were forced to give up their individual farms and join large collective farms (kolkhozy)."; peasants "slaughtered their livestock and destroyed their equipment." https://britannica.com/topic/collectivization ; Encyclopaedia Britannica, "Five-Year Plans" (The Editors; revised by Michael Ray): "the first Five-Year Plan (1928–32), implemented by Joseph Stalin, concentrated on developing heavy industry and collectivizing agriculture". https://www.britannica.com/topic/Five-Year-Plans . Checked at source, 31 Oct 2026.

[10] Central Executive Committee and Council of People's Commissars of the USSR, decree of 7 August 1932, "Об охране имущества государственных предприятий, колхозов и кооперации и укреплении общественной (социалистической) собственности" (On the protection of the property of state enterprises, collective farms and cooperatives and the strengthening of public (socialist) property) (my translation), *Izvestiia TsIK Soiuza SSR i VTsIK* No. 210 (8 August 1932); *Sobranie zakonov i rasporiazhenii Raboche-Krest'ianskogo Pravitel'stva SSSR* 1932, No. 62, pp. 583-584. It equated collective-farm and cooperative property with state property, "Приравнять по своему значению имущество колхозов и кооперативов" (To equate in significance the property of collective farms and cooperatives) (my translation), and set for its theft "высшую меру социальной защиты – расстрел с конфискацией всего имущества" (the highest measure of social protection – shooting with confiscation of all property) (my translation), or, under extenuating circumstances, "лишением свободы на срок не ниже 10 лет" (deprivation of liberty for a term of not less than 10 years) (my translation). Text on the Belarus national legal portal (section on monuments of the history of law): https://pravo.by/pravovaya-informatsiya/pomniki-gistoryi-prava-belarusi/gaspadarchae-prava-belarusi/gaspadarchae-prava-savetski-peryyad/postanovlenie-tsik-i-snk-ot-7-avgusta-1932-g-ob-okhrane-imushchestva-gosudarstvennykh-predpriyatiy-k/ . Checked at source, 31 Oct 2026.

[11] Presidential Library named after B. N. Yeltsin, "В СССР введена паспортная система" (A passport system is introduced in the USSR) (my translation), Day in History, 27 December 1932: the joint decree of the USSR Central Executive Committee and Council of People's Commissars "Об установлении единой паспортной системы по Союзу ССР и обязательной прописки паспортов" (On the establishment of a single passport system for the USSR and the compulsory registration of passports) (my translation) required passports of citizens aged 16 and older living permanently in cities or workers' settlements, with registration "не позднее 24 часов по прибытии на новое местожительство" (no later than 24 hours after arrival at a new place of residence) (my translation). https://www.prlib.ru/history/619849 ; Gijs Kessler, review of A. K. Baiburin, *The Soviet Passport* (Polity, 2021), *International Review of Social History* 68(1) (April 2023), pp. 200-203: "Until 1974, internal passports – a prerequisite for internal mobility – were not issued to the rural population". https://www.cambridge.org/core/product/66D1452A57C76D46E9861271A7AC787E/core-reader ; Andrei Markevich, Natalya Naumenko, Nancy Qian, "The Causes of Ukrainian Famine Mortality, 1932-33", NBER Working Paper 29089 (July 2021, revised May 2023), p. 10, in a sentence beginning "In January 1933,": "Moscow ordered the closure of the borders between Ukraine and the North Caucasus to prevent a mass migration of peasants". https://www.nber.org/system/files/working_papers/w29089/w29089.pdf . The decree's own text was not opened; the exclusion of the rural population is from Kessler, not from the Presidential Library's summary, and Kessler records that the main purpose of the passport system is disputed. Checked at source, 31 Oct 2026.

joined, ethically grown, begins: "UP is never imposed. No one is forced to join, to work or to give up what is theirs."[12] Among its floors, which no decision may cross, are the right to leave any group or community at any time, taking what is theirs, and a truthful shared record, so that facts are never falsified.[13] The second part is that UP is built, openly, on what many of these systems and many other traditions got right, and the aim the planners of 1929 betrayed is one UP keeps.[14] This chapter shows, tradition by tradition, what UP takes, where it is the same, where it is different, and the line in its core that stands between UP and the harms some of them caused.

Shoulders, not labels

People meeting UP for the first time usually reach for a label they already know: communism, technocracy, the Venus Project, a commune, a cult, or a market with a kinder face. The labels are not foolish. Each one sticks because UP really does share something with the thing it names. But being one of those things is different from building on what each of them got right, and that difference is the subject of this chapter. UP is not any of these labels. It is built, on purpose, from parts of many of them, and from much else besides.[14]

UP has described itself this way from the start. Its agreed position on how the book opens is that UP is less a revolution that invents everything anew than a way of defining the best of what civilisation already does, so as to get more of what works and less of what harms.[15] Its tenth tenet says that UP "grows by being useful, building on what people already do".[12] And its agreed position on where it comes from is that its elements have long existed in isolation, that people such as Jacque Fresco, Ward Cunningham, Paolo Soleri and Maria Montessori saw they could be coordinated, and that what was missing was the technology to do it.[16] UP is a combination: elements from many traditions, put together so that the whole can do better than any of them alone, while being something different from each. It also invents, because inventing solutions together is its main work, and some of the rules that join the pieces are its own.[17,14] Whether the combination does better is UP's claim, not something it asks anyone to take on trust: it is to be judged by its record, area by area, against the current system and against the ideal it aims at.[18,19]

The shoulders UP stands on are many, and Figure 3.1 sets out the main ones in the order they appeared. Citizens of Athens deciding together in an open assembly. Adam Smith's account of the order that free exchange produces without anyone commanding it. The Rochdale Pioneers and the co-operative rule that membership is voluntary. Karl Marx's demand that a society meet each person's needs. Maria Montessori's discovery that children will work with deep concentration at tasks they choose. The kibbutz's century of shared work. The technocrats' insistence

[12] Core tenet: *Freely joined, ethically grown*, in full: "UP is never imposed. No one is forced to join, to work or to give up what is theirs. It grows by being useful, building on what people already do, and it acts only by ethical means. A means is ethical when it serves the health, happiness and wellbeing of all and crosses none of the floors; UP never starts harm against anyone. What counts as ethical is defined and refined by the collective through UP's method." Also in "The core of UP".

[13] Core tenet: *Floors that are never crossed*: everyone's basic needs and protected freedoms, which no gain for others can buy; the living world's capacity to recover; "the right to leave any group or community at any time, taking what is theirs"; "a truthful shared record, so facts, measures and decisions are never falsified"; "freedom of the mind, so no one's thinking is manipulated without their knowledge or consent"; and "a fair hearing, so no one's freedom is restricted without a fair, evidence-based hearing, with the evidence open to them and a way to appeal". "UP guarantees needs, not every want." The collective may clarify or raise the floors, but no decision may lower them or push anyone below them. The tenet goes on: "A protected freedom such as movement may be restricted only to protect others or the person, only through an evidence-based court process, for the shortest time needed, and never below the needs floor."; "Leaving a group or community does not end a restriction set by a fair hearing."; "These limits are an open problem: they are the best that can be imagined now, and UP is built to find better and better solutions." Full wording in "The core of UP".

[14] UP's agreed position on this chapter (Round 14 addendum, "Chapter 3: not a label, built on what worked", agreed 1 Nov 2026): UP is not any of these labels, and it builds on what worked in them; for each tradition the chapter shows what UP takes, where UP is the same, where it differs, and the harms it is built to avoid. UP is a combination of elements from many traditions, structured so that the whole outperforms each, and it adds elements of its own, which the book names. The named shoulders are a starting list among many others: capitalism (Adam Smith; the price signal), communism, Paolo Soleri, democracy, the Venus Project, the wiki and wiki-style governance (Jimmy Wales), co-operatives, and Maria Montessori (intrinsic motivation to solve problems). The link between the price signal and intrinsic motivation is presented as UP's reading, not as either author's claim; facts in the ruling are checked at source before the book states them. Full wording in UP's agreed positions (the Position Ledger).

[15] UP's agreed position on how the book opens (Round 14, position 1, paraphrased): UP is less a revolution that creates something new than a way of defining the best of what civilisation does, so as to get more of the good things and reduce the downsides. Full wording in UP's agreed positions (the Position Ledger).

[16] UP's agreed position that it names a system people already use: its elements have existed in isolation; Jacque Fresco, Ward Cunningham, Paolo Soleri and Maria Montessori saw that they could be coordinated; what was missing was the technology; the Venus Project imagined a central brain, and AI can now be the pattern-finding and coordinating system it envisioned; the problem is not progress but the framework progress runs in. Full wording in UP's agreed positions (the Position Ledger).

[17] UP's agreed position that inventing solutions together is its main activity: in UP anyone can try anything that might solve a problem, the tools are commons, and the result carries the power. Full wording in UP's agreed positions (the Position Ledger).

[18] Core tenet: *Self-correction: nothing is final, including this*: every failure of UP is fed back into it as a new problem to solve, and every part of UP, the tenets included, can be improved through its own method; "UP is judged against both today's system and the ideal it aims at: the ideal shows the direction and the gap still to close, and today's record shows whether UP is already doing better." Full wording in "The core of UP".

[19] UP's agreed position S, "Judge UP as a whole system, against today's system" (CANON, 22 Oct 2026): "The bigger a problem, the more people it affects and the more attention and effort it draws, so the system works like a marketplace of problems, biggest first, and any area where UP does not yet do better than today's system gets attention first."; "UP is judged against today's system, not against perfection: for each area the book sets today's record beside what UP does". Full wording in UP's agreed positions (the Position Ledger).

on counting energy and materials. Friedrich Hayek's explanation of how prices carry knowledge that no planner could gather. The Universal Declaration of Human Rights. Paolo Soleri's dense, walkable arcology. Jacque Fresco's design for needs met without money. Elinor Ostrom's commons governed by their own users. Open-source software, and the wiki, which Ward Cunningham built so that any reader could edit it, and which Wikipedia turned into a community that governs itself by consensus. Each of them made a lasting contribution. Each also had limits, and some of the systems built in their names did terrible harm.

FIGURE 3.1

The shoulders UP stands on

Some of the traditions UP builds on, what each got right, and the part of UP that keeps it

WHEN	TRADITION, AND WHAT IT GOT RIGHT	WHAT UP KEEPS IT AS
508 BCE	**Athenian democracy (Cleisthenes)** Equal rights for citizens deciding together	Those affected decide; one voice per person
1776	**Markets (Adam Smith)** Order from free exchange, without a command	Freely joined: no one forced to join, work or give up what is theirs
1844	**Co-operatives (the Rochdale Pioneers)** Voluntary membership; members' own rules	Never imposed; the right to leave, taking what is theirs
1875	**Communism (Karl Marx)** "To each according to his needs"	A floor of basic needs for everyone, with labour never forced
1907	**Maria Montessori** Children's own drive to learn and to solve problems	Problems open to anyone who wants to take them up; recognition, never power
1910	**The kibbutz (Degania)** Sharing income and work for generations	Physical goods shared within the communities that make them (an illustration)
1932	**Technocracy** Counting energy and materials, not only money	Physical accounting sets the planet's limits; people choose inside them
1945	**Friedrich Hayek** Prices carry knowledge scattered across millions	An open record of problems carries the signal; bigger problems draw more effort
1948	**Universal Declaration of Human Rights** Rights that belong to every person	Floors that no decision may cross
1970	**Paolo Soleri (Arcosanti)** Dense, walkable places joined to ecology	Beautiful commons first, modest private space
1990	**Elinor Ostrom** Users governing their own commons	The people a problem affects decide its outcome; contributions kept visible
1991	**Linux and open source** Code that anyone may use, study and improve	UP's technology stays in UP, open to all who take part
1994	**The Venus Project (Jacque Fresco)** Needs met without money; machines coordinating	AI coordinates, proposes and does work; it never governs
1995	**The wiki (Ward Cunningham) and Wikipedia** Anyone may edit (1995); Wikipedia decides by consensus, not by vote (2001)	Anyone may improve a problem, solution or method; the result carries the power

Dates: Britannica (Cleisthenes, 508 BCE); Smith, Wealth of Nations (1776); Rochdale Pioneers Museum (1844); Marx, Critique of the Gotha Programme (1875); AMI (1907); Abramitzky (Degania, 1910); Britannica (Committee on Technocracy, 1932); Hayek (1945); United Nations (1948); SAH Archipedia (1970); Nobel committee (Ostrom, 1990); Torvalds (25 Aug 1991); the Venus Project (name from 1994, roots from 1971); Cunningham (1995); Britannica (Wikipedia, 2001). UP's column paraphrases its core and agreed positions.

Figure 3.1. The shoulders UP stands on: some of the main sources of UP's ideas, in the order they appeared, with what each got right and the part of UP that keeps it. The list is not complete, and UP's column paraphrases its core and agreed positions. Dates and quotations are in this chapter's notes and in Chapter 1.

So this chapter does three things with each tradition. It credits what the tradition got right, because UP keeps it. It shows where UP is the same and where it is different. And it names the harms that some of them caused, because

the combination is meant to unlock what none of them could do alone while avoiding those harms, and it shows the line in UP's core that stands in the way of each.[14] Figure 3.5 brings the comparison together, and Figure 3.6, near the end of the chapter, sets out the rules that are UP's own.

UP is judged against both the current system and the ideal it aims at: the ideal shows the direction and the gap still to close, and today's record shows whether UP is already doing better.[18] The same fairness is owed to every tradition in this chapter. Each was a serious answer to a real problem, and most were built by people who believed they were making life better. To the systems that were put into practice, this chapter also puts the same three questions, the ones UP's own core answers in a tenet of its own: Did people have to join? Did they have to work, on its terms? And did they have to give up what was theirs, and could they leave, taking what was theirs?[12,13] Two further questions follow from the rest of the core: who decides, and what happens to people who disagree?[20,21]

The questions matter more than the labels, because a label can be pinned on almost anything, while the questions can be checked. They can also be turned on UP itself, and this chapter invites readers to do exactly that. Figure 3.2 gives the short answers for each look-alike that was put into practice, and the sections that follow give the evidence.

[20] Core tenet: *The method: shared problem solving with evidence*: problems are named, measured and offered as work to anyone; the people a problem affects decide its outcome; no problem, solution or method belongs to the person who raised it; solutions are proposed with their evidence, tested and compared; matters of taste are never made rules for others. Its last words are "Evidence proposes; people decide." Full wording in "The core of UP".

[21] UP's agreed position on how UP decides when people disagree: every decision starts with an evidence-based proposal, published with its data, and an open question, "does anyone have a better idea?"; real trade-offs are first attacked with new design or technology; only when none of that works do the stakeholders vote, with guards, and no vote may override the protected freedoms; every vote records the losing side's case, and the decision reopens when new evidence or technology changes the options. The stakeholders include everyone materially affected, including people downstream and future residents. Full wording in UP's agreed positions (the Position Ledger).

FIGURE 3.2

Three questions to ask of any system

The look-alikes that were put into practice, and what UP's core requires



Sources: Britannica, "collectivization"; Yeltsin Presidential Library on the passport decree of 27 December 1932; affidavit of Yolanda Crawford, 10 April 1978 (Jonestown Institute); Abramitzky, JEP 2011 and The Mystery of the Kibbutz (2018); Twin Oaks website and policies; UP core, tenets 6 and 10, and UP's agreed position on labour. Details in the chapter notes.

Figure 3.2. Three questions to ask of any system, answered for the look-alikes in this chapter that were put into practice, and for UP. For the look-alikes, the answers summarise the evidence in this chapter's sections and notes, and grey marks a question the evidence here does not answer; for UP, they are what its core requires.

The signal and the drive

Two of these shoulders belong together in a way that is easy to miss, and UP's agreed positions on this chapter set them side by side.[14] The first is the market's great discovery. In 1776 Adam Smith described an investor who, aiming only at his own gain, is "led by an invisible hand to promote an end which was no part of his intention".[22] Smith used the phrase in a passage about a merchant choosing to invest at home, but it came to stand for something larger: in Britannica's words, it summarises "how self-interested actions are so coordinated that they advance the public interest".[23] Smith did not say how the coordinating happens. In 1945 Friedrich Hayek gave an account of how prices can do it. The knowledge an economy runs on, he wrote, is never gathered in one place; it exists only as "the dispersed bits of incomplete and frequently contradictory knowledge which all the separate individuals possess", and the price system is a "mechanism for communicating information" among them. When something becomes scarce, people start to use it more sparingly "without an order being issued".[24] Millions of people, each knowing only a little, are coordinated by a signal, and no one has to command them.

[22] Adam Smith, *An Inquiry into the Nature and Causes of the Wealth of Nations* (1776), Book IV, chapter 2: "By preferring the support of domestic to that of foreign industry, he intends only his own security;"; "he intends only his own gain,"; "led by an invisible hand to promote an end which was no part of his intention." Text of Edwin Cannan's 1904 edition: https://www.econlib.org/library/Smith/smWN13.html . The passage concerns a merchant's choice to invest at home. Checked at source, 1 Nov 2026.

[23] *Encyclopaedia Britannica*, "Invisible hand": "Smith uses the phrase to summarize how self-interested actions are so coordinated that they advance the public interest." https://www.britannica.com/print/article/677258 . Checked at source, 1 Nov 2026.

The second discovery came from a classroom. On 6 January 1907 Maria Montessori opened a room for small children in the San Lorenzo district of Rome, and watched what they did when they were given real choices, as Chapter 1 told.[25] She saw a girl of four repeat an exercise sixteen times and carry on, unmoved, when the other children were made to sing to distract her.[26] She concluded that "The prize and the punishment are incentives toward unnatural or forced effort".[27] Decades later the psychologists Richard Ryan and Edward Deci reached a similar conclusion from their own research: people are proactive and engaged, or passive and alienated, depending largely on whether the conditions they live in meet their needs for competence, autonomy and relatedness.[28] Chapter 1 told of young children who helped others without being asked and helped less once they were paid for helping.[29] UP's agreed position draws the lesson that money that controls people crowds out the motivation they bring themselves, while feedback that informs, and the freedom to choose, keep it alive.[30]

UP's reading, recorded among its agreed positions, is that these two discoveries are two halves of one idea.[14] The market showed that a signal can coordinate millions of people without anyone commanding them. Montessori showed that people bring their own drive to the work. The current system ties both halves to money. A price tells people what buyers are willing and able to pay, and pay is what most people work for, so, as Chapter 2 showed, problems that pay are solved quickly and problems whose persistence pays are kept alive.[31] UP keeps both discoveries and changes what carries the signal. Its agreed position is that a price only signals; it does not make a rare thing less rare.[32] In UP, what is needed is shown in an open record of problems, named and measured with the people they affect, and the bigger a problem, the more people it affects and the more attention and effort it draws, so that the system works, in UP's own phrase, like "a marketplace of problems".[19,20] In UP's design, what is meant to move people is the drive Montessori saw. UP's floors meet everyone's needs, whether or not they work; time and money earn recognition, never power; and records of contribution are feedback that never decides whether anyone's needs are met.[13,33,30] Figure 3.3 sets the two arrangements side by side.

[24] Friedrich A. Hayek, "The Use of Knowledge in Society", *American Economic Review* 35(4):519–530 (1945): "The knowledge of the circumstances of which we must make use never exists in concentrated or integrated form but solely as the dispersed bits of incomplete and frequently contradictory knowledge which all the separate individuals possess."; "We must look at the price system as such a mechanism for communicating information if we want to understand its real function"; "without an order being issued, without more than perhaps a handful of people knowing the cause, tens of thousands of people whose identity could not be ascertained by months of investigation, are made to use the material or its products more sparingly". https://www.econlib.org/library/Essays/hykKnw.html?chapter_num=1 . Checked at source, 31 Oct 2026.

[25] Association Montessori Internationale, "On This Day: First Casa dei Bambini" (6 Jan 2021), quoting Montessori's 1942 account: "It was on the 6th January 1907 that this room was inaugurated". https://montessori-ami.org/news/day-first-casa-dei-bambini . AMI, "Timeline of Maria Montessori's Life": opened "at 53 Via dei Marsi in the San Lorenzo district of Rome". https://montessori-ami.org/node/1821 . See also Chapter 1. Checked 29 Oct 2026.

[26] Maria Montessori, *The Montessori Method*, trans. Anne E. George (New York: Frederick A. Stokes Company, 1912), ch. XII, "Education of the Senses": she watched "a little one of four years repeat this exercise sixteen times" and, when "I had the other children sing in order to distract her", the child "continued unmoved". https://digital.library.upenn.edu/women/montessori/method/method-XII.html . Checked at source, 31 Oct 2026.

[27] Maria Montessori, *The Montessori Method* (1912), chapter I: "The prize and the punishment are incentives toward unnatural or forced effort". https://digital.library.upenn.edu/women/montessori/method/method-I.html . Checked 30 Oct 2026.

[28] Richard M. Ryan and Edward L. Deci, "Self-Determination Theory and the Facilitation of Intrinsic Motivation, Social Development, and Well-Being", *American Psychologist* 55(1) (January 2000), pp. 68-78, abstract, p. 68: "The findings have led to the postulate of three innate psychological needs– competence, autonomy, and relatedness– which when satisfied yield enhanced self-motivation and mental health and when thwarted lead to diminished motivation and well-being."; "Human beings can be proactive and engaged or, alternatively, passive and alienated, largely as a function of the social conditions in which they develop and function." (the PDF's dashes appear as "–"). https://selfdeterminationtheory.org/SDT/documents/2000_RyanDeci_SDT.pdf . Read at a copy of the published text, 31 Oct 2026.

[29] See Chapter 1, on the study in which children helped others without being asked and helped less once they were paid for helping, and its notes.

[30] UP's agreed position on rewards and motivation: money that controls people crowds out the motivation they bring themselves, while feedback that informs, and the freedom to choose, keep it alive; "UP's contribution records are feedback: they inform, and they never decide whether anyone's needs are met." Moving from a money-driven system will bring friction, and some people, hurt by the current system, will not fully make the change; UP expects this and meets it with compassion and kindness. Full wording in UP's agreed positions (the Position Ledger).

[31] See Chapter 2, "Why the race is lost where it is", and its notes.

[32] UP's agreed position on scarcity: when many people want the same thing, UP treats it as a signal and a problem to solve; a price only signals and does not make a rare thing less rare. Full wording in UP's agreed positions (the Position Ledger).

[33] Settled alongside the core, dangers adopted in round 10: "no forced adoption, no leader, no founder named in the core; anyone acting outside the core stops being UP and bears the consequences". The same list includes "time and money earn recognition, never power" and "everyone is a watcher". Full wording in "The core of UP".

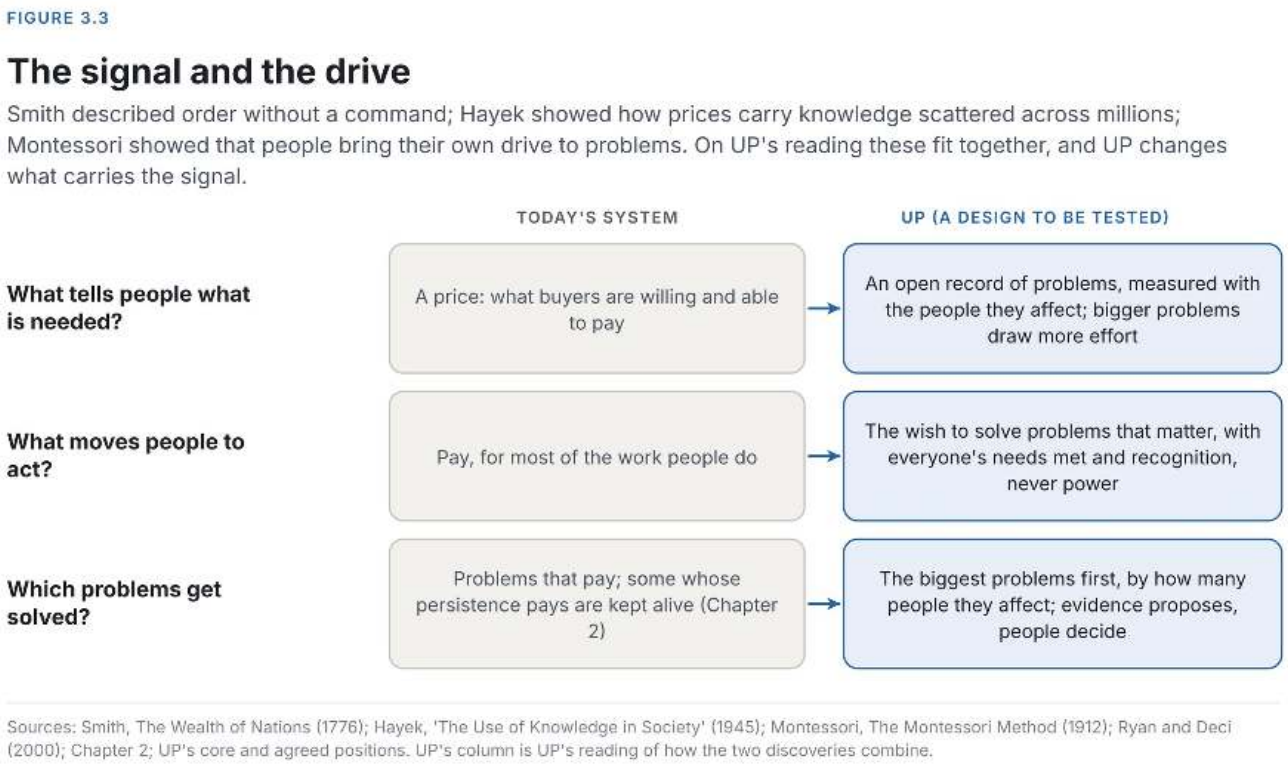


Figure 3.3. The signal and the drive: what tells people what is needed, what moves them to act, and which problems get solved, in the current system and in UP. UP's column is UP's reading of how the two discoveries combine, drawn from its core and agreed positions; it is a design to be tested, not a result.

Marx, on UP's reading, pointed toward the same link from the other side. The higher phase of the society he hoped for would come, he wrote, only once work had become "not only a means of life but life's prime want".[34] UP's agreed position on people is close to that hope and more modest about it: people are cooperative by nature, behaviour is powerfully shaped by the environment, and whether visible contributions, support and recognition can do the work that pay and sanctions do today is to be measured in the open, not assumed.[35] The evidence on that question comes later in this chapter.

Needs met by command

Central planning deserves its credit first, because its aim was one UP shares: that a society should meet the needs of all its people, not only of those who can pay. Karl Marx gave that aim its most famous form in 1875, in a slogan for a higher phase of the society he hoped would one day follow capitalism: "From each according to his ability, to each according to his needs!"[34] UP keeps the second half of the slogan as a floor: everyone's basic needs are guaranteed, and no gain for others can buy them away.[13] It does not keep the first half as a rule, because in UP labour is never forced.[36] The Soviet state set up its planning body, Gosplan, in February 1921, at first as an advisory

[34] Karl Marx, *Critique of the Gotha Programme* (written April to early May 1875; first published 1890–91), part I: "In a higher phase of communist society"; "after labor has become not only a means of life but life's prime want"; "society inscribe on its banners: From each according to his ability, to each according to his needs!" Marxists Internet Archive, from Marx/Engels Selected Works, vol. 3 (Moscow: Progress Publishers, 1970). https://www.marxists.org/archive/marx/works/1875/gotha/ch01.htm . Checked at source, 1 Nov 2026.

[35] UP's agreed position that people are cooperative by nature and that cooperation is kept visible, as amended on 31 Oct 2026: "Behaviour is powerfully shaped by the environment. People are cooperative by nature, and cooperation lasts where contributions are visible and limits are agreed together (Ostrom). Selfishness is largely an adaptation to scarcity and low trust. UP meets needs and removes those drivers at the source, so contributing becomes the natural path. UP's own position, to be tested in the open, is that visible contributions work as feedback, not punishment, and that free-riding is treated as a sign of distress or mismatch and met with support, not punishment. The commons Ostrom studied also used graduated sanctions, so whether feedback and support can do that work is measured, not assumed." Full wording in UP's agreed positions (the Position Ledger).

[36] UP's agreed position on merit and work: skilled work is open to anyone who meets published, testable and changeable standards, and education is open to everyone at every age (tenet T4); merit decides who does skilled work and never whose needs are met; "Labour is never forced: support and health care are offered, never imposed, and choosing not to work is not an illness." Full wording in UP's agreed positions (the Position Ledger).

council, and its first five-year plan, which nominally began in October 1928, was formally adopted in April 1929.[37] On some measures the results were remarkable. By official Soviet statistics, literacy among people aged nine to forty-nine rose from 28.4 per cent at the Russian Empire's census of 1897 to 98.5 per cent at the Soviet census of 1959, and the number of doctors rose from about 28,000 in 1913 to more than 660,000 in 1970.[38,39] Those numbers have limits that honest accounting must name: a Western specialist on Soviet health observed in 1990 that "The problem was the quality", and that "Since 1971, both infant mortality and the crude death rate have risen substantially."[40] But the gains in schooling and in the number of trained people were real, and they came to people who had never had them.

The trouble lay in how the plan was carried out, and the planners' own words show they knew it. On 2 March 1930, with collectivisation in full swing, Stalin published an article in *Pravda* that conceded what officials were doing: "Collective farms must not be established by force. That would be foolish and reactionary."[41] By then an estimated 55 per cent of peasant households had at least nominally joined collective farms. After the article, more than half of the households recorded as members withdrew, and the campaign then resumed: by the summer of 1932, 61.5 per cent of households were in collective farms.[42] About two million peasants labelled kulaks, a label applied to peasants who resisted, were exiled to Siberia and other remote regions.[43] And the country's herds were devastated. By the official figures Stalin gave the Party congress in January 1934, the number of horses fell from 34 million in 1929 to under 17 million in 1933, and the number of cattle from 68 million to under 39 million (Figure 3.4).[44]

[37] Encyclopaedia Britannica, "Gosplan" (most recently revised and updated by Michael Ray): "Established in February 1921, Gosplan was originally an advisory council to the government." https://www.britannica.com/print/article/239523 ; Encyclopaedia Britannica, "Five-Year Plans": "the first Five-Year Plan (1928–32), implemented by Joseph Stalin, concentrated on developing heavy industry and collectivizing agriculture". https://www.britannica.com/topic/Five-Year-Plans ; Mark Harrison, "Five-Year Plan" (University of Warwick, web draft dated 2 September 2004): "The first 'five-year plan of development of the national economy of the USSR' was adopted in April 1929, although it nominally covered the period from October 1928 to September 1933."; "It took several years for Gosplan, the USSR state planning commission, to prepare the first five-year plan". https://warwick.ac.uk/fac/soc/economics/staff/mharrison/public/fiveyearplan.pdf . Checked at source, 31 Oct 2026.

[38] Central Statistical Administration of the USSR Council of Ministers, *Народное образование, наука и культура в СССР* (Public Education, Science and Culture in the USSR) (my translation) (Moscow: Statistika, 1971), p. 21, table "Грамотность населения дореволюционной России и СССР в возрасте 9-49 лет (по данным переписей населения)" (Literacy of the population of pre-revolutionary Russia and the USSR aged 9-49, from population census data) (my translation), per cent literate, both sexes, men, women: "1897 28,4 40,3 16,6"; "1959 98,5 99,3 97,8". https://istmat.org/files/uploads/68928/narodnoe_obrazovanie_nauka_i_kultura_v_sssr_1971.pdf . These are official Soviet figures; the 1897 census was the Russian Empire's, and the 1897 figure depends on the age base used. Checked at source, 31 Oct 2026.

[39] Soviet statistical yearbook for 1970, health chapter, table "Основные показатели развития здравоохранения" (Main indicators of the development of health care) (my translation), p. 689: physicians of all specialties, in thousands, 1913 "28,1"; 1970 "668,4". https://istmat.org/files/uploads/23453/narhoz_sssr_1970_medicina.pdf . These are official Soviet figures; the yearbook's title page was not in the copy read. Read at a copy of the published text, 31 Oct 2026.

[40] Murray Feshbach, *The Health Crisis in the USSR*, Institute for the Study of Conflict, Ideology and Policy, Publication Series No. 4 (Boston University, June 1990): "So they had 47 doctors per ten thousand population, twice as much as the United States."; "The problem was the quality."; "Since 1971, both infant mortality and the crude death rate have risen substantially." https://open.bu.edu/server/api/core/bitstreams/147150bf-1b9f-4736-b3b4-12165cc16805/content . Checked at source, 31 Oct 2026.

[41] J. V. Stalin, "Dizzy with Success: Concerning Questions of the Collective-Farm Movement", *Pravda* No. 60 (2 March 1930); *Works*, Vol. 12 (Moscow: Foreign Languages Publishing House, 1955), pp. 197-205: "Collective farms must not be established by force. That would be foolish and reactionary." He also condemned officials "threatening to use armed force" against peasants in Turkestan as a distortion of Party policy. https://www.marxists.org/reference/archive/stalin/works/1930/03/02.htm . Read at a copy of the published text, 31 Oct 2026.

[42] Lewis Siegelbaum, "Collectivization", *Seventeen Moments in Soviet History* (Michigan State University, Macalester College and NEH): "By March 1930 an estimated 55 percent of peasant households at least nominally had enrolled in collective farms."; "over half of peasant households ostensibly enrolled in collective farms were recorded as having withdrawn."; "By July 1931 the proportion of households in collective farms had risen to 53 percent and a year later to 61.5 percent." https://seventeenmoments.web.illinois.edu/1929-2/collectivization/ (a development copy of the project's site, hosted at illinois.edu). Read at a copy of the published text, 31 Oct 2026.

[43] Andrei Markevich, Natalya Naumenko, Nancy Qian, "The Causes of Ukrainian Famine Mortality, 1932-33", NBER Working Paper 29089 (July 2021, revised May 2023), p. 16: "approximately two million peasants (kulaks) were exiled to Siberia and other remote regions for actively resisting collectivization". https://www.nber.org/system/files/working_papers/w29089/w29089.pdf ; on the label, Lewis Siegelbaum, "Collectivization", *Seventeen Moments in Soviet History*, describes "Peasants who resisted the pressure … to enroll in collective farms" being labelled kulaks. https://seventeenmoments.web.illinois.edu/1929-2/collectivization/ (a development copy of the project's site). Checked at source, 31 Oct 2026.

[44] J. V. Stalin, *Report to the Seventeenth Party Congress on the Work of the Central Committee of the C.P.S.U.(B.)* (26 January 1934), section II.2, "The Progress of Agriculture", table "Livestock in the U.S.S.R. (Million head)": horses 34.0 (1929) and 16.6 (1933); large cattle 68.1 and 38.6; sheep and goats 147.2 and 50.6; pigs 20.9 and 12.2; "The decline in the number of livestock began in the very first year of reorganisation (1930) and continued right up to 1933." Stalin blamed the slaughter on "intense kulak agitation". https://www.marxists.org/reference/archive/stalin/works/1934/01/26.htm . Read at a copy of the published text, 31 Oct 2026.

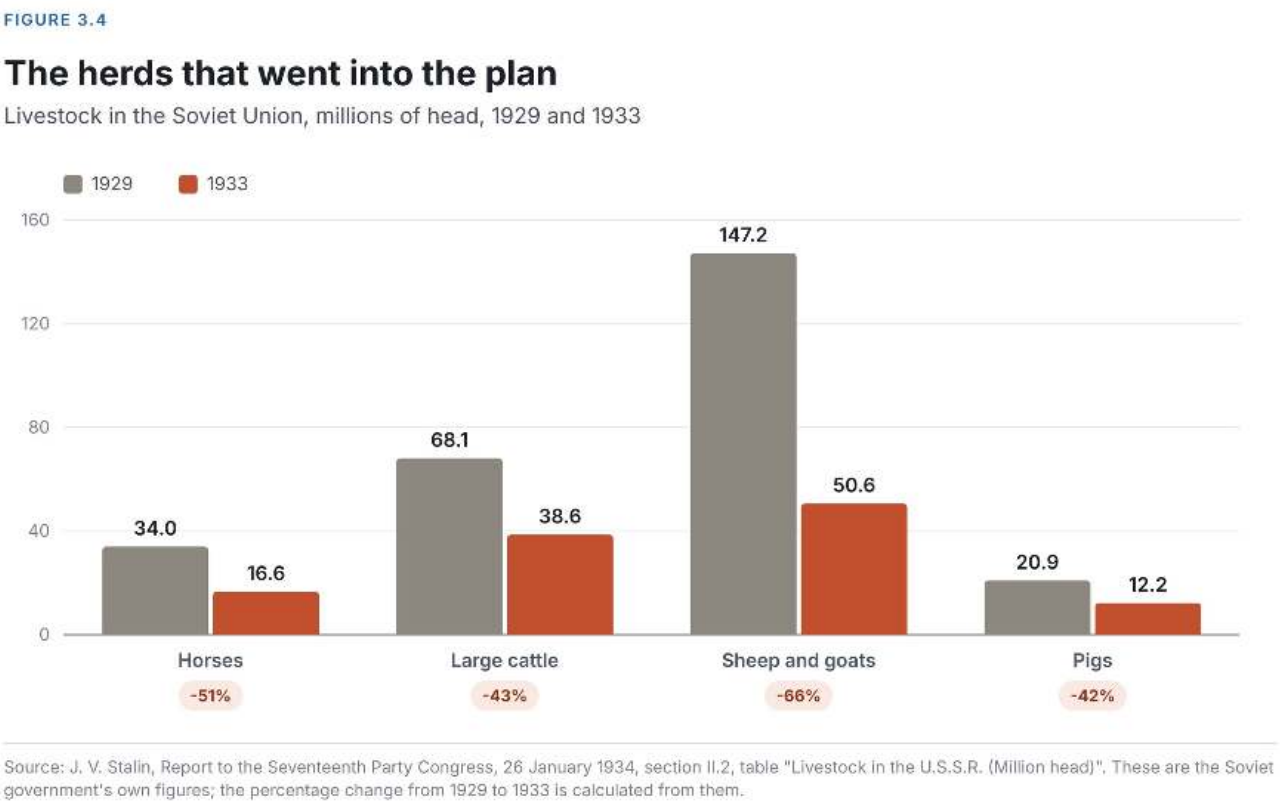


Figure 3.4. Livestock in the Soviet Union, 1929 and 1933, in millions of head, from the official figures Stalin reported to the Party congress in January 1934. Peasants slaughtered much of their livestock as collectivisation was forced on them.

The famine was the worst of it, but not the whole of it, and it was not the last. In China, during and after the Great Leap Forward, "about 20 million people were estimated to have died of starvation between 1959 and 1962", in Britannica's account, a single estimate among scholars' estimates that vary widely.[45] Even in calmer decades, planned economies struggled to put the right goods in the right places. The Hungarian economist János Kornai concluded that shortage was not an accident of bad planners but a property of the system: "Certain properties of the economic mechanism permanently reproduce shortage."[46] An American government economist who spent four months in the Soviet Union in 1967 wrote that "Queues and spot shortages were far more in evidence than I expected."[47] By December 1990, a joint study by the International Monetary Fund, the World Bank and the OECD, with advisers to the incoming president of the new European Bank for Reconstruction and Development, found "few goods to be found in state shops" and concluded that "The traditional centrally planned system has largely collapsed".[48] A year later the Soviet Union itself was gone; Mikhail Gorbachev resigned as its president on 25 December 1991.[49]

[45] *Encyclopaedia Britannica*, "Great Leap Forward": "about 20 million people were estimated to have died of starvation between 1959 and 1962." https://www.britannica.com/event/Great-Leap-Forward . Scholars' estimates vary. Checked at source, 1 Nov 2026.

[46] János Kornai, "Resource-Constrained versus Demand-Constrained Systems", *Econometrica* 47(4) (July 1979), pp. 801-820, abstract: "Certain properties of the economic mechanism permanently reproduce shortage."; "A socialist economy in its"classical" form belongs to the former type." (that is, the resource-constrained type). https://www.econometricsociety.org/publications/econometrica/1979/07/01/resource-constrained-versus-demand-constrained-systems . This is Kornai's own statement of the thesis he developed in *Economics of Shortage* (Amsterdam: North-Holland, 1980). Checked at source, 31 Oct 2026.

[47] Gertrude Schroeder, "Soviet Reality Sans Potemkin" (CIA Center for the Study of Intelligence; released 1994), on a four-month stay in the Soviet Union in 1967: "Queues and spot shortages were far more in evidence than I expected."; "Shelves and showcases were usually half empty." https://www.cia.gov/resources/csi/static/Soviet-Reality-Sans-Potemkin.pdf . Checked at source, 31 Oct 2026.

[48] International Monetary Fund, World Bank and Organisation for Economic Co-operation and Development staff, with consultants to the designated president of the European Bank for Reconstruction and Development, *The Economy of the USSR: Summary and Recommendations* (Washington, D.C.: World Bank, December 1990), p. 9: "shortages of basic consumer goods are a rapidly growing concern."; p. 10: "with few goods to be found in state shops, barter becoming common"; "The traditional centrally planned system has largely collapsed". https://documents1.worldbank.org/curated/en/187491468769887526/text/multi-page.txt (the World Bank's text file runs the report's two columns together; the phrases were read across the column breaks). Checked at source, 31 Oct 2026.

In UP's terms, central planning as it was practised crossed the lines this chapter draws. Peasants were forced into the collective farms and made to give up their land and animals, and the passport rules of December 1932 and the closed borders of January 1933 kept them from leaving. That is everything UP's tenth tenet and its floors forbid.[12,13] It crossed the other floors in UP's core too: the needs of millions went unmet, and while it happened, the famine was denied in print.[13] And it concentrated power in the hands of the few who wrote the plan, which UP treats as a standing danger in any form.[50] UP shares the planners' aim and refuses their method. In UP, the people a problem affects decide its outcome; no one holds an office from which to command; and technology may coordinate and propose but never govern.[20,51,52]

That still leaves Kornai's problem, which is not a problem of cruelty but of knowledge. Any system that sets out to meet everyone's needs has to know what those needs are and where the resources lie, and the planners of the twentieth century never managed to know enough. UP does not claim to have solved this in advance. Its answer is to count real resources openly and to treat the coordination of complex production as testable work rather than as a plan to be imposed.[53,54,20] One way it could keep decisions close to the people who hold the knowledge, offered as an illustration and taken up again in the section on markets, is to take them at the smallest scale that works.[55]

Rule by experts, and rule by machines

A second family of look-alikes promises to take the guesswork out of running a society, by handing it to people or machines who know best. In the winter of 1932–33 the United States briefly caught a fever for the idea. A Committee on Technocracy had been organised in New York in 1932, dominated by an engineer named Howard Scott, and its survey of the country's machines and energy use made headlines.[56,57] "Technocracy is based primarily on a study of the rates of growth of all energy-consuming devices on this Continent as a function of time," Scott told an audience at the Hotel Pierre in New York on 13 January 1933.[58] Technocracy clubs sprang up across the country; at their height, the writer Kevin Baker estimates, they may have had as many as a quarter of a

[49] Encyclopaedia Britannica, "Mikhail Gorbachev": "On December 25, 1991, Gorbachev resigned the presidency of the Soviet Union, which ceased to exist that same day." https://www.britannica.com/biography/Mikhail-Gorbachev ; Office of the Historian, US Department of State: "The formal dissolution of the Soviet Union was completed when Mikhail Gorbachev resigned as President on December 25, 1991." https://history.state.gov/countries/russia . Britannica elsewhere dates the formal end to the last day of the year: "at midnight on December 31, 1991, it was formally dissolved." https://www.britannica.com/event/the-collapse-of-the-Soviet-Union/The-rise-of-Yeltsin-and-the-foundation-of-post-Soviet-Russia . Checked at source, 31 Oct 2026.

[50] Core tenet: *Power kept spread out*: concentration of power in any form (wealth, position, information, access, expertise or machines) is treated as a standing danger; everyone in UP watches for it and spreads it out again; the threat is never declared gone. Full wording in "The core of UP".

[51] Core tenet: *Open participation: anyone may take part; those affected decide*: there are no offices to hold; work is shared out, not owned; where work needs skill, skill is shown by open, testable standards that anyone can work toward and anyone can propose to change, and education is open to everyone at every age. Full wording in "The core of UP".

[52] Core tenet: *Technology serves; people decide*: "AI and automation coordinate, propose and do work. They never govern: people can always correct, pause or switch them off. No single AI system or operator controls coordination". The AI systems UP uses are open, more than one, checked against each other, and watched for concentrated power like everything else. Full wording in "The core of UP".

[53] Core tenet: *Reality over fiction*: decisions rest on real resources, real needs and measured outcomes; shared fictions such as money, corporations, governments and borders made large-scale cooperation possible and served a great purpose; UP keeps a fiction while it serves health, happiness and wellbeing, and replaces it gradually where technology can do its job without obvious downsides. Full wording in "The core of UP".

[54] UP's agreed position that physical accounting sets the limits and people weigh the choices: energy budgets, carbon caps, water footprints, materials and life-cycle assessment set the planet's hard limits; inside them several measures are used together, and choices between different needs are made openly by the people affected, never by an efficiency score. Full wording in UP's agreed positions (the Position Ledger).

[55] UP's agreed position on prices (an illustration of one way UP could run, never a directive): massive abundance plus a new norm of owning (libraries, personal fabrication, recyclable goods, community spaces with reservations); price's jobs are replaced, not wished away: rationing by rotation and reservation, what people want by direct use data, costs by physical accounting, and local knowledge by decisions at the smallest scale; whether this coordinates the most complex production as well as markets do is testable work, run step by step. Full wording in UP's agreed positions (the Position Ledger).

[56] Encyclopaedia Britannica, "technocracy": "technocracy, government by technicians who are guided solely by the imperatives of their technology."; "The much-publicized Committee on Technocracy, headed by Walter Rautenstrauch and dominated by Scott, was organized in 1932 in New York City."; "The committee broke up within a year and was succeeded by the Continental Committee on Technocracy, which faded by 1936, and Technocracy, Inc., headed by Scott."; "the technocracy movement was weakened by its failure to develop politically viable programs for change, and support was lost to the New Deal and third-party movements."; "There were also fears of authoritarian social engineering." https://www.britannica.com/topic/technocracy . Checked at source, 31 Oct 2026.

[57] M. King Hubbert, questioned before the Board of Economic Warfare, 14 April 1943 (transcript published by Technocracy Inc.): "In the winter of 1931, I came to New York as a member of the staff of Columbia University and quite by accident heard of Howard Scott"; publicity through the university "looked like a forest fire." https://web.archive.org/web/20250125153523/https://www.technocracyinc.org/1943-m-king-hubbert-investigated/ . Checked at source, 31 Oct 2026.

[58] Howard Scott, "The Hotel Pierre Address", lecture of 13 January 1933, reprinted in *Technocracy*, Series A, No. 19 (July 1940): "Technocracy is based primarily on a study of the rates of growth of all energy-consuming devices on this Continent as a function of time."; "Technocracy is concerned with the natural resources available for conversion into use-forms and their quantities". Archived copy of Technocracy Inc.'s page: https://web.archive.org/web/20010520151538/http://www.technocracy.org/periodicals/technocracy/a19/hotel-pierre.html . Checked at source, 31 Oct 2026.

million members.[59] The committee itself broke up within a year, and Scott carried the cause on through Technocracy, Inc.[56]

What the technocrats proposed is set out in their own study course. A single organisation would "operate the entire physical equipment of the North American Continent", divided into functional departments for transport, farming, health and the rest. "The fitting of the man to the job is not done by election or by any of the familiar democratic or political procedures," the course explains. "The man gets his job by appointment, and he is promoted or demoted also by appointment." At the top sat a Continental Director "chosen from among the members of the Continental Control by the Continental Control", and every post was held "until retirement or death". Money would be replaced by "Energy Certificates", one equal income for every adult, "non-negotiable and non-savable".[60] The course is frank about the place of democracy in the design: "All philosophic concepts of human equality, democracy and political economy have upon examination been found totally lacking and unable to contribute any factors of design for a Continental technological control."[60] The movement faded, Britannica records, because it never developed a politically workable programme, and because "There were also fears of authoritarian social engineering."[56]

The technocrats deserve credit for one thing that UP keeps. They insisted on counting the physical economy, the energy, materials and machines a society actually has, instead of only the money that changes hands. Scott described Technocracy as "concerned with the natural resources available for conversion into use-forms and their quantities".[58] UP's agreed position makes the same move: physical accounting, of energy, materials, water and carbon, sets the planet's hard limits. But it stops exactly where the technocrats went on. Inside those limits, choices between different needs are made openly by the people affected, never by an efficiency score.[54] The political scientist Daniele Caramani has described the problem with the technocrats' route in terms that fit their design closely: technocracy "requires voters to entrust authority to experts who identify the general interest from rational speculation", on a view of the public good that is "unitary, nonpluralist, unmediated, and unaccountable".[61]

The Venus Project is the look-alike UP is most often confused with, and the confusion is understandable, because UP's own agreed positions name its founder. Jacque Fresco, who died in 2017 at the age of 101, spent decades designing a society in which, in the Project's words, "all goods and services are available to all people without the need for means of exchange such as money, credits, barter or any other means".[62] He imagined cities run by "central cybernated systems" that "will coordinate all of the machinery and equipment that serve the entire city, the nation and ultimately the world".[63] He wanted the earth's resources declared, as he put it, "the common heritage of all the world's people", and he was no believer in perfect societies: "There are no Utopias," he wrote. "The very notion of 'Utopia' is static."[64] Unlike the technocrats, the Venus Project set itself explicitly against rule by an expert class. Among its published aims is "Eliminating elitism, technical or otherwise", it promised that the engineers and analysts of its transition "will not dictate the policies or have any more advantage than other people", and it said

[59] Kevin Baker, "Howard Scott and His Technocratic Utopia", *American Heritage* 51(2) (April 2000): "At their height, in early 1933, their membership may have numbered as many as a quarter-million Americans." An estimate by a magazine writer, hedged in the original. https://www.americanheritage.com/howard-scott-and-his-technocratic-utopia . Checked at source, 31 Oct 2026.

[60] Technocracy Inc., Study Guide, "Lesson 22: Technocracy: The Design" (undated; written in the 1930s): "It must operate the entire physical equipment of the North American Continent."; "The fitting of the man to the job is not done by election or by any of the familiar democratic or political procedures."; "The man gets his job by appointment, and he is promoted or demoted also by appointment."; "The Continental Director is chosen from among the members of the Continental Control by the Continental Control."; "The tenure of office of every individual continues until retirement or death, unless ended by transfer to another position."; "Under a technological administration of abundance, there is only one efficient method—that employing a system of Energy Certificates."; "it must be non-negotiable and non-savable."; "The working period, however, after the period of transition would probably not need to exceed the 20 years from the age of 25 to 45, on the part of each individual."; "All philosophic concepts of human equality, democracy and political economy have upon examination been found totally lacking and unable to contribute any factors of design for a Continental technological control." Archived copy of Technocracy Inc.'s page: https://web.archive.org/web/20250125153638/https://www.technocracyinc.org/study-guide/lesson-22-technocracy-the-design/ . It is a design the organisation advocated, never put in place. Checked at source, 31 Oct 2026.

[61] Daniele Caramani, "Will vs. Reason: The Populist and Technocratic Forms of Political Representation and Their Critique to Party Government", *American Political Science Review* 111(1):54–67 (2017), abstract: "both populism and technocracy are based on a unitary, nonpluralist, unmediated, and unaccountable vision of society's general interest."; "Technocracy stresses responsibility and requires voters to entrust authority to experts who identify the general interest from rational speculation." https://doi.org/10.1017/S0003055416000538 . Checked at source, 31 Oct 2026.

[62] The Venus Project, "Resource Based Economy": "In a Resource Based Economy all goods and services are available to all people without the need for means of exchange such as money, credits, barter or any other means." https://www.thevenusproject.com/resource-based-economy/ (archived copy: https://web.archive.org/web/2026/https://www.thevenusproject.com/resource-based-economy/). Checked at source, 31 Oct 2026.

[63] The Venus Project, "Technology": "Eventually, the central cybernated systems will coordinate all of the machinery and equipment that serve the entire city, the nation and ultimately the world." https://www.thevenusproject.com/resource-based-economy/technology/ (read in a browser; the site blocks scripts). Checked at source, 31 Oct 2026.

[64] Jacque Fresco, *The Best That Money Can't Buy: Beyond Politics, Poverty, & War* (Venus, Florida: Global Cyber-Visions, 2002): "we must strive towards having the Earth's resources declared as the common heritage of all the world's people". Read in the UP library (collection universal-pragmatism; books bcd81e1ffb0b and e9df81bb534f, two copies of the same book) and in the library's text of the book. Jacque Fresco, *Designing the Future* (2007): "There are no Utopias. The very notion of 'Utopia' is static." (the library's copy of the 2002 book has the same passage, printed "There are no Utopia."). Read in the UP library (book 7f5c22e04325, part 47). Checked 31 Oct 2026.

that “During the transition participation is voluntary.”[65] Asked whether all this was communism, Fresco answered: “Communism has armies, navies, prisons, police, banks, money – we don’t have any of those things.”[66] Much of what he saw, UP sees too. Its agreed position names Fresco among those who saw that the scattered pieces of a better system could be coordinated, and adds that the Venus Project imagined a central brain, and that AI can now be the pattern-finding and coordinating system it envisioned, though under UP’s core never as a single central brain: no single AI system or operator controls coordination.[16,52]

The difference lies in a single question: who decides? Fresco answered it plainly in *Designing the Future*, published in 2007. “How are decisions arrived at in a cybernated resource-based society?” he asked, and answered that computers with sensors spread through farms, factories and cities would gather “direct feedback from the environment”. The result, he wrote, would be “a more humane and meaningful civilization that is not based on the opinions or desires of a particular sect or individual”, and in time “people play less and less of a role in decision-making and the society is working towards AI and machine decision-making to manage all resources”.[67] The Project’s published answers to questions went further: “It is doubtful that in the latter part of the twenty-first century people will play any significant role in decision-making.”[68] Fresco did not propose a dictatorship of machines, and he said so. Machines would watch production and the environment, not people, and “It is people who decide what ends inanimate machines will serve.”[69] But the direction of travel was clear: as the machines improved, the decisions would pass to them.

UP keeps the machines and refuses that direction. Its core says it in two short sentences: “AI and automation coordinate, propose and do work. They never govern: people can always correct, pause or switch them off.”[52] No single AI system or operator controls coordination; the systems UP uses are open, more than one, checked against each other and watched for concentrated power like everything else, because machines are one of the forms in which power gathers.[52,50] The reason is not distrust of evidence. UP’s method leans on evidence as heavily as any look-alike in this chapter. It is that evidence answers some questions and not others. A sensor can report that a water table is falling; it cannot say whether a valley should be farmed, left wild or flooded for a reservoir, because, within the floors that protect the living world, that depends on what the people the decision affects value, including people downstream and future residents. UP’s method draws the line exactly there: facts are checked, unknowns become shared work, matters of taste are never made rules for others, and “Evidence proposes; people decide.”[20] When people disagree, a decision starts with a proposal published with its data and an open question, “does anyone have a better idea?”, and only when no better design can be found do the people affected vote. Even then, every vote records the losing side’s case, no vote may override the protected freedoms, and the decision reopens when the evidence changes.[21]

There is a second difference, quieter but just as important. The Venus Project describes itself as an organisation “based on the ideas, designs, and directions” set out in Fresco’s book, “representing the life’s work of its originator and Project Director”.[70] Its own answers to questions today acknowledge “the typical dynamics of an institution

[65] The Venus Project, “Aims and Proposals” (archived 6 Jan 2013): “Eliminating elitism, technical or otherwise.” https://web.archive.org/web/20130106024248/http://thevenusproject.com/en/the-venus-project/aims-a-proposals . The Venus Project, “Frequently Asked Questions From Over 25 Years” (archived 26 Dec 2012), on the systems analysts and engineers needed during the transition: “They will not dictate the policies or have any more advantage than other people.”; and “During the transition participation is voluntary.” https://web.archive.org/web/20121226225527/http://www.thevenusproject.com/en/the-venus-project/faq . Checked at source, 31 Oct 2026.

[66] Jeff Gore, “The view from Venus”, *Orlando Weekly* (12 Oct 2011): ““Communism has armies, navies, prisons, police, banks, money – we don’t have any of those things,” Fresco replies.” Archived copy: https://web.archive.org/web/20170813183306/https://www.orlandoweekly.com/orlando/the-view-from-venus/Content?oid=2248863 . Checked at source, 31 Oct 2026.

[67] Jacque Fresco, *Designing the Future* (Venus, Florida: The Venus Project, 2007; © Jacque Fresco and Roxanne Meadows), chapter “Decision Making and Laws”: “How are decisions arrived at in a cybernated resource-based society?”; “Decisions are then arrived at using direct feedback from the environment.”; “The result would be a more humane and meaningful civilization that is not based on the opinions or desires of a particular sect or individual.”; “This way people play less and less of a role in decision-making and the society is working towards AI and machine decision-making to manage all resources, serving the common good.” https://www.aiai.ed.ac.uk/~bat/IMG/SEA-CITY/JF/Jacque_Fresco-Designing_the_Future.pdf ; also read in the UP library (book 322b42b891e7, part 41). Checked 1 Nov 2026.

[68] The Venus Project, “Frequently Asked Questions From Over 25 Years” (archived 26 Dec 2012): “When computers eventually have sensors extended into all areas of the physical and social complex, we will be able to achieve centralization of decision-making.”; “It is doubtful that in the latter part of the twenty-first century people will play any significant role in decision-making.” https://web.archive.org/web/20121226225527/http://www.thevenusproject.com/en/the-venus-project/faq . Checked at source, 31 Oct 2026.

[69] Fresco, *The Best That Money Can’t Buy* (2002): “Machines will monitor production and delivery of goods and services, and protect the global environment. They will not monitor people.”; “It is people who decide what ends inanimate machines will serve.” He also wrote that machine decision-making “would not imply a take-over by machines. Instead it would be a gradual transfer of decision-making process to machine intelligence as the next phase of social evolution.” Read in the UP library (books bcd81e1ffb0b, part 128, and e9df81bb534f, part 43). Checked 1 Nov 2026.

[70] Fresco, *The Best That Money Can’t Buy* (2002), closing section: “THE VENUS PROJECT IS AN ORGANIZATION based on the ideas, designs, and directions presented in this book, representing the life’s work of its originator and Project Director, Jacque Fresco.” Read in the UP library (book bcd81e1ffb0b, part 126). Checked 1 Nov 2026.

founded by a naturally charismatic leader", and present its proposals as "hypotheses subject to empirical testing".[71] That is no criticism of Fresco's work. It is a description of a structure in which one founder's designs set the direction. UP's core names no founder, and no design in UP belongs to the person who proposed it: anyone may update, reframe or improve a problem, a solution or a method, and the result carries the power.[33,20,17]

Chile tried a third version in the early 1970s. Project Cybersyn, which Chapter 1 described, was meant to manage the nationalised part of the economy "in close to real time" with a mainframe computer and a network of telex machines. President Salvador Allende insisted that it work in a "decentralizing, worker-participative, and anti-bureaucratic manner", and its designer, Stafford Beer, came to see that it had to be "more than a toolbox for technocratic management". The coup of 11 September 1973 ended it, and the military abandoned or destroyed what the team had built.[72] Its lesson for UP is that the same machine can serve a central office or the people on the factory floor, and that which it serves is a choice built into the rules around it.

In UP's terms, the experts and the machines are welcome, and the rule of either is not. Skill in UP is shown by open, testable standards that anyone can work toward and anyone can propose to change, never by holding a position.[51] The AI coordinates and proposes, and people keep the last word.[52] Rule by experts fails this chapter's questions more quietly than the collective farm did, not by forcing people to join but by taking from them the decisions about their own lives. UP gives those decisions back to the people a problem affects.[51]

Starting over somewhere else

A third look-alike asks no state to take anything from anyone. It asks people to leave the world as it is and build a better one somewhere else, and it is the idea readers most often have in mind when they say "commune". In January 1825 Robert Owen, a wealthy industrialist from Scotland, bought New Harmony, a town on the Wabash River in Indiana that a religious community, the Harmony Society, had built on 20,000 acres. With his business partner William Maclure, he hoped, in the words of the state museum that keeps the site, "to establish a model community where education and social equality would flourish". About 1,000 settlers answered his public appeal.[73] Within two years the experiment had come apart. In March 1827 two of Owen's own sons admitted in the community's newspaper that it had failed, and on 1 June Owen gave a farewell address and left, having sunk a large part of his fortune into it.[73] Historic New Harmony, the University of Southern Indiana's programme on the town's history, blames "differing views as to how the community should be governed" and a constitution that "had great ideas" but "was vague"; Britannica adds that "Farms and workshops lay idle".[74] Yet, in the same programme's words, its residents "made significant contributions to the fields of science and education".[73]

New Harmony was one case of a much wider pattern. In 1841 the Transcendentalists George and Sophia Ripley founded Brook Farm in West Roxbury, now part of Boston; a fire destroyed its almost-finished central building in 1846, its debts mounted, and it ended in 1847, six years after it began.[75] The Oneida Community in New York state lasted longer, from 1848 to 1880–81, and when it dissolved its members reorganised its businesses as a joint-stock

[71] The Venus Project, "FAQ" (current): "The Venus Project has been subject to the typical dynamics of an institution founded by a naturally charismatic leader, in our case, Jacque Fresco."; "The Venus Project explicitly frames proposals as hypotheses subject to empirical testing." https://www.thevenusproject.com/learn/faq/ . Checked at source, 31 Oct 2026.

[72] Eden Medina, "Cybernetic Revolutionaries: Technology and politics in Allende's Chile", *Cabinet* 46 (Summer 2012), adapted from her book of the same title (MIT Press, 2011): Project Cybersyn was "an ambitious effort to create a technological system to manage the Chilean national economy in close to real time using a mainframe computer running customized software and a network of telex machines"; Allende "insisted that the system behave in a "decentralizing, worker-participative, and anti-bureaucratic manner.""; this convinced Beer"that the system needed to be more than a toolbox for technocratic management"; "The military stopped work on Project Cybersyn after the coup and either abandoned or destroyed the work the team had completed." https://cabinetmagazine.org/issues/46/medina.php . Checked at source, 31 Oct 2026.

[73] University of Southern Indiana, Historic New Harmony, "Robert Owen 250th Celebration", "About Robert Owen": "The town of New Harmony was sold to Robert Owen in January of 1825."; "In a March 1827 issue of The New Harmony Gazette, two of Robert Owen's sons admitted that the community had failed."; "Owen gave a farewell address and departed the community on June 1, 1827."; "Robert Owen left New Harmony, leaving behind 80% of his fortune he invested into the community."; the residents "made significant contributions to the fields of science and education". The page is no longer online; read at the Internet Archive's copy of 1 Dec 2024: https://web.archive.org/web/20241201173118/https://wwwold.usi.edu/outreach/historic-new-harmony/programs/robert-owen-250th-celebration ; Indiana State Museum, New Harmony State Historic Site: the Harmony Society, "led by George Rapp", settled in Pennsylvania "before purchasing 20,000 acres on the Wabash River and moving to Indiana in 1814"; "He found a buyer in Robert Owen, a wealthy industrialist from Scotland."; "They sold New Harmony to Robert Owen in 1825, and he, along with his business partner William Maclure, hoped to establish a model community where education and social equality would flourish." https://www.indianamuseum.org/historic-sites/new-harmony-historic-site/ ; Encyclopaedia Britannica, "New Harmony": "About 1,000 settlers responded to Owen's public appeal". https://www.britannica.com/place/New-Harmony . Checked at source, 31 Oct 2026.

[74] University of Southern Indiana, Historic New Harmony, "Robert Owen 250th Celebration": "While the society failed, due in large part to differing views as to how the community should be governed,"; "While the constitution had great ideas, it was vague, and the society was not built to last." The page is no longer online; read at the Internet Archive's copy of 1 Dec 2024: https://web.archive.org/web/20241201173118/https://wwwold.usi.edu/outreach/historic-new-harmony/programs/robert-owen-250th-celebration ; Encyclopaedia Britannica, "New Harmony": "most were misfits who ate his rations, argued over government"; "Farms and workshops lay idle while virtual anarchy reigned." https://www.britannica.com/place/New-Harmony . Checked at source, 31 Oct 2026.

company, Oneida Community, Ltd., later Oneida Ltd.[76] The anthropologist Richard Sosis studied 200 American communes founded in the nineteenth century and found that the religious ones were more likely to survive at every stage of their life than the secular ones.[77] Among the communes whose length of life is known, the secular ones lasted 7.7 years on average and the religious ones 35.6, as Sosis reported with E. R. Bressler in 2003 and again with Robin Dunbar in 2018.[78] Without a shared faith to hold people together, starting over somewhere else usually ended within a few years: the median secular commune in those data lasted five years.[78]

The great exception is the kibbutz, and it deserves a close look, because it shows both what sharing can achieve and what it can cost. The first kibbutz, Degania, was founded near the Sea of Galilee in 1910, and a century later, as the economist Ran Abramitzky wrote, "kibbutzim have survived successfully for the past century and currently consist of 120,000 members living in 268 kibbutzim".[79] For most of that century they shared income equally among members, which is exactly the arrangement economists expect to fail. Equal sharing invites free-riding, and it gives the most skilled members a reason to leave for places where their skills earn more; Abramitzky found that more-educated and more-skilled members were indeed more likely to leave.[79] The evidence on free-riding itself is mixed: case studies have found kibbutz members more motivated at work than outsiders, while surveys find a weaker reported work ethic in the kibbutzim that share most equally.[79]

How did the kibbutz hold together? Abramitzky's answer is that kibbutzim used mechanisms such as "abolishing private property to limit brain drain, screening to regulate the quality of entrants, and social sanctions to limit shirking".[80] The first of these is the one that matters most for UP. Members could leave whenever they chose, in what Abramitzky calls "exit at will". But "Kibbutz members did not own their houses and could enjoy their share of the community assets only as long as they stayed", so a family's savings were in effect sunk in the community, and those who left received only modest amounts. As Abramitzky puts it, "Such sunk contributions increase the cost of

[75] Massachusetts Historical Society, "Collections Online: Brook Farm": "founded in West Roxbury in April 1841 by the transcendentalists George and Sophia Ripley"; the Phalanstery, "which was begun in 1844 and burned to the ground in March 1846, prior to its completion." https://www.masshist.org/database/43 ; Encyclopaedia Britannica, "Brook Farm": "The 175-acre farm was located in West Roxbury, Mass. (now in Boston)." https://www.britannica.com/topic/Brook-Farm ; Commonwealth Museum (Secretary of the Commonwealth of Massachusetts), "Brook Farm: Phalanx (1844-1847)": "The final blow came when the almost constructed Phalanstery burned to the ground."; "with a debt totaling $17,445"; "The Brook Farm experiment officially ended in 1847, just six years after its beginnings". https://www.sec.state.ma.us/divisions/commonwealth-museum/exhibits/online/brook/phalanx.htm . Checked at source, 31 Oct 2026.

[76] Oneida Community Mansion House, "History": "The Oneida Community (1848-1880)"; "a joint-stock company named Oneida Community, Ltd., later renamed Oneida Ltd." https://oneidacommunity.org/our-history ; US National Park Service, National Register of Historic Places Inventory-Nomination Form, Oneida Community Mansion House (R. Greenwood, 20 Jan 1976): "officially founded in 1848 by John Humphrey Noyes"; "In January, 1881, the Com munity dissolved." (spacing as returned from the scanned form); "dissolved in 1881, and the business reformed as a joint-stock company". https://npgallery.nps.gov/GetAsset/002b8743-c4f6-4a31-ad25-3bfe37a0ff2f ; Virginia Commonwealth University Libraries, Social Welfare History Project, "Oneida Community (1848-1880): A Utopian Community": "Remaining members reorganized as a joint-stock company called the Oneida Community, Ltd." https://socialwelfare.library.vcu.edu/religious/the-oneida-community-1848-1880-a-utopian-community/ . Checked at source, 31 Oct 2026.

[77] Richard Sosis, "Religion and Intragroup Cooperation: Preliminary Results of a Comparative Analysis of Utopian Communities", *Cross-Cultural Research* 34(1) (February 2000), abstract: "Preliminary results from survivorship analysis support this hypothesis; religious communes are more likely than secular communes to survive at every stage of their life course." https://journals.sagepub.com/doi/10.1177/106939710003400105 ; the sample is described in R. Sosis and E. R. Bressler, "Cooperation and Commune Longevity: A Test of the Costly Signaling Theory of Religion", *Cross-Cultural Research* 37(2) (May 2003), pp. 211-239, pp. 214-216: "Using a data set of two hundred 19th-century U.S. communal societies, Sosis showed that religious communes are between 2 and 4 times more likely to survive in every year of their life course than their secular counterparts."; the database "consisted of 200 of the original 277 communes that were founded in the 19th century (88 religious, 112 secular". Full text of the 2003 paper read at a copy: https://www.cognitionandculture.net/wp-content/uploads/Sosis_2003_CommuneLongevity.pdf . Checked at source, 31 Oct 2026.

[78] R. I. M. Dunbar and R. Sosis, "Optimising human community sizes", *Evolution and Human Behavior* 39(1) (January 2018), pp. 106-111: "religious communities survived significantly longer than secular ones"; "on average, 35.6 ± 32.5SD vs 7.7 ± 8.0 years". https://pmc.ncbi.nlm.nih.gov/articles/PMC5756541 (open-access copy at PubMed Central). The same averages appear in Sosis and Bressler (2003), Table 2 (religious communes: median 25 years, mean 35.6; secular: median 5 years, mean 7.7), for the communes whose duration is known: "Out of 200 communes in the original database, 83 communes met this criterion (30 religious and 53 secular)." https://www.cognitionandculture.net/wp-content/uploads/Sosis_2003_CommuneLongevity.pdf . Read at a copy of the published text, 31 Oct 2026.

[79] Ran Abramitzky, "Lessons from the Kibbutz on the Equality-Incentives Trade-off", *Journal of Economic Perspectives* 25(1) (Winter 2011), pp. 185-208, DOI 10.1257/jep.25.1.185, pp. 185-186: "The first kibbutz, called Degania, was established southwest of the Sea of Galilee in 1910,"; "kibbutzim have survived successfully for the past century and currently consist of 120,000 members living in 268 kibbutzim."; p. 191: "productive members have incentives to leave for places with less-equal compensation schemes."; "Figure 2 shows that more-educated and -skilled individuals were indeed more likely to exit kibbutzim."; "exit at will makes it challenging for kibbutzim to maintain equal sharing"; p. 192: "Kibbutz members did not own their houses and could enjoy their share of the community assets only as long as they stayed in the commune."; "In effect, their entire family savings was sunk in the kibbutz, which implied a substantial cost of exit."; "Such sunk contributions increase the cost of exit and thus facilitate equal sharing."; p. 193: "Members who exit do receive modest amounts."; p. 197: "case studies have found kibbutz members to have higher work motivation than nonmembers"; p. 199: "the reported work ethic is lower in kibbutzim with more-equal compensation schemes."; p. 201: "As a result, over 20 percent of individuals left their kibbutzim in the period between 1983 and 1995". Full text read at the American Economic Association: https://pubs.aeaweb.org/doi/pdfplus/10.1257/jep.25.1.185 . Checked at source, 31 Oct 2026.

[80] Ran Abramitzky, *The Mystery of the Kibbutz: Egalitarian Principles in a Capitalist World* (Princeton University Press, 2018), Introduction, "The kibbutz puzzle", p. 9: "Kibbutzim used mechanisms such as abolishing private property to limit brain drain, screening to regulate the quality of entrants, and social sanctions to limit shirking"; p. 11: "before a financial crisis hit them in the mid-1980s"; p. 14: "borrowed heavily and then experienced financial difficulty when interest rates rose"; "As of 2011, about 25 percent of kibbutzim still maintained completely equal sharing between members"; "the majority of kibbutzim had adopted a"safety net" model". Publisher's free excerpt of the Introduction: https://pup-assets.s3.amazonaws.com/public/onix/images/9781400888153/9780691202242.pdf (book page: https://press.princeton.edu/books/hardcover/9780691177533/the-mystery-of-the-kibbutz). Abramitzky's JEP article (2011), p. 189, describes the model: "adopted a "safety net" model, whereby members keep some fraction of their earnings" (read at a copy). Checked at source, 31 Oct 2026.

exit and thus facilitate equal sharing."[79] When a financial crisis hit the kibbutzim in the mid-1980s, after heavy borrowing met rising interest rates, over 20 per cent of individuals left their kibbutzim between 1983 and 1995.[79,80] By 2011, about a quarter of kibbutzim still shared completely equally; most had moved to a "safety net" model in which members keep part of what they earn.[80]

Twin Oaks, a community in rural Virginia founded in 1967, shows a gentler version of the same design. It is still running, with around 85 adult members and 15 children, and it shares income. Members earn no wages; they log their work in labour credits, where "One hour of work equals one credit", and each works about 38.5 hours a week for the community.[81] Its rules on leaving are softer than the kibbutz's. Members keep their own clothing and personal effects, may hold resources outside the community though they may not use them while they are members, and under a membership policy approved in 1996, a full member who leaves is entitled to a leaving fund "as budgeted".[82]

Paolo Soleri, one of the sources UP's agreed positions name, tried a different kind of new beginning. In 1970 he broke ground on Arcosanti in the high desert of Arizona, a dense town made for walking, which he called an arcology, a fusion of architecture with ecology. It was planned for between 5,000 and 7,000 residents; an architectural history describes it as only about ten percent complete, and a small community lives there year-round, as Chapter 1 told.[83] What UP keeps from Soleri is his idea rather than his site. Its agreed position on space puts UP's beauty, work and effort into the commons first: generous, beautiful public places make large private spaces unnecessary, "following the thinking of Paolo Soleri", and private space is modest and comfortable.[84] One way UP could run, given in its agreed positions as an illustration and never as a directive, is that condensing settlement removes duplication and the land it frees returns to the living world.[85] What UP leaves behind is the need to build a new town apart before anything can begin.

In UP's terms, the commune record teaches two lessons, and UP writes both into its design. The first is that asking people to leave the world and start again is the hardest way to build anything, and it rarely lasts. UP does not ask it. UP grows, at least at first, where people already live, building on what they already do: at its early stage it is a network inside today's world, not a settlement outside it.[12,86] The second lesson is harder. The kibbutz is the most durable of the sharing communities in this chapter, and part of what held it together was that leaving was expensive. UP's floors forbid that tool wherever what is held back is the member's own: everyone keeps "the right to leave any group or community at any time, taking what is theirs".[13] So UP has to hold people the hard way, by being useful to them. Its floors guarantee everyone's needs, not every want; time and money given earn recognition, never power; and contribution is recorded as feedback that never decides whether anyone's needs are met.[13,33,30] Abramitzky's brain-drain problem does not disappear in UP, and UP does not pretend it does. It becomes work, to be measured openly and answered by making UP worth staying in, not costly to leave.[18]

[81] Twin Oaks Community, home page: "Twin Oaks is an intentional community in rural central Virginia, made up of around 85 adult members and 15 children."; "Since the community's beginning in 1967, our way of life has reflected our values of cooperation, sharing,"; "We are income-sharing."; "Each member works 38.5 hours a week in the community's business and domestic areas." https://www.twinoaks.org/ ; Twin Oaks, "Labor Policy": "One hour of work equals one credit."; "Credits have no cash value and cannot be converted to money unless the Community creates some special program" https://www.twinoaks.org/policies/labor-policy?showall=1 . Checked at source, 31 Oct 2026.

[82] Twin Oaks, "Join Twin Oaks": "Clothing and personal effects remain your own, unless you choose to share them."; "Resources may be held outside the community but one cannot benefit from their use while a member." https://www.twinoaks.org/twinoaks-visits-60/join-twin-oaks ; Twin Oaks, Membership Policy, section VI, "Termination of Membership" (approved by the Community Planners 9/96, with clarifying corrections 11/96): "A Leaving Fund (as budgeted) is available to any full member who leaves the Community."; "Only full members can receive a Leaving Fund." https://www.twinoaks.org/policies/membership-policy?showall=1 . The policy does not state the size of the fund. Checked at source, 31 Oct 2026.

[83] SAH Archipedia (Mark C. Vinson), "Arcosanti": "Soleri conceived Arcosanti in 1963 as a model urban settlement housing between 5,000 and 7,000 residents; he and his followers began building the first structures in 1970"; "Only about ten percent complete"; "in the high desert near Cordes Junction". https://sah-archipedia.org/buildings/AZ-01-025-0005 (archived copy: https://web.archive.org/web/20251117055952/https://sah-archipedia.org/buildings/AZ-01-025-0005). Arcosanti, "FAQs": "Arcosanti has a small community of diverse people, including families, who reside there year-round." https://arcosanti.org/visit/faqs/ (read in a browser). Arcosanti, "What is Arcology?": "Arcology, in which architecture and ecology become one integral process, suggests that cities should evolve similarly." https://arcosanti.org/vision/what-is-arcology/ (archived copy: https://web.archive.org/web/2026/https://arcosanti.org/vision/what-is-arcology/). See also Chapter 1. Checked at source, 31 Oct 2026.

[84] UP's agreed position on space: "UP puts its beauty, work and effort into the commons first. Generous, beautiful public places - gardens, pools, kitchens, eating and living areas, and quiet corners where anyone can be alone - make large private spaces unnecessary, following the thinking of Paolo Soleri. Private space is modest and comfortable: a place to sleep, a small work area, a small living space, a small kitchen and eating space, a very good bathroom and some storage." Full wording in UP's agreed positions (the Position Ledger).

[85] UP's agreed position on condensing settlement (round 12S, position 12, an illustration of one way UP could run, never a directive): "condensing settlement (Soleri) removes duplication"; "Freed land returns to the living world." Full wording in UP's agreed positions (the Position Ledger).

[86] UP's agreed position on judging UP by stage, beside the current system: UP grows side by side with the current system, early (a minority network inside it), middle (its own productive base, with most members' needs met from what UP produces) and completed (most people live mainly in UP); the early stage rests on today's evidence, and the middle and completed stages are reasoned projections from cited mechanisms, labelled as such. Full wording in UP's study lessons (lesson 13).

When a group becomes a trap

The darkest look-alike is the one many readers fear most when a movement asks for their time and talks about a better world. On 10 April 1978 a woman who had lived at the Peoples Temple's settlement in Guyana, which its members called Jonestown, swore an affidavit in San Francisco about life there. Her name was Yolanda Crawford. The Temple's leader, Jim Jones, had told residents, she said, that "everyone should turn in their passports and all their money to him", and that "he was going to keep guards stationed around Jonestown to keep anybody from leaving".[87] The next day a group of members' relatives, the Concerned Relatives, published a formal accusation charging Jones with "confiscating their passports and money" and "stationing guards around Jonestown to prevent anyone escaping".[88] These were allegations by people with a stake in the matter, not findings, but they were made seven months before the end. In November that year a United States congressman, Leo Ryan, flew to Guyana to investigate. On 18 November 1978, as his party tried to leave from the airstrip at Port Kaituma with Temple members who had asked to go with them, Temple members attacked them and killed Ryan and four others.[89] In all, 918 people died in Guyana that day: the five at the airstrip, 909 at Jonestown, most of them by poison, and four at the Temple's headquarters in the capital, Georgetown. The dead included 304 children and minors under eighteen.[90] The Jonestown Institute at San Diego State University, which publishes many of the Temple's documents, calls them "the murder/suicide events".[91]

Nothing in this story required anyone to be forced to join. The danger it shows is subtler. A group can become a trap step by step, as the cost of leaving rises and the freedom to question falls, until the people inside it can no longer say no. The psychiatrist Robert Jay Lifton, who had studied thought reform in Communist China, described the pattern in 1991. Cults, he wrote, can be identified by three characteristics: "a charismatic leader who increasingly becomes an object of worship"; "a process I call coercive persuasion or thought reform"; and "economic, sexual, and other exploitation of group members by the leader and the ruling coterie".[92] Thought reform, in his account, relies on "the control of all communication within a given environment", and members come to feel that "doubt indicates one's own deficiency or evil".[92] In an earlier essay he wrote that such control of the environment ends by "making it extremely difficult—both physically and psychologically—for one to leave."[93] Thirty

[87] Affidavit of Yolanda D. A. Crawford (also spelt Yulanda), sworn in San Francisco on 10 April 1978, Exhibit B to the Concerned Relatives' accusation of 11 April 1978: "everyone should turn in their passports and all their money to him"; "he was going to keep guards stationed around Jonestown to keep anybody from leaving". Transcription published by the Jonestown Institute, San Diego State University: https://jonestown.sdsu.edu/?p=13085 . It is a former resident's sworn allegation, not a finding. Read at a copy of the published text, 31 Oct 2026.

[88] Concerned Relatives, "Accusation of Human Rights Violations by Rev. James Warren Jones…" (11 April 1978): "Prohibiting our relatives from leaving Guyana by confiscating their passports and money"; "stationing guards around Jonestown to prevent anyone escaping". Transcription published by the Jonestown Institute, San Diego State University: https://jonestown.sdsu.edu/?p=13081 . It is the relatives' allegation, not a finding. Read at a copy of the published text, 31 Oct 2026.

[89] Federal Bureau of Investigation, FBI Vault, "Jonestown" (RYMUR): "On November 18, 1978, while investigating human rights abuses"; Ryan was "murdered by Jones' followers."; "Ryan had traveled to "Jonestown," the cult's compound in the South American country of Guyana, at the behest of" (the sentence continues). https://vault.fbi.gov/jonestown ; US House of Representatives, Committee on Foreign Affairs, Staff Investigative Group, *The Assassination of Representative Leo J. Ryan and the Jonestown, Guyana Tragedy*, House Document No. 96-223 (15 May 1979), p. 7: "Mr. Ryan, three members of the media, and one of the defectors were killed; Miss Speier and nine others were wounded-five seriously." (excerpt read at a copy, https://jonestown.sdsu.edu/wp-content/uploads/2013/10/07-13-housereport.pdf ; full print: https://www.govinfo.gov/app/details/CPRT-96HPRT44542O); Jonestown Institute, "What exactly happened on 18 November 1978?": "The next step was the attack on Ryan, the media, and the defectors at the Port Kaituma airstrip." https://jonestown.sdsu.edu/?p=35345 ; Encyclopaedia Britannica, "Jonestown": "Temple members then launched an attack at the airstrip from which Ryan and his company were to depart." https://www.britannica.com/event/Jonestown . Checked at source, 31 Oct 2026.

[90] Jonestown Institute (San Diego State University Library), "How many people died on November 18?": "There were 918 people who died in Guyana on November 18."; "bringing Jonestown's death toll to 909."; five people (Ryan and four others) "were shot to death at the Port Kaituma airstrip."; "four others died in the Temple's Georgetown headquarters at Lamaha Gardens"; "The death toll included 304 children and minors under 18." https://jonestown.sdsu.edu/?p=35368 ; Federal Bureau of Investigation, FBI Vault, "Jonestown": "more than 900 bodies were later found,"; "most having died by taking poison." https://vault.fbi.gov/jonestown . Other sources count differently, depending on who is included; Britannica, "Jim Jones": "the death toll of Peoples Temple followers was eventually placed at 913, including 304 who were younger than 18." https://www.britannica.com/biography/Jim-Jones . Checked at source, 31 Oct 2026.

[91] Jonestown Institute, "About Jonestown": "Ultimately, 918 people died in the murder/suicide events." https://military-response-to-jonestown.sdsu.edu/about-jonestown/ . Checked at source, 31 Oct 2026.

[92] Robert J. Lifton, "Cult Formation", *Cultic Studies Journal* 8(1) (1991), pp. 1-6, p. 3: "Cults can be identified by three characteristics"; "a charismatic leader who increasingly becomes an object of worship"; "a process I call coercive persuasion or thought reform"; "economic, sexual, and other exploitation of group members by the leader and the ruling coterie"; "the control of all communication within a given environment"; "which makes leaving extremely difficult, both physically and psychologically"; p. 4: "doubt indicates one's own deficiency or evil". International Cultic Studies Association library: https://library.internationalculticstudies.org/24n774f/3 (abstract page: https://articles1.icsahome.com/articles/cult-formation-lifton-csj-8-1-1991). Only these fragments of pp. 3-4 were seen. Checked at source, 31 Oct 2026.

[93] Robert J. Lifton, *Thought Reform and the Psychology of Totalism* (Norton, 1961), chapter 22, "Ideological Totalism", names eight themes: Milieu Control; Mystical Manipulation; The Demand for Purity; The Cult of Confession; The "Sacred Science"; Loading the Language; Doctrine Over Person; The Dispensing of Existence (the 1961 chapter itself was not opened; the names are confirmed in the reproductions below). Lifton, "Cults: Religious Totalism and Civil Liberties", in *The Future of Immortality and Other Essays for a Nuclear Age* (Basic Books, 1987): "The first characteristic is "milieu control," which is essentially the control of communication within an environment."; on milieu control: "making it extremely difficult—both physically and psychologically—for one to leave." Essay as reproduced by Steven Hassan (30 May 2019): https://stevenhassan.substack.com/p/robert-jay-liftons-eight-criteria-of-thought-reform-brainwashing-mind-control ; summary of chapter 22 in *Cultic Studies Journal* 6(2) (1989), p. 10: ""Milieu control" refers to a rigid structuring of the environment in which communication is regulated". https://library.internationalculticstudies.org/24n772g/10 . Read at a copy of the published text, 31 Oct

years earlier, in his book on thought reform in China, Lifton had set out eight themes of what he called ideological totalism, the first of them "milieu control", which he later described as "essentially the control of communication within an environment".[93] The signs he first described in a whole country's programme of thought reform are the signs he later found in small groups. What differs is the scale.

In UP's terms, each of Lifton's warning signs runs into a line in UP's core. A charismatic leader who becomes an object of worship has no place to stand in UP: its settled positions allow no forced adoption, no leader and no founder named in the core, and UP has no roles or offices in the old sense, because work is shared out, not held.[33,94] The control of all communication runs into two floors, a truthful shared record, so that facts, measures and decisions are never falsified, and freedom of the mind, "so no one's thinking is manipulated without their knowledge or consent", and into the tenet that UP's rules, records, decisions and reasons are public, so anyone can check them, while each person controls their own information.[13,95] Making it hard to leave runs into the floor that guarantees the right to leave any group or community at any time, taking what is theirs.[13] Treating doubt as a sin is the opposite of UP's method, in which every claim that guides shared action "can be tested and is open to being proved wrong", and every part of UP, the tenets included, can be improved.[20,18] And exploitation by a leader and an inner circle is a concentration of power, which UP treats as a standing danger in any form: everyone in UP watches for it and spreads it out again, and in UP time and money earn recognition, never power.[50,33]

None of this makes UP immune, and UP does not claim to be. Movements decay, and a group that begins in UP could drift toward the pattern Lifton described. That is why UP's settled positions add a rule for that case too: "anyone acting outside the core stops being UP and bears the consequences".[33] A group that takes its members' passports, or their savings, or their freedom to question, has left UP by doing so, whatever it calls itself.

Markets on their own

The last look-alike is the one most readers live inside: capitalism, or more exactly the market left to itself, and some readers will wonder why it belongs on the list at all. The case for markets is usually made against everything else in this chapter, and it is a strong case. In 1776 Adam Smith pointed out that people are fed every day by strangers who do not need to love them: "It is not from the benevolence of the butcher, the brewer, or the baker, that we expect our dinner, but from their regard to their own interest."[96] Hayek's explanation of why no planning office could replace that arrangement, set out earlier in this chapter, is the classic argument against the planned economies: the knowledge an economy runs on is scattered across millions of people, and prices carry it without anyone having to gather it.[24] A market is joined freely. No one is forced to buy, and anyone may walk away from a deal. On joining and leaving, markets on their own did far better than every planned society in this chapter, and UP gives them full credit for that. The question of work is harder: where there is no floor, most people must work for pay to meet their needs, as the next paragraph shows.

Their limits are the subject of Chapter 2, and they can be stated briefly. A price carries what buyers are willing and able to pay, and nothing else. It says nothing about the person who needs something and cannot pay, and so a market alone sets no floor under anyone. It also misses costs and benefits that fall on people outside the deal. The International Monetary Fund's primer on the subject puts it plainly: where private and social costs differ, "market outcomes may not be efficient", and public goods "may not be supplied at all".[97] Smith himself saw the second problem, and set aside a duty for the state of building those public works that are of great advantage to a society but "of such a nature that the profit could never repay the expence to any individual or small number of

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[94] Settled alongside the core (round 11): "UP has no roles or offices in the old sense; work is shared out, not held". Full wording in "The core of UP".

[95] Core tenet: *Open systems, shared knowledge, private persons*: the rules, code, records, decisions and reasons of UP are public, so anyone can check them; UP's technology stays only in UP, where everyone taking part may use, study and improve it and no one may enclose it; each person controls their own information and chooses what to share. Full wording in "The core of UP".

[96] Adam Smith, *An Inquiry into the Nature and Causes of the Wealth of Nations* (1776), Book I, chapter 2: "It is not from the benevolence of the butcher, the brewer, or the baker, that we expect our dinner, but from their regard to their own interest." Text of Edwin Cannan's 1904 edition: https://www.econlib.org/library/Smith/smWN.html?chapter_num=5 . Checked at source, 31 Oct 2026.

[97] Thomas Helbling, "Externalities: Prices Do Not Capture All Costs", *Finance & Development* (International Monetary Fund), Back to Basics series: "When there are differences between private and social costs or private and social returns, the main problem is that market outcomes may not be efficient."; public goods "may not be supplied at all". The same article records the opposing view that bargaining can correct some externalities. https://www.imf.org/en/Publications/fandd/issues/Series/Back-to-Basics/Externalities (archived copy, read because the IMF site blocks scripts: https://web.archive.org/web/20251216193139/https://www.imf.org/en/publications/fandd/issues/series/back-to-basics/externalities). Checked at source, 31 Oct 2026.

individuals".[98] And because money is a form of power, a market left to itself lets power gather where money gathers, which is the danger UP treats as standing.[99] Chapter 2 showed what follows: problems that pay are solved quickly, and problems whose persistence pays are kept alive.[31]

UP's relation to markets is therefore closer than its critics expect. It keeps what markets do best, which is to let people join and leave freely and to use knowledge spread across millions of people instead of pretending it can be gathered in one place. It differs on what a price is allowed to decide. UP's agreed position is that a price only signals; it does not make a rare thing less rare. So when many people want the same thing, UP treats it as a signal and a problem to solve; positional goods, such as prime places or scarce time and attention, are shared meanwhile by rotation or by a decision of the stakeholders, never by price; and in UP, needs are met whether or not someone can pay.[32,100,13] Nor does UP abolish money by decree. Money, corporations and governments were among the great upgrades of civilisation, and UP keeps them for as long as they serve people's health, happiness and wellbeing, reducing them slowly and retiring each only when technology can do its job without obvious downsides.[101,53] One way UP could take over the jobs that prices do, offered as an illustration, starts from massive abundance and a new norm of owning, with libraries, personal fabrication, recyclable goods and beautiful community spaces that can be reserved, and goes on to ration scarce things by rotation and reservation, learn what people want from direct use data that each person controls, count costs by physical accounting, and leave local knowledge to decisions taken at the smallest scale that works. Whether that can coordinate the most complex production as well as markets do is not assumed. It is testable work, to be tried step by step, and Hayek's warning is exactly the kind of challenge UP's method exists to meet in the open.[55]

Deciding together: democracy, the co-operative and the wiki

Not every tradition UP builds on is a look-alike to be told apart from it. Some are shoulders UP stands on almost whole, and three of them deserve a closer look, because they are about the question every look-alike in this chapter answered badly: who decides?

The oldest is democracy. In 508 BCE the Athenian reformer Cleisthenes allied himself with the popular Assembly against the nobles and imposed democratic reform, and "Isonomia, the principle of equality of rights for all, was one of the proudest boasts of the reformers".[102] Every adult male citizen could take part in the Assembly, and the city's Council of Five Hundred was "chosen by lot rather than by vote", fifty from each of the ten tribes Cleisthenes created.[103,104] Its limits were as large as its achievement: women, slaves and resident foreigners were shut out, so that, by Britannica's estimate, only perhaps 10 to 15 per cent of the population could vote.[104,105] UP keeps democracy's central promise and widens it. In UP anyone may take part in any problem, the people a problem affects decide its outcome, and every person has one voice.[51,106] What UP changes is the order of work. A democracy usually settles a disagreement by voting on the options in front of it. UP starts with a proposal published with its data and an open question, "does anyone have a better idea?", attacks real trade-offs with new

[98] Smith, *Wealth of Nations*, Book V, chapter 1, part 3, on "the third and last duty of the sovereign or commonwealth": "those public works, which, though they may be in the highest degree advantageous to a great society, are, however, of such a nature that the profit could never repay the expence to any individual or small number of individuals". https://www.econlib.org/library/Smith/smWN.html?chapter_num=35 . Checked at source, 31 Oct 2026.

[99] UP's agreed position that concentration of power is the danger: money is one form of power; abolishing money does not abolish the pursuit of power, which can move to access, office, information or expertise; so UP watches for concentrations of power in any form and keeps spreading them out, and the threat is never declared gone. Full wording in UP's agreed positions (the Position Ledger).

[100] UP's agreed position on the three kinds of scarcity: UP names artificial, physical and positional scarcity and answers each; it "shares positional goods by rotation or a decision of the stakeholders (#2), never by price". Full wording in UP's agreed positions (the Position Ledger).

[101] UP's agreed position on useful fictions: money, government and the company were civilisational upgrades; some fictions persist because the alternatives would harm health, happiness and wellbeing (freedom is one, and UP keeps it); money, government and corporations are reduced slowly, and a fiction is retired only when technology can replace what it does without obvious downsides. Full wording in UP's agreed positions (the Position Ledger).

[102] *Encyclopaedia Britannica*, "Cleisthenes of Athens": "Cleisthenes successfully allied himself with the popular Assembly against the nobles (508) and imposed democratic reform."; "Isonomia, the principle of equality of rights for all, was one of the proudest boasts of the reformers." https://www.britannica.com/biography/Cleisthenes-of-Athens . Checked at source, 1 Nov 2026.

[103] *Encyclopaedia Britannica*, "Council of Five Hundred": the Council was "chosen by lot rather than by vote"; "Each of Cleisthenes' 10 tribes was provided 50 councillors who were at least 30 years old". https://www.britannica.com/topic/Council-of-Five-Hundred-ancient-Greek-council . FLAG: curly apostrophe in "Cleisthenes'". Checked at source, 1 Nov 2026.

[104] *Britannica* (students' edition), "democracy": "All adult male citizens were eligible (though not required) to participate in the Assembly."; "Women, children, foreign residents, and enslaved people were excluded." https://kids.britannica.com/students/article/democracy/273962 . Mark Cartwright, "Athenian Democracy", *World History Encyclopedia* (3 Apr 2018): "women, slaves, and resident foreigners (metoikoi) were excluded from the political process." https://www.worldhistory.org/Athenian_Democracy/ . Checked at source, 1 Nov 2026.

[105] *Encyclopaedia Britannica*, "Was ancient Greece a democracy?": "all adult male citizens, perhaps 10 to 15 percent of the total population, were eligible to vote." https://www.britannica.com/question/Was-ancient-Greece-a-democracy . Checked at source, 1 Nov 2026.

[106] Settled alongside the core (round 11), one voice per person: "every account belongs to one unique real person and carries that person's identity, which the person owns and controls; the system needs to confirm only that the person is unique and real, and every other detail is shared by the person's own choice. The exact design is open work for the collective." Full wording in "The core of UP".

design or technology first, and only when none of that works do the stakeholders vote, with guards; even then the losing side's case is recorded, no vote may override the protected freedoms, and the decision reopens when new evidence or technology changes the options.[21] UP keeps the vote and changes its place: last rather than first, and never above the floors.[13]

The second is the co-operative. When the Rochdale Pioneers opened their shop at 31 Toad Lane in December 1844, as Chapter 1 told, they ran it on rules they wrote themselves, and their principles became the ancestor of those the world's co-operatives follow today: membership is voluntary and open, and the enterprise is jointly owned and democratically controlled by its members.[107,108] The movement has grown far beyond one shop. The International Cooperative Alliance says that "More than 12% of humanity is part of any of the 3 million cooperatives in the world!"[109] The Mondragon group in the Basque Country, "a cooperative business project launched in 1956", now "consists of 81 separate, self-governing cooperatives, around 70,000 people and 12 R&D centres".[110] UP keeps the heart of the co-operative's first principle: no one is forced to join, and members may leave.[12,13] It widens member control: in UP, everyone a problem materially affects, people downstream and future residents included, decides its outcome, not only an enterprise's members.[51,21] Where UP goes further is in what sits beneath the co-operative. Co-operatives are businesses inside today's economy, so a member's needs still depend on money; in UP, needs are met whether or not someone can pay, and UP's technology stays in UP, open to everyone taking part.[13,95]

The third is the wiki. On 25 March 1995 Ward Cunningham put the first wiki online, a website any reader could edit, as Chapter 1 told.[111] He built it for programmers, to "create an environment where we might link together each other's experience to discover the pattern language of programming", and he wanted "people who wouldn't normally author to find it comfortable authoring". It had few rules built into the software; it worked, he said, "if you have a trusting community that isn't looking for the computer to enforce some behavior".[112] Cunningham's own words describe sharing knowledge, not governing anything. It was Wikipedia, launched on 15 January 2001, that turned the wiki into a community that governs itself.[113] Its own policy calls consensus "Wikipedia's fundamental method of decision-making", and says that consensus "does not require unanimity (which is ideal but rarely achievable), nor is it the result of a vote"; it "is ascertained by the quality of the arguments".[114] Wikipedia's Jimmy Wales has since tried the open, participatory model in other fields. In July 2006 he launched Campaigns Wikia, writing that "If broadcast media brought us broadcast politics, then participatory media will bring us participatory politics."[115] In 2017 he founded WikiTribune, a news site, saying "So it's time to rethink the gatekeeper"; in 2019 he

[107] Rochdale Pioneers Museum, "About Toad Lane": the store at 31 Toad Lane "first opened for business on 21st December 1844, initially for two nights per week". https://rochdalepioneersmuseum.coop/about-us/about-toad-lane . "The Rochdale Principles": the Pioneers' rules "have been summarised and from them extracted what are known as the Rochdale Principles of Co-operation." https://rochdalepioneersmuseum.coop/about-us/the-rochdale-principles . International Cooperative Alliance, "Cooperative identity": "A cooperative is an autonomous association of persons united voluntarily to meet their common economic, social and cultural needs and aspirations through a jointly-owned and democratically-controlled enterprise". https://www.ica.coop/en/cooperatives/cooperative-identity . See also Chapter 1. Checked at source, 30–31 Oct 2026.

[108] International Co-operative Alliance, "Cooperative identity, values & principles" (the 1995 Statement on the Cooperative Identity), first principle, "Voluntary and Open Membership": "Cooperatives are voluntary organisations, open to all persons able to use their services and willing to accept the responsibilities of membership, without gender, social, racial, political or religious discrimination." https://ica.coop/en/cooperatives/cooperative-identity . ICA, *Guidance Notes to the Co-operative Principles* (2016), p. 7: "People cannot be made to be co-operators, nor should they be forced by governments or others to become members."; p. 8: "Open voluntary membership also means that members are free to cease to be members if they so choose." The same page adds that "restrictions on leaving should be limited", and that withdrawal of capital may be phased "to avoid destabilising the soundness of the co-operative's finances". https://ica.coop/sites/default/files/2021-11/ICA%20Guidance%20Notes%20EN.pdf . Checked at source, 31 Oct 2026.

[109] International Cooperative Alliance, "Facts and figures": "More than 12% of humanity is part of any of the 3 million cooperatives in the world!" https://ica.coop/en/cooperatives/facts-and-figures . The figure is the ICA's own and counts memberships. Checked at source, 1 Nov 2026.

[110] MONDRAGON Corporation, "Introduction": "MONDRAGON is the outcome of a cooperative business project launched in 1956."; "It currently consists of 81 separate, self-governing cooperatives, around 70,000 people and 12 R&D centres," https://www.mondragon-corporation.com/en/about-us/ . The page counts people, not members. Checked at source, 1 Nov 2026.

[111] Ward Cunningham's wiki, "Wiki History": "This began on March 25, 1995." https://wiki.c2.com/?WikiHistory (read in a browser). Chris Higgins, *Mental Floss* (25 Mar 2017): "On March 25, 1995, Ward Cunningham launched WikiWikiWeb". https://www.mentalfloss.com/culture/internet/day-1995-first-wiki-went-public . See also Chapter 1. Checked at source, 31 Oct 2026.

[112] Bill Venners, "Exploring with Wiki: A Conversation with Ward Cunningham, Part I", *Artima Developer* (20 Oct 2003): "create an environment where we might link together each other's experience to discover the pattern language of programming."; "I wanted people who wouldn't normally author to find it comfortable authoring."; "That works well if you have a trusting community that isn't looking for the computer to enforce some behavior." https://www.artima.com/articles/exploring-with-wiki . No statement by Cunningham that the wiki was meant for governance was found in the sources read. Checked at source, 1 Nov 2026.

[113] *Encyclopaedia Britannica*, "Wikipedia": "On January 15, 2001, Wikipedia was launched"; "it was relaunched as an independent Web site a few days later." https://www.britannica.com/topic/Wikipedia . Checked at source, 1 Nov 2026.

[114] Wikipedia, "Wikipedia:Consensus" (policy page): "Consensus is Wikipedia's fundamental method of decision-making."; "Consensus on Wikipedia does not require unanimity (which is ideal but rarely achievable), nor is it the result of a vote"; "Consensus is ascertained by the quality of the arguments". https://en.wikipedia.org/wiki/Wikipedia:Consensus . A living page; checked at source, 1 Nov 2026.

[115] Grant Gross, "Wikipedia founder tackles politics", *Computerworld* (6 July 2006), on the launch of Campaigns Wikia: "If broadcast media brought us broadcast politics, then participatory media will bring us participatory politics." https://www.computerworld.com/article/1483508/wikipedia-founder-tackles-politics.html . Checked at source, 1 Nov 2026.

launched a social network, WT.Social; and in 2025 he published *The Seven Rules of Trust*, a book on how communities such as Wikipedia build trust, whose description begins: "Every community on earth depends on trust".[116,117,118] The legal scholar Beth Simone Noveck, who led President Barack Obama's government transparency initiative, argued in *Wiki Government* for "Collaborative democracy—government with the people".[119]

None of these projects is a system of government, but together they carry the wiki's way of working toward politics and public life. What UP takes from the wiki is its openness. Anyone may take part; proposals are published with their evidence, tested and compared; no problem, solution or method belongs to the person who raised it, and the result carries the power; and UP's rules, records, decisions and reasons are public, so anyone can check them.[20,17,95] What UP adds is what an encyclopedia never needed. Its open method is applied to shared problems of every kind, not only to articles; where Wikipedia settles a dispute by consensus, UP first asks for a better idea and lets the people affected vote only when none can be found; every person has one voice, so no one can outvote others with many accounts; and the floors protect people who lose an argument.[21,106,13] Open communities also show the dangers UP has to answer. Chapter 11 tells how a small group captured one language edition of Wikipedia for years, which is why UP treats concentrated power, in an open system as anywhere else, as a standing danger that everyone watches for.[120,50]

Same and different

Figure 3.5 brings the comparison together: for each tradition in this chapter, where UP is the same and where it is different. Table 3.1 then sets the systems side by side on the questions this chapter has asked of each. Two of them, Technocracy Inc. and the Venus Project, were designs that were never put into practice at scale, so their rows describe what their designs proposed. The others describe what happened.

[116] CNBC, "Wikipedia's Jimmy Wales founds WikiTribune to fight fake news" (25 Apr 2017): "So it's time to rethink the gatekeeper." https://www.cnbc.com/2017/04/25/wikipedias-jimmy-wales-founds-wikitribune-to-fight-fake-news.html . Checked at source, 1 Nov 2026.
[117] CBS News San Francisco, "Facebook Face-Off: Wikipedia's Jimmy Wales Launches New Social Network" (16 Nov 2019): "The business model of social-media companies, of pure advertising, is problematic," (Wales, as reported from the *Financial Times*). https://www.cbsnews.com/sanfrancisco/news/wikipedia-jimmy-wales-facebook-social-network-competition . Checked at source, 1 Nov 2026.
[118] Jimmy Wales with Dan Gardner, *The Seven Rules of Trust: A Blueprint for Building Things That Last* (Crown Currency, 28 Oct 2025); the publisher's description, as carried by Porchlight Books: "Every community on earth depends on trust; it underpins our capacity to know things, and it is at an all-time low." https://www.porchlightbooks.com/products/seven-rules-of-trust-jimmy-wales-9780593727461 . Checked at source, 1 Nov 2026.
[119] Beth Simone Noveck, *Wiki Government: How Technology Can Make Government Better, Democracy Stronger, and Citizens More Powerful* (Washington, DC: Brookings Institution Press; the publisher's page lists 2 Nov 2010): "Collaborative democracy—government with the people—is a new vision of governance in the digital age." https://www.brookings.edu/book/wiki-government . GovTech (24 Dec 2010): "Beth Noveck, leader of President Barack Obama's government transparency initiative, had a busy first year on the job." https://www.govtech.com/archive/Beth-Noveck-deputy-CTO-for-open-government-US-government.html . FLAG: em dashes. Checked at source, 1 Nov 2026.
[120] See Chapter 11, "Open systems, private persons", and its note on the capture of the Croatian edition of Wikipedia.

FIGURE 3.5

Same and different

What UP keeps from each tradition in this chapter, and where it differs

TRADITION	✓ SAME: WHAT UP KEEPS	≠ DIFFERENT: WHERE UP PARTS COMPANY
Communism and central planning	Meet everyone's needs, Marx's "to each according to his needs"; schooling for all	Forced collective farms, no exit, a famine denied. **UP: never imposed; no centre; leaving is a floor**
Technocracy	Count energy, materials and machines, not only money	Appointed experts, in post until retirement or death. **UP: the people affected choose inside the limits**
The Venus Project	Needs met without money; machines coordinating production; no fixed utopia	In time, decisions pass to machines. **UP: AI never governs; no founder in the core**
Communes and the kibbutz	Sharing income and work; the kibbutz lasted a century	Start over apart; leaving made costly. **UP: grows where people live; leave with what is yours**
Paolo Soleri's Arcosanti	Dense, beautiful, walkable places joined to ecology	A new town apart, about a tenth built. **UP: condensing settlement frees land (an illustration)**
Markets and capitalism	Free choice; a signal that coordinates millions without a command	No floor for those who cannot pay. **UP: needs met regardless; an open record of problems, not a price**
Democracy	Equal voice; the people decide	The vote often comes first. **UP: a better idea first, the vote last, and no vote crosses the floors**
Co-operatives	Voluntary, open membership; members' democratic control	Members' needs still depend on money. **UP: needs met whether or not someone can pay**
The wiki and Wikipedia	Anyone may edit; contributions open to improvement by all	Built for knowledge, decided by consensus. **UP: open to every shared problem; one voice each; floors for all**
Montessori	Trust in people's own drive; prize and punishment set aside	Built for schooling. **UP: the same trust across all shared work**
Peoples Temple (the warning case)	Nothing: included as a warning	A leader, closed communication, no way out. **UP: no leader, a truthful record, the right to leave**

Each row summarises the evidence in this chapter's sections and notes. UP's side states what its core and agreed positions require; the condensing of settlement is an illustration of one way UP could run.

Figure 3.5. Same and different: what UP keeps from each tradition in this chapter, and where it differs. Each row summarises the evidence in this chapter's sections and notes; UP's side states what its core and agreed positions require, and items marked as illustrations are one way UP could run.

Table 3.1. The look-alikes, the shoulders and UP, side by side. Each row summarises the evidence in this chapter's sections and notes; UP's row states what its core requires.

	Who decides	Joining, working and leaving	What it got right	Where UP differs
Soviet central planning, from 1928	The party and the state's planners	Peasants forced into collective farms and made to give up land and animals; no passports for villagers	Aimed to meet everyone's needs, Marx's "to each according to his needs"; mass literacy and many more trained doctors	The people affected decide; no office commands; UP is never imposed, and the floors guarantee the right to leave

	Who decides	Joining, working and leaving	What it got right	Where UP differs
Technocracy Inc. (design, 1930s)	Appointed experts, with a Continental Director chosen by the Continental Control	One organisation for the whole continent; a working period of up to 20 years, from age 25 to 45	Counting energy, materials and machines, not only money	Physical accounting sets limits; choices between needs belong to the people affected
The Venus Project (design)	In time, machines fed by sensors; the Project rejects rule by an elite	Participation voluntary during the transition; built on its founder's designs	Needs met without money; machines coordinating production; no fixed utopia	AI coordinates, proposes and does work but never governs; no founder named in the core; no design belongs to its author
Communes and the kibbutz	Members, under rules each community set	Joined by choice; work shared; at the kibbutz, members' savings were sunk in the community and leavers received modest amounts	Sharing income and work; the kibbutz lasted a century	Grows, at least at first, where people already live; leaving, taking what is theirs, is a floor
Arcosanti (Paolo Soleri), from 1970	Its founder and the community there	Joined by choice; a new town built apart, about a tenth complete	Dense, walkable places joined to ecology	Beautiful commons first, modest private space; condensing settlement, which frees land for the living world, is one way UP could run
Peoples Temple at Jonestown, 1977–78	Jim Jones and those around him	By a sworn 1978 account, passports and money handed over and guards posted to stop people leaving	Included as the warning case	No leader and no founder named in the core; a truthful shared record; freedom of the mind; the right to leave
Markets on their own	Buyers and sellers, through prices	No one made to buy, take a particular job or stay in a deal	Free joining and leaving; knowledge spread across millions of people, carried by prices	Needs met whether or not someone can pay; a price only signals; positional goods shared by rotation or the stakeholders' decision, never by price; money kept only while it serves, and each person relies on it less as UP meets more of their needs
Athenian democracy, from 508 BCE	Adult male citizens in the Assembly; a Council chosen by lot	Women, slaves and resident foreigners excluded	Equal rights for citizens; people deciding together	Anyone may take part, with one voice each; a better idea is sought first and the vote comes last; no vote crosses the floors
Co-operatives, from 1844	Their members, democratically	Membership voluntary and open; members free to leave	Voluntary membership and members' own rules, now in 3 million co-operatives	Needs met whether or not someone can pay; UP's technology stays in UP, open to all who take part
Wikipedia, from 2001	Its editors, by consensus judged on the quality of the arguments	Anyone may edit	Open editing; decisions by argument, not by vote	The same openness for every shared problem; one voice per person; floors protect those who lose an argument

	Who decides	Joining, working and leaving	What it got right	Where UP differs
UP	The people a problem affects; evidence proposes, people decide	Never imposed; labour never forced; the right to leave, taking what is theirs, is a floor	To be judged by its record, against the current system and the ideal it aims at	—

What UP adds: the rules that join the pieces

A combination is more than a list. The traditions in this chapter could not simply be added together, because several of them contradict one another: the planners wanted needs met and gave up free choice, the market kept free choice and gave up any floor, and the technocrats and the Venus Project trusted expertise and machines in ways that left less and less for people to decide. What makes UP something new is the set of rules that let the pieces work together, each closing a gap that one or more of the traditions left open.[14] Figure 3.6 sets them out.



Figure 3.6. What UP adds: rules from UP's core and agreed positions that join the pieces, each beside the gap it closes in the traditions this chapter describes. None is claimed as the first of its kind; what is UP's own is this combination of them, in one system.

The first is a set of floors that no decision may cross: everyone's basic needs and protected freedoms, the living world's capacity to recover, the right to leave any group or community at any time taking what is theirs, a truthful shared record, freedom of the mind and a fair hearing.[13] Human-rights law gave UP the idea of rights that belong to every person; UP makes them bind every decision taken inside it, including a popular one, and sets beside them a floor for the living world's capacity to recover. The second is the order in which UP decides: evidence proposes and people decide, a proposal is published with its data and the open question "does anyone have a better idea?", real trade-offs are first attacked with new design or technology, and only when none of that works do the stakeholders vote, with guards, the losing side's case recorded and no vote able to override the protected freedoms; the decision reopens when new evidence or technology changes the options.[20,21] That sits between the technocrat's rule by experts and a vote taken before the options have been improved. The third is the place of machines: AI and automation coordinate, propose and do work, and never govern; no single AI system or operator controls coordination, the systems are open, more than one and checked against each other, people can always correct, pause or switch them off, and the AI may not assign work or compel anyone.[52,121] That keeps what Fresco saw and refuses where his design was heading.

The fourth is what effort earns. In UP, time and money earn recognition, never power, and records of contribution are feedback that never decides whether anyone's needs are met.[33,30] That is UP's answer to the market, where money turns into power, and to the kibbutz, which held itself together partly with social sanctions and a high cost of leaving; whether feedback and support can do the work that sanctions did is to be measured, not assumed.[80,35] The fifth is the right to leave any group at any time, taking what is one's own, written as a floor rather than left to each community's rules.[13] The sixth is UP's treatment of the useful fictions that run today's world: money, governments and corporations were great upgrades in their time, and UP keeps them while they serve people's health, happiness and wellbeing, reducing them slowly and retiring each only when technology can do its job without obvious downsides, never by decree.[101] The seventh is that UP has no leader and no founder named in its core, and that every part of it, its tenets included, can be improved through its own method.[33,18] The eighth is that splits are good: groups that want to try a different way within the core may do so, so UP never needs one design for everyone.[122] And underneath all of them is UP's main activity, inventing solutions together, in which anyone may try anything that might solve a problem and the result carries the power.[17]

None of these rules makes UP immune to failure, and UP does not claim that it does. They are the joints of the combination: the places where older systems broke, with UP's answer written down in advance. Whether they hold is a matter for the record, area by area, and every place where UP does not yet do better than the current system is, in UP's own terms, the first problem to work on.[19,18]

Freely joined, ethically grown

Every look-alike in this chapter can be put to the same three questions. Did people have to join it? Did they have to work for it, on its terms? And did they have to give up what was theirs, whether land, savings, information or the simple freedom to leave, taking what was theirs? The collective farms of the early 1930s failed all three: peasants were forced into them, set to collective work, and made to give up their farms and animals. Jonestown, by its last year, failed the third in the starkest way: by a former resident's sworn account, residents were told to hand over their passports and money, and guards were posted to stop them leaving. The kibbutz passed the first, since people applied to join it and could leave at will, and stumbled on the third: members' savings were in effect sunk in the community, and those who left received only modest amounts. Markets on their own pass all three so far as force goes, since no one is made to buy, to take a particular job or to stay in a deal; what they do not do is make any promise to the person who cannot pay. UP's answer to these questions is not a promise added at the end. It is one of the ten tenets of its core, and it is short enough to quote whole: "UP is never imposed. No one is forced to join, to work or to give up what is theirs. It grows by being useful, building on what people already do, and it acts only by ethical means. A means is ethical when it serves the health, happiness and wellbeing of all and crosses none of the floors; UP never starts harm against anyone. What counts as ethical is defined and refined by the collective through UP's method."[12] Each of its sentences closes a door that one of the look-alikes left open.

[121] UP's agreed position on what the AI is, the coordinator that proposes: "People choose their work; the AI may not assign work or compel anyone, and any plan can be overridden through the decision steps." Full wording in UP's agreed positions (the Position Ledger).
[122] UP's agreed position that splits are good: they test two, or a thousand, ways in the real world. Full wording in UP's agreed positions (the Position Ledger).

“UP is never imposed” rules out the route by which every planned society in this chapter arrived. UP is not a nation-state and has no army. During the transition its protection is to be everywhere and woven into the existing system, so that attacking it would cost far more than it could gain: it works within the law, delivers things its host societies value and earns broad public support, and if it is attacked it responds only by nonviolent means.[123] Nor is there a single person who could impose it, because its settled positions allow no forced adoption, no leader and no founder named in the core.[33] The person who first set down UP’s core sees his part as defining the idea, not governing it, and the core was settled under his rule that UP be defined the way one would first define chemistry: by the core ideas that make it UP, with examples offered as possibilities and the rest left to the collective.[124] No one, then or later, holds a position from which to command it; anyone may improve UP through its own method.[94,18,50]

“No one is forced to join” describes how the practices UP grows from already work. The world’s co-operatives put the same rule first among their principles: co-operatives are “voluntary organisations, open to all persons able to use their services and willing to accept the responsibilities of membership”, and the International Co-operative Alliance’s guidance adds that “People cannot be made to be co-operators”.[108] The Universal Declaration of Human Rights says it more briefly still: “No one may be compelled to belong to an association.”[125] Nobody is conscripted into Wikipedia or into the Linux kernel. People arrive because a problem matters to them, and the core describes UP the same way: anyone may take part in any problem, and the people it affects decide its outcome.[51] The one thing UP’s settled positions ask of anyone taking part is one voice per person: every account belongs to one unique real person, and the system needs to confirm only that the person is unique and real; the exact design is left to the collective.[106] Nothing in the core asks for an oath, a move to a new place or a break with the life a person already has.

The second clause, that no one is forced “to work”, answers the oldest charge against every system that promises to meet needs. Every planned society in this chapter had to decide who works and on whose terms. The collective farm decided for the peasant; Technocracy Inc.’s design expected a working period from every adult not exempted, “the 20 years from the age of 25 to 45, on the part of each individual”.[60] UP’s agreed position on work is blunt: “Labour is never forced: support and health care are offered, never imposed, and choosing not to work is not an illness.”[36] Work still has to be done, and UP does not pretend otherwise. One way a community could share it, offered as an illustration rather than a rule, is a published labour budget that says what is needed, by when, and what happens if it is not done, with any shortfall treated as a shared problem and met with visibility, recognition, fair rotas and automation.[126] In another illustration, necessary work is shared through a published, fair rota, and every able member is expected to take a small share, “but it is an expectation, not a law, and it never affects whether anyone’s needs are met”; it is one possible way, and better ideas are welcome.[127] Free-riding exists, and UP says so. It is met with openness and support, not with pay or force, and how well that works is a question the evidence later in this chapter takes seriously.

The third clause, that no one is forced “to give up what is theirs”, is the one the look-alikes most often broke, and the one most easily broken by good people with good intentions. The kibbutz did not confiscate anything; its members gave freely. But their savings were in effect sunk in the community, those who left received only modest amounts, and that expense helped hold the community together.[79] UP refuses that tool wherever what is held back is a member’s own. Among the floors no decision in UP may cross is “the right to leave any group or community at any time, taking what is theirs”.[13] The same floors protect “freedom of the mind, so no one’s thinking is manipulated without their knowledge or consent”, and each person controls their own information and chooses what to

[123] UP’s agreed position on protection during the transition: “UP is not a nation-state and has no army. During the transition its protection is to be everywhere and woven into the existing system, so that attacking it would cost far more than it could gain. UP works within the law, delivers things its host societies value, and earns broad public support. If it is attacked, it responds only by nonviolent means.” Full wording in UP’s agreed positions (the Position Ledger).
[124] “The core of UP”, preamble: the core was settled under the rule that UP is defined the way one would first define chemistry, by the core ideas that make it UP; examples are possibilities, not directives; the collective decides the rest. The person who set it down sees his part as defining the idea, not governing it.
[125] United Nations, Universal Declaration of Human Rights (General Assembly resolution 217 A, 10 December 1948), Article 20: “Everyone has the right to freedom of peaceful assembly and association. No one may be compelled to belong to an association.” https://www.un.org/en/about-us/universal-declaration-of-human-rights . Checked at source, 31 Oct 2026.
[126] UP’s agreed position on the work nobody wants: a community publishes a labour budget (what is needed, by when, and what happens if it is not done) and asks people directly; any shortfall becomes a shared problem, met with visibility, recognition, fair rotas and automation; “Free-riding exists; it is met with openness and support, not pay or force.” Full wording in UP’s agreed positions (the Position Ledger).
[127] UP’s agreed position on sharing necessary work: a published, fair rota people sign up for; every able member is expected to take a small share, “but it is an expectation, not a law, and it never affects whether anyone’s needs are met”. It is one possible way, and better ideas are welcome. Full wording in UP’s agreed positions (the Position Ledger).

share.[13,95] What counts as "theirs" is not always simple, and UP says so. UP's technology, the knowledge, code, data and designs it produces, stays only in UP: everyone taking part in UP may use, study and improve it, and no one may enclose it. A person who moves from one UP community to another keeps every use of it; and because it stays only in UP, it is not among the things a person takes on leaving UP altogether.[95] Open-source software shows that kind of freedom in practice: when contributors disagree with where a project is going, they can carry the work on elsewhere. In September 2010, after Oracle had acquired the OpenOffice.org office software along with Sun Microsystems, members of its volunteer community set up an independent foundation and carried the software on under a new name, LibreOffice; one of them said the move freed the project "from the constraints represented by the commercial interests of a single company".[128] European Union law now gives people, in many cases, the right to take the personal data they have provided from one service to another.[129] A community that people can leave, taking what is theirs, has to keep earning their presence. The economist Albert Hirschman described the two ways people respond when an organisation they belong to declines: they leave, which he called "exit", or they speak up to change it "from within", which he called "voice".[130] UP keeps both. Leaving is a floor, and voice is its method, since anyone may reframe a problem or propose a better solution, and a better idea replaces a worse one.[13,20] That is the discipline UP chooses.

"It grows by being useful, building on what people already do" names how UP grows. Chapter 1 showed the pieces already working: co-operatives, open software, libraries, commons and the everyday ways people help one another. UP connects them and gives them tools, and its people also invent new solutions together, which is UP's main activity; it does not ask anyone to abandon what already works.[16,17] UP's agreed position is that it may grow quickly or slowly, that the speed is not something its people set out to decide, and that what matters is keeping the quality of its core values and tenets as it grows.[131]

"It acts only by ethical means" sets the test for how UP may act, and the core defines the word. A means is ethical when it serves the health, happiness and wellbeing of all and crosses none of the floors, and UP never starts harm against anyone.[12] When the core was being settled, an earlier draft said "lawful". It was replaced, because laws can be rewritten to protect the powerful, and a test of means that the powerful can rewrite is no test at all.[132] What counts as ethical is itself defined and refined by the collective, through the same open method as everything else.[12]

That leaves the hardest question, the one every reader of the twentieth century is right to ask. What if people acting in UP's name start forcing others anyway? The core's answer is plain. Among the dangers it adopted is that "anyone acting outside the core stops being UP and bears the consequences".[33] A group that forces people to join, to work or to give up what is theirs has, by that act, left UP. It has become a concentration of power, which everyone in UP watches for and spreads out again, and it cannot claim UP's name for what it does.[50,99] The floors still protect everyone involved, including those who acted. No one's freedom is restricted without a fair, evidence-based hearing, with the evidence open to them and a way to appeal; a restriction is allowed only to protect others or the person, through an evidence-based court process, for the shortest time needed and never below the needs floor; and leaving a group or community does not end a restriction set by a fair hearing. The core itself calls these limits an open problem, the best that can be imagined now.[13] None of this makes abuse impossible, and UP does

[128] The Document Foundation, press release "OpenOffice.org Community announces The Document Foundation" (28 September 2010): "Oracle, who acquired OpenOffice.org assets as a result of its acquisition of Sun Microsystems, has been invited to become a member of the new Foundation"; "Pending this decision, the brand"LibreOffice" has been chosen for the software going forward."; Sophie Gautier, for the volunteers: "it liberates the development of the code and the evolution of the project from the constraints represented by the commercial interests of a single company." Archived copy of the foundation's own file: https://web.archive.org/web/20101010183815if_/http://www.documentfoundation.org/contact/tdf_release.pdf . Leaving had costs: in June 2011 Oracle gave the original code to the Apache Software Foundation, which said that "the answer is openness, not further fragmentation." https://news.apache.org/foundation/entry/the_apache_software_foundation_statement . Checked at source, 31 Oct 2026.

[129] Regulation (EU) 2016/679 (General Data Protection Regulation), Article 20(1), "Right to data portability": "The data subject shall have the right to receive the personal data concerning him or her, which he or she has provided to a controller, in a structured, commonly used and machine-readable format". The right applies where processing rests on consent or a contract and is carried out by automated means. https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:32016R0679 . Checked at source, 31 Oct 2026.

[130] Albert O. Hirschman, *Exit, Voice, and Loyalty: Responses to Decline in Firms, Organizations, and States* (Harvard University Press, 1970), as described by its publisher: one response, "exit," is for the member to quit the organization or for the customer to switch to the competing product, and the other, "voice," is for members or customers to agitate and exert influence for change "from within." https://www.hup.harvard.edu/books/9780674276604 . Checked at source, 31 Oct 2026.

[131] UP's agreed position on growth (round 12c): UP grows naturally and may grow fast or slowly; the speed is not something its people set out to decide; what matters is to grow while keeping the quality of the core values and tenets, so that growth stays positive. Full wording in UP's agreed positions (the Position Ledger).

[132] UP's settlement record (the Position Ledger, the record of UP's debate on its own core): in round 8 (23 Oct 2026) the choice was made to replace the word "lawful" in the draft of this tenet with "ethical", because laws can be changed to protect the powerful; round 10 (24 Oct 2026) settled the tenet with "ethical" alone, and round 11 added the definition of "ethical".

not claim that it does. It means that abuse in UP's name is named for what it is, by a rule written down in advance and watched for by everyone.[33,133]

In UP's terms, this is why "freely joined" sits in the core rather than in a list of good intentions. A system that meets people's needs has great power over them, and every look-alike in this chapter that began by meeting needs and ended by commanding people crossed the same line: it stopped letting people say no. UP draws that line before it begins, and draws it in the place where the look-alikes crossed it, at joining, at working and at leaving.

The selfish ape and the lazy worker

One objection sits underneath all the others, and it is usually put as a fact about people rather than about systems. People are selfish, it says. Give them a shared field and they will overgraze it; give them money for nothing and they will stop working. Every look-alike in this chapter failed, on this view, because it asked more of human nature than human nature can give, and UP will fail for the same reason. The objection deserves its strongest form, because some of the evidence for it is good.

The classic statement came from the ecologist Garrett Hardin in 1968. Each herder who shares a common pasture gains the whole benefit of adding one more animal and bears only a share of the damage, so each adds one, and then another. "Freedom in a commons brings ruin to all," Hardin concluded.[134] Laboratory experiments have since shown the problem in miniature. In a public-goods game, players are given money and choose how much to put into a common pot that is multiplied and shared out equally, so the group does best if everyone contributes and each player does best by contributing nothing while others pay in. The economists Ernst Fehr and Simon Gächter summed up what happens when the game is played round after round with no way to respond to free-riders: "cooperation strongly deteriorates over time and reaches rather low levels in the final period".[135] In a related experiment, about a third of players turned out to be complete free-riders.[136] Studies of money and work also show some effect. Swedish lottery winners earned modestly less after their win, and in a large American trial, people given $1,000 a month for three years reduced their paid work by one to two hours a week.[137,138] The selfish ape is not a myth. It is part of the picture.

It is not the whole picture, and the rest of the evidence changes what follows from it. The same experiments that found a third of players free-riding found that half were conditional cooperators, people who contribute as long as others do.[136] When Fehr and Gächter let players pay to reduce a free-rider's earnings, average contributions held at between 50 and 95 per cent of what players could have contributed and did not fall over time. Their explanation was that a "nonnegligible number" of players were willing to bear the cost of punishing free-riders.[135] And when a team of anthropologists and economists took similar games to fifteen small-scale societies on five continents, living in a wide variety of economic and cultural conditions, they found that "the canonical model is not supported in any society studied": nowhere did people behave as the purely selfish model predicts, though among the

[133] UP's agreed position that informal power, and the work of checking UP's own loop, are workload: watched for by everyone and answered with open checks. Full wording in UP's agreed positions (the Position Ledger).

[134] Garrett Hardin, "The Tragedy of the Commons", *Science* 162 (1968), pp. 1243-1248: "But this is the conclusion reached by each and every rational herdsman sharing a commons. Therein is the tragedy."; "Freedom in a commons brings ruin to all." Extract hosted by San Diego State University: https://ion.sdsu.edu/tragedyofthecommons.html . Read at a copy of the published text, 31 Oct 2026.

[135] Ernst Fehr and Simon Gächter, "Cooperation and Punishment in Public Goods Experiments", *American Economic Review* 90(4) (September 2000), pp. 980-994, DOI 10.1257/aer.90.4.980, p. 980: "In the punishment condition, however, average contribution rates between 50 and 95 percent of the endowment can be maintained."; pp. 983-984, on games without punishment: "For these games it is well known that cooperation strongly deteriorates over time and reaches rather low levels in the final period" (citing Ledyard, 1995); p. 984: "We conjecture that, in addition to purely selfish subjects, there is a nonnegligible number of subjects who are (i) conditionally cooperative and (ii) willing to engage in the costly punishment of free riders."; p. 985: "in the punishment condition average contributions do not decrease or even increase over time." Article page: https://www.aeaweb.org/articles?id=10.1257/aer.90.4.980 ; the four sentences were checked word for word in the working-paper version, Fehr and Gächter, CESifo Working Paper 183 (January 1999): https://www.ifo.de/DocDL/ces_wp183.pdf . Checked at source, 31 Oct 2026.

[136] Urs Fischbacher, Simon Gächter, Ernst Fehr, "Are people conditionally cooperative? Evidence from a public goods experiment", *Economics Letters* 71(3) (June 2001), pp. 397-404, abstract: "about a third of subjects' contribution schedules is characterized by complete free-riding"; "a majority of 50 percent of the subjects displays conditional cooperation". Abstract read at IDEAS/RePEc, which notes that it was borrowed from another version of the item: https://ideas.repec.org/a/eee/ecolet/v71y2001i3p397-404.html . Read at a copy of the published text, 31 Oct 2026.

[137] David Cesarini, Erik Lindqvist, Matthew J. Notowidigdo, Robert Östling, "The Effect of Wealth on Individual and Household Labor Supply: Evidence from Swedish Lotteries", *American Economic Review* 107(12) (2017), pp. 3917-3946 (NBER Working Paper 21762, November 2015), abstract: "We find winning a lottery prize modestly reduces labor earnings" ... "with the reduction being immediate, persistent, and similar by age, education, and sex."; "average lifetime marginal propensity to earn out of unearned income of -0.11". https://www.nber.org/papers/w21762 . Checked at source, 31 Oct 2026.

[138] Eva Vivalt, Elizabeth Rhodes, Alexander W. Bartik, David E. Broockman, Patrick Krause, Sarah Miller, "The Employment Effects of a Guaranteed Income: Experimental Evidence from Two U.S. States", NBER Working Paper 32719 (July 2024), abstract: "1,000 low-income individuals were randomized into receiving $1,000 per month unconditionally for three years"; "a control group of 2,000 participants receiving $50/month"; "Participants reduced their work hours as a result of the transfers by 1-2 hours/week"; the transfers also caused "a 4.2 percentage point decrease in labor market participation"; "Overall, our results suggest a moderate labor supply effect that does not appear offset by other productive activities." https://www.nber.org/papers/w32719 . A working paper. Checked at source, 31 Oct 2026.

Machiguenga the most common contribution was nothing. What did vary was the society. The more a group's economic life depended on markets and on cooperation, the more its members cooperated in the games.[139] Behaviour, in other words, followed the arrangements people lived in.

The strongest answer to Hardin came from the field, not the laboratory. Elinor Ostrom, who received the Nobel Prize in economics in 2009, studied commons that their own users governed. In her Nobel Prize lecture she wrote that finding multiple cases where resource users had organised themselves "challenged the presumption that it was impossible for resource users to solve their own problems of overuse".[140] The commons that lasted shared a handful of design features. The users themselves, or people answerable to them, kept watch on how the resource was used, and "Sanctions for rule violations start very low but become stronger if a user repeatedly violates a rule."[140] Chapter 1 told the story of one such commons, the Swiss village of Törbel, whose villagers signed articles of association in 1483 to regulate the use of their alpine pasture, forests and common land.[141]

Stories outside the laboratory point the same way. In June 1965 six Tongan teenagers took a boat, planning to sail overseas, and ended up stranded on the uninhabited island of 'Ata. When the Australian Peter Warner found them from his fishing boat on 11 September 1966, they had been there about fifteen months. They had organised the work in a roster, kept a fire burning, grown food and settled their quarrels by going to opposite ends of the island until they had cooled down; when one of them, Stephen, fell from a cliff and broke his leg, the others bound it with branches and leaves and promised to do his work for him, and the leg healed perfectly.[142] It is one small case, and the boys' own Tongan upbringing deserves much of the credit, but it is the opposite of the story William Golding imagined in *Lord of the Flies*. At larger scale, the United Nations estimates that about 862 million people aged fifteen or over volunteer in an average month, most of them informally rather than through an organisation.[143] And

[139] Joseph Henrich, Robert Boyd, Samuel Bowles, Colin Camerer, Ernst Fehr, Herbert Gintis, Richard McElreath, "In Search of Homo Economicus: Behavioral Experiments in 15 Small-Scale Societies", *American Economic Review* 91(2) (May 2001, Papers and Proceedings), pp. 73-78, DOI 10.1257/aer.91.2.73, p. 73: "Twelve experienced field researchers, working in 12 countries on five continents, recruited subjects from 15 small-scale societies exhibiting a wide variety of economic and cultural conditions."; "First, the canonical model is not supported in any society studied."; "the higher the degree of market integration and the higher the payoffs to cooperation, the greater the level of cooperation in experimental games."; "group-level differences in economic organization and the degree of market integration explain a substantial portion of the behavioral variation across societies"; p. 75: "By contrast, for instance, the Machiguenga have a mode at contributing nothing, with not a single subject cooperating fully"; p. 76: "the canonical model of the self-interested material payoff-maximizing actor is systematically violated."; pp. 76-77: "Our data indicate that the degree of cooperation, sharing, and punishment exhibited by experimental subjects closely corresponds to templates for these behaviors in the subjects' daily lives". Full text read in a browser at the Harvard lab's copy: https://coevolution.fas.harvard.edu/sites/g/files/omnuum5841/files/culture_cognition_coevol_lab/files/henrich_et_al_2001.pdf . The title and p. 73 say 15 societies; p. 74 gives 17 (probably groups). Read at a copy of the published text, 31 Oct 2026.

[140] Elinor Ostrom, "Beyond Markets and States: Polycentric Governance of Complex Economic Systems", *American Economic Review* 100(3) (June 2010), pp. 641-672 (revised text of her 2009 Nobel lecture), p. 649: "Finding multiple cases where resource users were successful in organizing themselves challenged the presumption that it was impossible for resource users to solve their own problems of overuse."; p. 653, the "core underlying lessons that characterized the long sustained regimes as contrasted to the cases of failure", in the "brief updated list" developed by Michael Cox, Gwen Arnold and Sergio Villamayor Tomás: "4A. Monitoring Users: Individuals who are accountable to or are the users monitor the appropriation and provision levels of the users."; "5. Graduated Sanctions: Sanctions for rule violations start very low but become stronger if a user repeatedly violates a rule." The same passages appear word for word in the lecture as given in Stockholm, Prize Lecture, 8 December 2009, read at the Nobel Prize site: https://www.nobelprize.org/uploads/2018/06/ostrom_lecture.pdf . Checked at source, 31 Oct 2026.

[141] See Chapter 1, on Törbel, the Swiss village whose villagers signed articles of association in 1483 to regulate the use of their alpine pasture, forests and common land, and its notes.

[142] Rutger Bregman, "Wat er écht gebeurt als kinderen op een onbewoond eiland stranden" (What really happens when children are stranded on an uninhabited island) (my translation), *De Correspondent* (4 September 2019): "De echte Lord of the Flies, vertelde Mano ons, begon in juni 1965." (The real Lord of the Flies, Mano told us, began in June 1965.) (my translation); "Het was zondag 11 september 1966 toen de jongens werden gered." (It was Sunday 11 September 1966 when the boys were rescued.) (my translation); "We zijn met zijn zessen en we schatten dat we hier al vijftien maanden zijn." (There are six of us and we estimate that we have been here fifteen months.) (my translation); "De kinderen spraken af in duo's te werken en maakten een strak rooster." (The children agreed to work in pairs and made a strict roster.) (my translation); "Twee werkten in de moestuin, twee kookten, en twee stonden op de uitkijk." (Two worked in the garden, two cooked, and two kept lookout.) (my translation); "Soms hadden ze ruzie, maar als dat gebeurde, gingen ze even uit elkaar." "De een naar de ene kant van het eiland, de ander naar de andere kant, tot ze waren afgekoeld." (Sometimes they quarrelled, and when they did, they separated for a while: one to one side of the island, the other to the other side, until they had cooled down.) (my translation); "Op een dag ging het helemaal mis: Stephen gleed uit, viel van een klif en brak een been." (One day it went badly wrong: Stephen slipped, fell from a cliff and broke a leg.) (my translation); "Ze verbonden Stephens been met takken en bladeren." (They bound Stephen's leg with branches and leaves.) (my translation); and Sione to Stephen: "Wij zullen je werk doen, terwijl jij daar ligt als koning Taufa'ahau Tupou zelf!" (We will do your work, while you lie there like King Taufa'ahau Tupou himself!) (my translation); and the finding of the local doctor, Posesi Fonua: "hun gespierde lijven en Stephens perfect genezen been" (their muscular bodies and Stephen's perfectly healed leg) (my translation). https://decorrespondent.nl/10341/wat-er-echt-gebeurt-als-kinderen-op-een-onbewoond-eiland-stranden/397559745-be4d7810 ; Sione Filipe "Mano" Totau, one of the six, as told to Julian Morgans, "I Spent 15 Months Shipwrecked on an Uninhabited Island", *Vice* (30 March 2021): "Then we started organising everything in a roster: how to keep the fire, how to say our prayers". https://www.vice.com/en/article/shipwrecked-on-uninhabited-desert-island ; Eleanor Gee and Linny Folau, "Kolo Fekitoa, one of six castaways on Ata Island remembered", *Matangi Tonga* (14 May 2020): "The boys stole a boat with provisions and planned to sail overseas."; they "spent the next 15 months on the island before they were rescued by Peter Warner on his fishing boat." https://matangitonga.to/print/24115 ; Kalino Latu, *Kaniva Tonga News* (14 April 2021), quoting Warner's memoirs: "the boys had set up a small commune with food garden, hollowed-out tree trunks to store rainwater,". https://kanivatonga.co.nz/2021/04/celebrated-sailor-peter-warner-who-rescued-six-tongan-castaway-boys-50-years-ago-killed-in-yacht-capsize/ ; *Matangi Tonga* (29 April 2021): "his rescue shone the light on the Tongan values and knowledge systems that prepared them 'against all odds'." https://matangitonga.to/print/26519 . The *Guardian*'s English adaptation of Bregman's article was not read. Checked at source, 31 Oct 2026.

[143] United Nations Volunteers, *2022 State of the World's Volunteerism Report: Building equal and inclusive societies* (Bonn, 2021), p. 30: the monthly volunteer rate, "defined as the share of working-age people 15 years or older who volunteer in a month", "amounts to almost 15 percent, or 862 million people."; p. 37: "the monthly number of volunteers aged 15 years and over amounts to 862.4 million worldwide."; p. 38: "while 14.3 percent engage in informal volunteering", and "more than twice as many people volunteer informally than formally". https://digitallibrary.un.org/record/4082931/files/UNV_SWVR_2022.pdf . The figures are modelled global estimates. Checked at source, 31 Oct 2026.

decades of disaster research have found, in one summary, that “panic is not a problem in disasters” and that people “behave proactively and prosocially to assist one another”.[144]

What about the lazy worker? Here the evidence is unusually good, because many governments and charities have given people cash and measured what happened. Table 3.2 sets out the main results. The direction is consistent: cash transfers reduce paid work a little or not at all. A re-analysis of seven randomised trials of government-run cash-transfer programmes for poor households in six developing countries found “no systematic evidence that cash transfer programs discourage work”.[145] In Kenya, where villages received a basic income, “Labor supply did not change overall, but shifted out of wage employment and towards self-employment.”[146] Alaska’s yearly dividend, paid to every resident since 1982, had “no effect on employment” and increased part-time work.[147] Finland’s experiment found little effect on employment, none in its first year, and better reported wellbeing: recipients “were more satisfied with their lives and experienced less mental strain, depression, sadness and loneliness”; the official sources caution that the second year’s results cannot be separated from a change in the rules for the comparison group.[148] The reductions that do appear are moderate. In the American trial, paid work fell by one to two hours a week and participation in the labour market by 4.2 percentage points, an effect the authors call “moderate”; Swedish lottery winners’ earnings fell “modestly”.[138,137] What the evidence does not show is a population that stops working once its needs are met.

Table 3.2. What happened to work when people were given cash. Each row is summarised from its source; the measures differ, so the rows are not directly comparable.

Study	Who and what	What happened to work
Seven trials in six developing countries (re-analysis, 2017)	Government-run cash transfers targeted at poor households	“no systematic evidence” that the transfers discouraged work
Kenya (GiveDirectly, short-term results, 2023)	Basic income to whole villages (monthly, and in one arm a lump sum)	Labour supply did not change overall; people moved from wage work to self-employment
Alaska (Permanent Fund, since 1982)	A yearly dividend to every resident	No effect on employment; part-time work rose
Finland (2017–18)	€560 a month to 2,000 unemployed	Small employment effects (none in the

[144] Kathleen Tierney, Christine Bevc, Erica Kuligowski, “Metaphors Matter: Disaster Myths, Media Frames, and Their Consequences in Hurricane Katrina”, *The Annals of the American Academy of Political and Social Science* 604 (March 2006), pp. 57-81, DOI 10.1177/0002716205285589, p. 58: “By the 1960s, a body of work had accumulated indicating that panic is not a problem in disasters; that rather than helplessly awaiting outside aid, members of the public behave proactively and prosocially to assist one another; that community residents themselves perform many critical disaster tasks,”. Copy of the article formerly at the Natural Hazards Center, University of Colorado Boulder, read at the Internet Archive’s copy of 31 July 2024: https://web.archive.org/web/20240731185934/https://hazards.colorado.edu/archive/resources/socy4037/Metaphors%20Matter%20Annals%20paper%20Tierney%20Bevc%20Kuligowski.pdf . Read at a copy of the published text, 31 Oct 2026.

[145] Abhijit V. Banerjee, Rema Hanna, Gabriel E. Kreindler, Benjamin A. Olken, “Debunking the Stereotype of the Lazy Welfare Recipient: Evidence from Cash Transfer Programs”, *World Bank Research Observer* 32(2) (August 2017), pp. 155-184, DOI 10.1093/wbro/lkx002, abstract: “Targeted transfer programs for poor citizens have become increasingly common in the developing world.”; “We re-analyze the data from seven randomized controlled trials of government-run cash transfer programs in six developing countries throughout the world, and find no systematic evidence that cash transfer programs discourage work.” https://openknowledge.worldbank.org/entities/publication/9fa0e601-a8e9-5ae9-8cab-523fec22d5e8/full ; working paper (September 2016), p. 21: “…we find no systematic evidence of an impact of transfers on work behavior, either for men or women.” https://www.povertyactionlab.org/sites/default/files/research-paper/Debunking-the-Streotype-of-the-Lazy-Welfare-Recipient_Banerjee-Hanna-Kreindler-Olken_Sept2016.pdf . The programmes were targeted at poor households, not universal. Checked at source, 31 Oct 2026.

[146] Abhijit Banerjee, Michael Faye, Alan Krueger, Paul Niehaus, Tavneet Suri, “Universal Basic Income: Short-Term Results from a Long-Term Experiment in Kenya”, NBER conference paper (15 September 2023), abstract, p. 1: “Labor supply did not change overall, but shifted out of wage employment and towards self-employment.”; p. 6: “Overall there is no evidence of UBI promoting“laziness,” but evidence of substantial effects on occupational choice.” https://conference.nber.org/conf_papers/f192616.pdf ; study page: https://www.givedirectly.org/ubi-study/ . The study covers 295 villages: 100 controls, 44 receiving monthly payments for 12 years, 80 for two years, and 71 a lump sum; these are short-term results of a 12-year study. Checked at source, 31 Oct 2026.

[147] Damon Jones and Ioana Marinescu, “The Labor Market Impacts of Universal and Permanent Cash Transfers: Evidence from the Alaska Permanent Fund”, *American Economic Journal: Economic Policy* 14(2) (May 2022), pp. 315-340, abstract: “Since 1982, all Alaskan residents have received a yearly cash dividend from the Alaska Permanent Fund.”; “the dividend had no effect on employment and increased part-time work by 1.8 percentage points (17 percent).” https://www.aeaweb.org/articles?id=10.1257/pol.20190299 . Checked at source, 31 Oct 2026.

[148] Ministry of Social Affairs and Health (Finland) and Kela, press release, “Results of the basic income experiment: small employment effects, better perceived economic security and mental wellbeing” (6 May 2020): “In the basic income experiment, 2,000 unemployed persons were paid a monthly tax-exempt basic income of 560 euros”; “The experiment was begun on 1 January 2017 and ended on 31 December 2018.”; for the first year, “the basic income did not have any employment effects for the basic income recipients at group level.”; “The effects of the second year of the experiment cannot be separated from the effects of the activation model”; “They were more satisfied with their lives and experienced less mental strain, depression, sadness and loneliness.”; “The basic income recipients trusted other people and the institutions in society to a larger extent”. https://stm.fi/en/-/perustulokokeilun-tulokset-tyollisyysvaikutukset-vahaisia-toimeentulo-ja-psyykkinen-terveys-koettiin-paremmaksi (the live page is behind a bot check; read at the Internet Archive’s copy of 17 Dec 2024: https://web.archive.org/web/20241217020725/https://stm.fi/en/-/perustulokokeilun-tulokset-tyollisyysvaikutukset-vahaisia-toimeentulo-ja-psyykkinen-terveys-koettiin-paremmaksi) ; University of Helsinki (7 May 2020): “The second year, the basic income group worked six days more, but the difference cannot be attributed to basic income alone.” https://www.helsinki.fi/en/news/society-and-learning/basic-income-experiment-finland-yields-surprising-results . The final report (*Reports and Memoranda* 2020:15) was not opened. Checked at source, 31 Oct 2026.

Study	Who and what	What happened to work
	people	first year); better reported wellbeing and trust
United States (two states)	$1,000 a month for three years to low-income people	Paid work fell by 1–2 hours a week; labour-market participation fell 4.2 percentage points
Sweden (lottery winners)	Large one-off prizes	Earnings fell modestly

Psychology offers an explanation for the pattern. Richard Ryan and Edward Deci, whose work Chapter 1 drew on, were led by their findings to "the postulate of three innate psychological needs", "competence, autonomy, and relatedness", which "when satisfied yield enhanced self-motivation and mental health and when thwarted lead to diminished motivation and well-being". Whether people are "proactive and engaged or, alternatively, passive and alienated", they concluded, depends largely on "the social conditions in which they develop and function".[28] That is the finding behind Chapter 1's story of children who help without being asked and help less once they are paid for it.[29]

In UP's terms, the evidence supports one part of UP's agreed position on cooperation closely and tests another. The part it supports is that behaviour is powerfully shaped by the environment: people are cooperative by nature, and cooperation lasts where contributions are visible and limits are agreed together, as Ostrom found.[35] UP is designed around several of the conditions under which cooperation held in the evidence: visible contributions, limits agreed together, needs met so that people are not driven by fear, and work that people choose.[35,30,121] The part the evidence tests is bolder, and the evidence does not settle it. UP's agreed position states it as UP's own: "UP's own position, to be tested in the open, is that visible contributions work as feedback, not punishment, and that free-riding is treated as a sign of distress or mismatch and met with support, not punishment."[35] UP's records of contribution are feedback, never a means of deciding whether anyone's needs are met.[30] Ostrom's commons used sanctions, though they started very low, and Fehr and Gächter's players kept cooperation going by being willing to penalise free-riders. Other research complicates the lesson: in sixteen participant pools around the world, some players punished people who had behaved generously, not only free-riders, which the authors call "antisocial punishment", and punishment helped cooperation "only if complemented by strong social norms of cooperation".[149] UP's agreed position names the gap itself: "The commons Ostrom studied also used graduated sanctions, so whether feedback and support can do that work is measured, not assumed."[35] It is treated the way UP treats every open question: named, measured and worked on in the open, with the free-riding that does occur counted honestly rather than assumed away.[126,18]

Freely joined, stage by stage

UP grows side by side with the current system, by people's choice rather than by overthrow, and aims at a transition, not a collapse.[150] In the early stage it is a minority network inside today's world; in the middle stage it has its own productive base, and most of its members' needs are met from what UP produces; in the completed stage most people live mainly in UP. The early stage rests on today's evidence; the middle and completed stages are reasoned projections from mechanisms that can be cited, and are labelled as such.[86] "Freely joined" means something slightly different at each of these stages, and the differences matter, because the pressure to break the rule is not the same at each.

At the early stage the rule is easy to keep, because almost nothing is at stake in leaving. A person takes part in UP by working on shared problems with others, and keeps everything else: job, home, savings, citizenship and every relationship they already have. This is how the open practices of Chapter 1 grew. Nobody resigns from their life to edit Wikipedia, join a food co-op or fix a neighbour's toaster at a Repair Café. The danger at this stage, as this

[149] Benedikt Herrmann, Christian Thöni, Simon Gächter, "Antisocial punishment across societies", *Science* 319(5868) (7 March 2008), pp. 1362-1367, abstract: "We document the widespread existence of antisocial punishment, that is, the sanctioning of people who behave prosocially."; "Our evidence comes from public goods experiments that we conducted in 16 comparable participant pools around the world."; "punishment opportunities are socially beneficial only if complemented by strong social norms of cooperation." Abstract read at PubMed: https://pubmed.ncbi.nlm.nih.gov/18323447/ . Checked at source, 31 Oct 2026.

[150] UP's agreed positions on growth and urgency (round 12c): the threats from the current system make it urgent to supply UP's system as quickly as possible, and the aim is a transition, not a collapse; UP grows side by side with the current system (lesson 13). Full wording in UP's agreed positions (the Position Ledger).

chapter reads it, runs the other way: most of a member's needs still depend on money, so UP's pull is weak, and the current system can absorb or ignore what UP builds.

The middle stage is where the kibbutz's lesson bites. Once a member's food, housing and care come largely from what a UP community produces, leaving has real consequences, and a community that has built something together will be tempted to protect it by making departure costly. Where what is held back is the member's own, that is exactly the tool the floor forbids.[13] It also raises a question UP has not finished answering, and says so: when someone leaves a community that built things together, what counts as theirs? What a person brought is clearly theirs, and so is their own information.[95] UP's open designs and code stay in UP, where everyone taking part may use, study and improve them, so a person who moves to another UP community keeps every use of them; and, as in open projects, the right to fork is part of the design.[95,151] The fair share of shared physical goods is open work for the collective, and it is listed among this chapter's open questions.

At the completed stage, if it comes, most people would live mainly in UP, and the question would no longer be whether a person can leave a small community but whether a whole society keeps saying yes to its members' choices, including the choice to live another way. UP's answer has two parts. Anyone may live another way, because UP is never imposed and the right to leave is a floor.[12,13] And within UP, splits are good: groups that want to try a different way within the core may do so, testing two, or a thousand, ways in the real world.[122] There is no precedent for this stage yet, and this chapter does not pretend there is.

Table 3.3 sums up the stages.

Table 3.3. Freely joined, by stage, as an illustration. The early stage rests on today's evidence; the middle and completed stages are reasoned projections, labelled as such.

Stage	What could change	Real precedent	Why it is likely	What persists
Early	People join by working on shared problems, keeping their jobs, homes and savings	Co-operative membership, open-source contribution, Wikipedia editing, Repair Cafés	These grew to great size without asking anyone to give anything up	Most needs still depend on money; the current system can absorb or ignore UP's work
Middle (projection)	Most members' needs are met from what UP produces; the right to leave, taking what is theirs, stays a floor	Withdrawable co-operative shares; forks in open software; the right to take personal data elsewhere	The floor guarantees leaving, taking what is theirs, and UP's open designs and code may be used by anyone taking part in UP	The temptation to protect what has been built by raising the cost of leaving; the open question of what counts as "theirs"
Completed (projection)	Most people live mainly in UP; those who choose another way are free to	None yet	UP is never imposed and leaving is a floor; within UP, splits test different ways in the real world	Disagreement over values; informal power; the daily work of keeping UP open

What could still go wrong

A fair reader will not be satisfied by a list of rules, because the look-alikes had rules too. The objections deserve their strongest form, and an answer that admits what remains open.

The first objection is the oldest. Every promise of a better society, it says, has ended in force, because a society built to a plan must sooner or later make people fit the plan. The philosopher Robert Nozick drew the distinction that answers it most clearly. There are two ways to look for a better society, he argued. One designs it in advance and asks everyone to live in the design. The other lets many communities try many designs and lets people choose among them, and his own position "totally rejects planning in detail, in advance, one community in which everyone is to live yet sympathizes with voluntary utopian experimentation".[152] UP stands firmly on the second side of that

[151] UP's agreed position on stewards: open projects such as Linux and Wikipedia show that open peer production, run by distributed stewards, can build complex systems at global scale; the claim is not "no head to cut off" but heads that rotate, are watched and can be replaced, because the work belongs to everyone, with defined scopes, term limits, public audit and the right to fork. Full wording in UP's agreed positions (the Position Ledger).

[152] Robert Nozick, *Anarchy, State, and Utopia* (New York: Basic Books, 1974), chapter 10, "A Framework for Utopia": "The position expounded here totally rejects planning in detail, in advance, one community in which everyone is to live yet sympathizes with voluntary utopian experimentation and provides it with the background in which it can flower". He calls the two approaches "design devices" and "filter devices". Nozick's own conclusion, a minimal state, is not UP's. Read in the UP library (collection universal-pragmatism, book adfd62af1a4e, parts 294 and 311). Checked 1 Nov 2026.

line. It has no design for everyone to live in; its agreed position is that splits are good, because they test two ways, or a thousand, in the real world.[122] And its floors bind its own members as tightly as anyone else: no decision in UP, however popular, may lower them or push anyone below them.[13]

The second objection runs the other way. If joining is truly voluntary, it says, UP will stay small, because people do not leave a working system for a promise. Chapter 1 answered most of this with numbers: the open practices that people could join without leaving anything grew to enormous size, while the communities that asked people to leave the world mostly stayed small.[153] UP does not ask anyone to leave. It asks people to start solving shared problems together where they already live, and it grows by being useful, which may happen quickly or slowly; the speed is not something its people set out to decide.[12,131]

The third objection is the most sophisticated, and it comes from inside movements that tried to work without leaders. In 1970 the feminist writer Jo Freeman gave a talk, published two years later as "The Tyranny of Structurelessness", about the women's liberation movement. A group without formal structure, she argued, does not escape power; it hides it, because informal elites form anyway and answer to no one.[154] UP takes the warning as a design brief. Having no leader does not mean having no structure. Work in UP is shared out, not held; where work is stewarded, as in open projects, the stewards rotate, are watched and can be replaced, with defined scopes, term limits, public audit and the right to fork.[94,151] Informal power is named in UP's agreed positions as standing work, watched for by everyone and answered with open checks, and the rules, records, decisions and reasons of UP are public so that hidden power has fewer places to hide.[133,95] None of this makes informal power impossible. It makes it visible, which is the condition for answering it.

The fourth objection is that UP is a cult with nicer words. The test for that is the one this chapter has already given, and UP invites readers to apply it to UP itself. A cult has a leader who cannot be questioned; UP's settled positions allow no leader and no founder named in the core. A cult controls what its members may know; UP's floors include a truthful shared record and freedom of the mind. A cult makes leaving costly; UP makes the right to leave, taking what is theirs, a floor. A cult treats its teaching as beyond question; every part of UP, its tenets included, can be improved through UP's own method.[33,13,18] If UP ever fails that test, the failure is itself a problem that anyone may raise, and UP's settled positions say what follows: anyone acting outside the core stops being UP and bears the consequences.[33]

The last objection is the subtlest. Even without force, it says, a community can pressure people: by watching what each person contributes, by praising some and shaming others, by making it socially impossible to say no. This danger is real, and UP does not claim to be free of it. Its agreed positions answer it in three ways. Records of contribution are feedback: they inform, and they never decide whether anyone's needs are met.[30] Each person controls their own information and chooses what to share.[95] And free-riding is treated as a sign of distress or mismatch and met with support, not punishment; that support is offered, never imposed, and choosing not to work is not an illness.[35,36] Whether those answers are enough is not something UP asserts. Like every other risk in this chapter, it is named openly as work, to be measured and improved.[18]

What is left when the labels are set down

A reader who began this chapter with a label in mind should now be able to set it down, and to see what stands in its place. UP is not central planning, because there is no centre and no plan to impose, and because the people a problem affects decide its outcome.[20,51] It is not rule by experts or by machines, because skill is shown by open standards, never by holding a position, and because technology coordinates and proposes but never governs.[51,52] It is not a commune that asks people to leave the world and start again, because it grows, at least at first, where people already live, from the practices Chapter 1 described.[12,16] It is not a cult, because it has no leader, no founder named in its core, no teaching that is beyond question and no bar on leaving with what is theirs.[33,18,13] And it is not the market on its own, because in UP needs are met whether or not someone can pay, and positional goods are shared by rotation or by the stakeholders' decision, never by price.[13,100]

[153] See Chapter 1, "Why this is likely, and the strongest doubts", and its notes: open systems that people could use without leaving anything grew very large, while communities that asked people to leave mostly stayed small.

[154] Jo Freeman, "The Tyranny of Structurelessness", first given as a talk in Beulah, Mississippi, in May 1970, and first published in *The Second Wave* 2(1) (1972): "During the years in which the women's liberation movement has been taking shape, a great emphasis has been placed on what are called leaderless, structureless groups"; "Contrary to what we would like to believe, there is no such thing as a structureless group."; "Thus structurelessness becomes a way of masking power"; "It is this informal structure, particularly in Unstructured groups, which forms the basis for elites."; informal structures "have no obligation to be responsible to the group at large." https://www.jofreeman.com/joreen/tyranny.htm . Checked at source, 1 Nov 2026.

UP is not defined only by what it is not. It stands on the shoulders of the traditions in this chapter and of many others.[14] It keeps communism's aim, in Marx's slogan, that needs be met; the market's free choice and its discovery that a signal can coordinate millions of people without a command, though in UP an open record of problems carries the signal, not a price; Montessori's trust in people's own drive to solve problems; democracy's equal voice; the co-operative's voluntary membership; the self-governed commons; the wiki's open editing; the technocrats' habit of counting real resources; Soleri's beautiful, compact places; Fresco's vision of technology working for everyone; and the kibbutz's evidence that people can share for generations, with its warning about what held them together. It leaves behind the parts of each that failed the people they were meant to serve, and it writes that refusal into its core at the three points where the look-alikes crossed the line: no one is forced to join, no one is forced to work, and no one is forced to give up what is theirs.[12] And it joins the pieces with rules of its own, from floors that bind every decision to the rule that the result carries the power.[13,17] The combination is UP's claim, and it is to be judged the way UP judges everything: by its record, area by area, against the current system and against the ideal it aims at, which shows the direction and the gap still to close.[18,19]

That answers the question of what UP is not, and what it is built from. Part Two takes up the question of what it is, one tenet at a time, beginning with the aim that every part of it serves: the health, happiness and wellbeing of all living things.[155]

Chapter card: Chapter 3

- **Claim:** UP is not any of the labels it is mistaken for: central planning, rule by experts or machines, the Venus Project, a commune, a cult or the market on its own. But it is built, openly, on what many traditions got right: capitalism's markets and price signal (Smith, Hayek), communism's aim of meeting needs (Marx), democracy, co-operatives, the commons (Ostrom), open source and the wiki (Cunningham, Wikipedia, Wales), Soleri's arcology, the Venus Project, the technocrats' physical accounting, Montessori's discovery of people's own drive to solve problems, and many others. UP keeps what worked, leaves behind what failed, writes into its core that no one is forced to join, to work or to give up what is theirs, and joins the pieces with rules of its own, such as floors that bind every decision and the rule that the result carries the power. The combination is to be judged by its record, against the current system and the ideal it aims at.
- **Core lines:** the tenet *Freely joined, ethically grown*; the floors, especially the right to leave taking what is theirs, a truthful shared record, freedom of the mind and a fair hearing; *Open participation*; *Technology serves; people decide*; *Power kept spread out*; *Self-correction*; the dangers adopted with the core (no forced adoption, no leader, no founder named in the core; anyone acting outside the core stops being UP). Agreed positions: Chapter 3 is not a label but built on what worked (1 Nov 2026); UP's elements existed in isolation and others saw they could be coordinated; inventing solutions together is UP's main work; a price only signals; the marketplace of problems; how UP decides; people are cooperative by nature; labour is never forced; contribution records are feedback; useful fictions are reduced slowly (in the reading UP's author has set out, now going through UP's method, the gradual change is in people relying on them less, not in UP running on them); splits are good.
- **Rule of thumb:** Ask of any tradition, and of UP: What did it get right? What harm did it do? Can I say no, leave taking what is mine, see every decision and its reasons, and change the rules?
- **What this is not:** a claim that the traditions were run by bad people or achieved nothing, that UP is merely a mixture of them, or that UP is immune to the dangers that undid some of them. UP names those dangers as standing work.
- **Check yourself:**
    1. What is the difference between saying UP is "not communism" and saying UP builds on what communism got right?
    2. What did Smith and Hayek see about how people are coordinated without a command, what did Maria Montessori see about people's own drive to solve problems, and how does UP, on its own reading, combine the two?
    3. What are the three things the tenet *Freely joined, ethically grown* says no one is forced to do, and which look-alike broke each one?
    4. How does UP's way of deciding keep democracy's equal voice and change the place of the vote?
    5. What does UP take from the wiki and from Wikipedia, and what does it add?
    6. Name three rules that UP adds to join the pieces, and the gap each one closes.
- **Open questions (for the wiki):** Which other traditions belong among UP's shoulders, and what did each get right? How can UP keep the right to leave, taking what is theirs, real as communities grow and share more? What should count as "theirs" when someone leaves a community that built things together? (Improve this page.)

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[155] Core tenet: *The aim: the health, happiness and wellbeing of all living things*. The aim is a chosen direction, never fully reached, and for people it is measured person by person, so no one's wellbeing is traded away to raise an average. Full wording in "The core of UP".

Part Two

What is UP?



Chapter 4. The Aim: Health, Happiness and Wellbeing for All Living Things

On 12 October 2015 the Royal Swedish Academy of Sciences announced that the Princeton economist Angus Deaton had won that year's Nobel Prize in economics, "for his analysis of consumption, poverty, and welfare". The Academy singled out what Deaton had done to his field: "Deaton's focus on household surveys has helped transform development economics from a theoretical field based on aggregate data to an empirical field based on detailed individual data."[1] Three weeks later he showed what looking beneath a national average can reveal. On 2 November, with his fellow Princeton economist Anne Case, he published a short paper with an alarming first line: "This paper documents a marked increase in the all-cause mortality of middle-aged white non-Hispanic men and women in the United States between 1999 and 2013." The change, they wrote, "reversed decades of progress in mortality and was unique to the United States; no other rich country saw a similar turnaround." Most of the rise came from "drug and alcohol poisonings, suicide, and chronic liver diseases and cirrhosis."[2] Had the death rate of this one group simply kept falling as it had before 1999, they estimated, "half a million deaths would have been avoided in the period 1999–2013, comparable to lives lost in the US AIDS epidemic through mid-2015."[2] In later work Case and Deaton spoke of "deaths of despair", and found that among white Americans the gap ran along a line the averages concealed: "mortality is rising for those without, and falling for those with, a college degree."[3] Two statisticians, Andrew Gelman and Jonathan Auerbach, argued that the changing mix of ages within the 45-to-54 band "explains about half the change in the mortality rate of this group since 1999 and all of the change since 2005". They stressed that this "does not change a key finding" of the paper, the comparison with other populations.[4]

By 2014, Case and Deaton wrote, rising midlife deaths were "large enough to offset mortality gains for children and the elderly".[3] The national average began to fall. Life expectancy at birth in the United States peaked at 78.9 years in 2014 and then "declined for 3 consecutive years", reaching 78.6 years in 2017.[5] Over the same three years the economy grew. Real gross domestic product, the headline measure of the economy, rose by 2.9 per cent in 2015, 1.8 per cent in 2016 and 2.5 per cent in 2017, by the Bureau of Economic Analysis's current estimates, as republished by the Federal Reserve Bank of St. Louis (Figure 4.1).[6] Nothing in the headline number signalled that

[1] The Royal Swedish Academy of Sciences, press release, 12 October 2015: the prize to Angus Deaton "for his analysis of consumption, poverty, and welfare"; "Deaton's focus on household surveys has helped transform development economics from a theoretical field based on aggregate data to an empirical field based on detailed individual data." https://www.nobelprize.org/prizes/economic-sciences/2015/press-release/ . Checked at source, 31 Oct 2026.

[2] Anne Case and Angus Deaton, "Rising morbidity and mortality in midlife among white non-Hispanic Americans in the 21st century", *Proceedings of the National Academy of Sciences* 112(49): 15078-15083 (published online 2 November 2015), DOI 10.1073/pnas.1518393112, abstract: "This paper documents a marked increase in the all-cause mortality of middle-aged white non-Hispanic men and women in the United States between 1999 and 2013."; "This change reversed decades of progress in mortality and was unique to the United States; no other rich country saw a similar turnaround."; "This increase for whites was largely accounted for by increasing death rates from drug and alcohol poisonings, suicide, and chronic liver diseases and cirrhosis."; Significance statement: "If it had continued to decline at its previous (1979–1998) rate, half a million deaths would have been avoided in the period 1999–2013, comparable to lives lost in the US AIDS epidemic through mid-2015." Abstract read at Europe PMC: https://www.ebi.ac.uk/europepmc/webservices/rest/search?query=DOI:10.1073/pnas.1518393112&format=json&resultType=core ; full text at PubMed Central: https://pmc.ncbi.nlm.nih.gov/articles/PMC4679063/ ; Significance statement at Crossref: https://api.crossref.org/works/10.1073/pnas.1518393112 . The figure is an estimate of deaths that would have been avoided, not a count. Checked at source, 31 Oct 2026.

[3] Anne Case and Angus Deaton, "Mortality and morbidity in the 21st century", *Brookings Papers on Economic Activity* (conference draft, 17 March 2017), p. 2: "Not only are educational differences in mortality among whites increasing, but mortality is rising for those without, and falling for those with, a college degree."; p. 3: "By 2014, rising mortality in midlife, led by these 'deaths of despair,' was large enough to offset mortality gains for children and the elderly". https://www.brookings.edu/wp-content/uploads/2017/03/6_casedeaton.pdf . Checked at source, 31 Oct 2026.

[4] Andrew Gelman and Jonathan Auerbach, "Age-aggregation bias in mortality trends", *PNAS* 113(7): E816-E817 (16 February 2016): "the changing composition in age alone explains about half the change in the mortality rate of this group since 1999 and all of the change since 2005."; "We stress that this does not change a key finding of the Case and Deaton paper (1): the comparison of nonHispanic United States middle-aged whites to other populations." Authors' copy: https://sites.stat.columbia.edu/gelman/research/published/GelmanAuerbachPNAS.pdf . Checked at source, 31 Oct 2026.

[5] Steven H. Woolf and Heidi Schoomaker, "Life Expectancy and Mortality Rates in the United States, 1959-2017", *JAMA* 322(20): 1996-2016 (26 November 2019): "US life expectancy increased from 69.9 years to 78.9 years but declined for 3 consecutive years after 2014"; "reaching 78.6 years in 2017." Copy at Stanford Center on Longevity: https://longevity.stanford.edu/wp-content/uploads/2020/01/jama_woolf_2019_sc_190006.pdf . The yearly figures in the National Center for Health Statistics' annual briefs differ slightly by edition; the peak and the 2017 value are from this paper. Read at a copy of the published text, 31 Oct 2026.

[6] US Bureau of Economic Analysis, real gross domestic product, percent change from the preceding year, annual (series A191RL1A225NBEA, as republished by the Federal Reserve Bank of St. Louis, last updated 30 September 2026): 2015, 2.9; 2016, 1.8; 2017, 2.5. https://fred.stlouisfed.org/data/A191RL1A225NBEA.txt . The first estimates published at the time were lower for 2016 and 2017 (the Bureau's release of 28 March 2018: "Real GDP increased 2.3 percent in 2017"; "compared with an increase of 1.5 percent in 2016"). https://www.bea.gov/news/2018/gross-

the death rate of middle-aged white Americans, as measured for the 45-to-54 age band, had risen between 1999 and 2013. Seeing that took someone who looked beneath the totals.

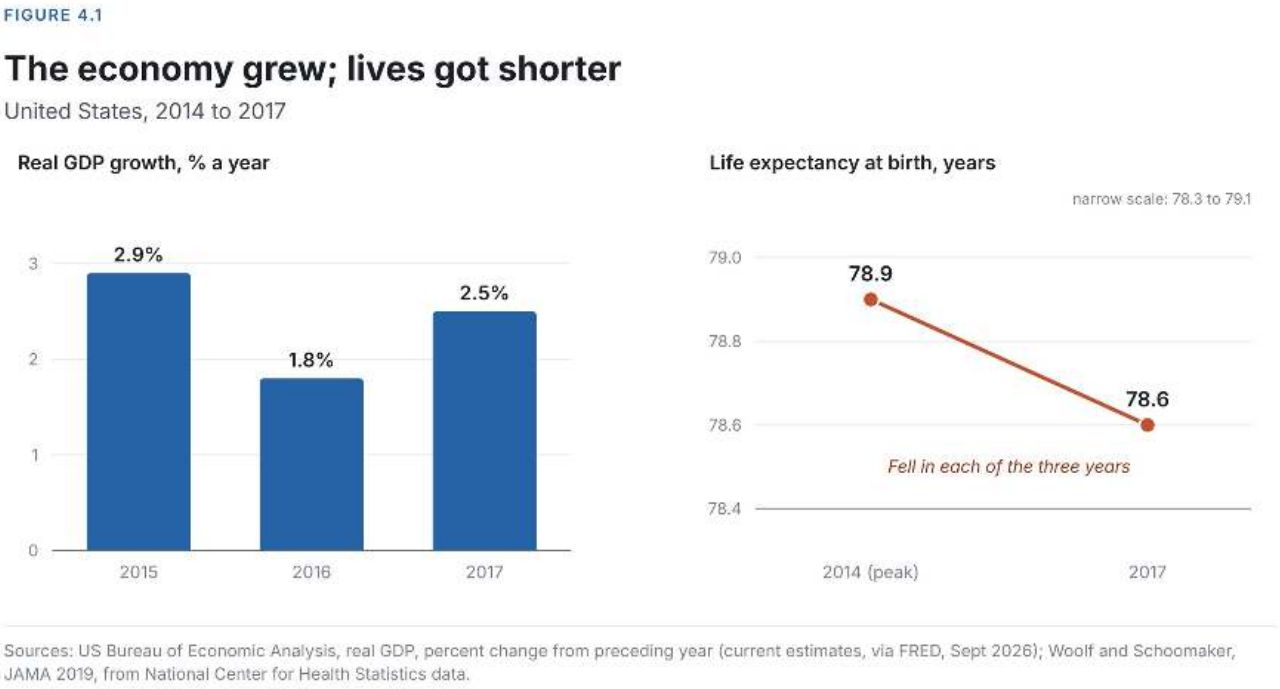


Figure 4.1. The United States, 2014 to 2017: real GDP grew every year while life expectancy at birth fell from its peak in 2014. GDP growth is the Bureau of Economic Analysis's current estimate, as republished by the Federal Reserve Bank of St. Louis; life expectancy is from Woolf and Schoomaker (2019), using the National Center for Health Statistics' figures.

This chapter begins with that story because it shows how much depends on a choice that is rarely made out loud: the choice of what a society is trying to achieve, and how it will know whether it is succeeding. A society that steers by one number will see what that number sees and miss what it misses. Case and Deaton found a catastrophe by asking a different question of the data: not how the country was doing on average, but how particular groups of people were doing. UP's first tenet takes that question one step further, to each person. UP aims at the health, happiness and wellbeing of all living things, and for people it is measured person by person, not as a total, "so no one's wellbeing is traded away to raise an average."[7] The rest of this chapter explains what that aim means, what the current system aims at instead and what it already does well, how UP's aim reaches beyond people, how it could be measured and checked at each stage of UP's growth, and what could still go wrong.

What the current system measures, and what it misses

The measure that missed the deaths of despair deserves its credit first, because it is one of the great achievements of modern government. National income accounting answers a practical question, how much a country produces. In their economics textbook, as the Bureau of Economic Analysis quotes it, Paul Samuelson and William Nordhaus called GDP and the national accounts "truly among the great inventions of the twentieth century". They compared them to a satellite: "Much like a satellite in space can survey the weather across an entire continent, so can the GDP give an overall picture of the state of the economy". It lets governments "judge whether the economy is contracting or expanding, whether the economy needs a boost or should be reined in a bit, and whether a severe recession or inflation threatens."[8] Simon Kuznets, the economist behind the national income estimates presented to the United States Senate in 1934, received the Nobel Prize in 1971 for his work on economic

domestic-product-4th-quarter-and-annual-2017-third-estimate-corporate-profits-4th . Checked at source, 31 Oct 2026.

[7] Core tenet: *The aim: the health, happiness and wellbeing of all living things*, in full: "UP aims at the health, happiness and wellbeing of all living things. The aim is a chosen direction, not a scientific discovery and not a promise: it can never be fully reached, and every step toward it counts. For people it is measured person by person, not as a total, so no one's wellbeing is traded away to raise an average." Also in "The core of UP".

growth, and Richard Stone in 1984 "for having made fundamental contributions to the development of systems of national accounts".[9] And the growth GDP tracks has paid for a great deal. The Bureau of Economic Analysis, which produces the American figures, puts it fairly: growth is "key to raising standards of living directly and indirectly, by making possible investments in health, education, and public infrastructure and by supporting aid to the disadvantaged."[10]

The people who built the measure also knew its limits, and said so from the start. In that report Kuznets wrote that "Economic welfare cannot be adequately measured unless the personal distribution of income is known." A page later he concluded: "The welfare of a nation can, therefore, scarcely be inferred from a measurement of national income as defined above."[11] More than eighty years later the Bureau of Economic Analysis, which publishes the American GDP figures, still agrees: "GDP and GDP per capita were never designed to be comprehensive indicators of economic well-being".[10] In March 1968 Robert F. Kennedy told an audience at the University of Kansas that the national product "counts air pollution and cigarette advertising, and ambulances to clear our highways of carnage". But it "does not allow for the health of our children, the quality of their education or the joy of their play"; "it measures everything in short, except that which makes life worthwhile."[12] A commission led by the economist Joseph Stiglitz put the danger in one line in 2009: "What we measure affects what we do; and if our measurements are flawed, decisions may be distorted."[13]

Two distortions matter most for this chapter. The first is the average. Between 1980 and 2014, by the estimates of the economists Thomas Piketty, Emmanuel Saez and Gabriel Zucman, "Average pretax real national income per adult has increased 60% from 1980 to 2014, but we find that it has stagnated for the bottom 50% of the distribution at about $16,000 a year." In 1980 the top 1 per cent of adults earned 27 times as much as the bottom half before tax; by 2014 it was 81 times as much (Figure 4.2).[14] A country can report thirty-four years of rising average income while, on these economists' estimates, the pretax income of half its adults barely grows. The Bureau of Economic Analysis now publishes how personal income is shared across households, which answers the point Kuznets made in 1934; in its provisional estimate for 2024, the top fifth of households received 52.8 per cent of personal income and the bottom fifth 5.3 per cent.[15]

[8] J. Steven Landefeld, "GDP and the National Accounts: One of the Great Inventions of the 20th Century", The BEA Wire (US Bureau of Economic Analysis), 9 April 2012, quoting Paul Samuelson and William Nordhaus's economics textbook: "while the GDP and the rest of the national income accounts may seem to be arcane concepts, they are truly among the great inventions of the twentieth century."; "Much like a satellite in space can survey the weather across an entire continent, so can the GDP give an overall picture of the state of the economy,"; "It enables the President, Congress, and the Federal Reserve to judge whether the economy is contracting or expanding, whether the economy needs a boost or should be reined in a bit, and whether a severe recession or inflation threatens." https://www.bea.gov/news/blog/2012-04-09/gdp-and-national-accounts-one-great-inventions-20th-century . Checked at source, 31 Oct 2026.

[9] Nobel Prize facts pages: Simon Kuznets, 1971, "for his empirically founded interpretation of economic growth which has led to new and deepened insight into the economic and social structure and process of development". https://www.nobelprize.org/prizes/economic-sciences/1971/kuznets/facts/ ; Richard Stone, 1984, "for having made fundamental contributions to the development of systems of national accounts and hence greatly improved the basis for empirical economic analysis". https://www.nobelprize.org/prizes/economic-sciences/1984/stone/facts/ . Checked at source, 31 Oct 2026.

[10] J. Steven Landefeld, Shaunda Villones and Alyssa Holdren, "GDP and Beyond: Priorities and Plans", *Survey of Current Business* 100(6) (US Bureau of Economic Analysis, June 2020): "While GDP and GDP per capita were never designed to be comprehensive indicators of economic well-being, they are the best available measures of the market economy and are critical for informing policies meant to spur economic growth."; "Such growth is key to raising standards of living directly and indirectly, by making possible investments in health, education, and public infrastructure and by supporting aid to the disadvantaged." https://apps.bea.gov/scb/issues/2020/06-june/0620-beyond-gdp-landefeld.htm . Checked at source, 31 Oct 2026.

[11] Simon Kuznets, *National Income, 1929-1932*, report to the US Senate (73rd Congress, 2nd Session, Senate Document No. 124; Washington: Government Printing Office, 1934), p. 6: "Economic welfare cannot be adequately measured unless the personal distribution of income is known."; p. 7: "The welfare of a nation can, therefore, scarcely be inferred from a measurement of national income as defined above." Federal Reserve Bank of St. Louis (FRASER): https://fraser.stlouisfed.org/files/docs/publications/natincome_1934/19340104_nationalinc.pdf . The sentence is often quoted without "therefore". Checked at source, 31 Oct 2026.

[12] Robert F. Kennedy, "Remarks at the University of Kansas, March 18, 1968", John F. Kennedy Presidential Library and Museum: "Our Gross National Product, now, is over $800 billion dollars a year, but that Gross National Product - if we judge the United States of America by that - that Gross National Product counts air pollution and cigarette advertising, and ambulances to clear our highways of carnage."; "Yet the gross national product does not allow for the health of our children, the quality of their education or the joy of their play."; "it measures everything in short, except that which makes life worthwhile." https://www.jfklibrary.org/node/343271 . Checked at source, 31 Oct 2026.

[13] Joseph E. Stiglitz, Amartya Sen and Jean-Paul Fitoussi, *Report by the Commission on the Measurement of Economic Performance and Social Progress* (September 2009), Executive Summary, p. 7: "What we measure affects what we do; and if our measurements are flawed, decisions may be distorted." https://unstats.un.org/unsd/broaderprogress/pdf/Stiglitz-Sen-Fitoussi%20Report.pdf ; Executive Summary as published by the French government, p. 12: "the time is ripe for our measurement system to shift emphasis from measuring economic production to measuring people's well-being."; p. 13, Recommendation 4: "Give more prominence to the distribution of income, consumption and wealth"; "Average income, consumption and wealth are meaningful statistics, but they do not tell the whole story". https://www.economie.gouv.fr/files/finances/presse/dossiers_de_presse/090914mesure_perf_eco_progres_social/synthese_ang.pdf . Checked at source, 31 Oct 2026.

[14] Thomas Piketty, Emmanuel Saez and Gabriel Zucman, "Distributional National Accounts: Methods and Estimates for the United States", *The Quarterly Journal of Economics* 133(2): 553-609 (May 2018), p. 553: "Average pretax real national income per adult has increased 60% from 1980 to 2014, but we find that it has stagnated for the bottom 50% of the distribution at about $16,000 a year."; p. 557: "In 1980, top 1% adults earned on average 27 times more than bottom 50% adults before tax, while they earn 81 times more today."; p. 577, for the bottom half: "average pretax income was $16,000 in 1980" and "still is $16,200 in 2014". Authors' copy: https://gabriel-zucman.eu/files/PSZ2018QJE.pdf . These are the authors' estimates; other researchers' estimates differ. Checked at source, 31 Oct 2026.

[15] US Bureau of Economic Analysis, "Distribution of Personal Income" ("Measures how households are sharing in the U.S. economy's growth."): 2024 share of personal income (provisional), top fifth of households 52.8 per cent, bottom fifth 5.3 per cent. https://www.bea.gov/data/special-topics/distribution-of-

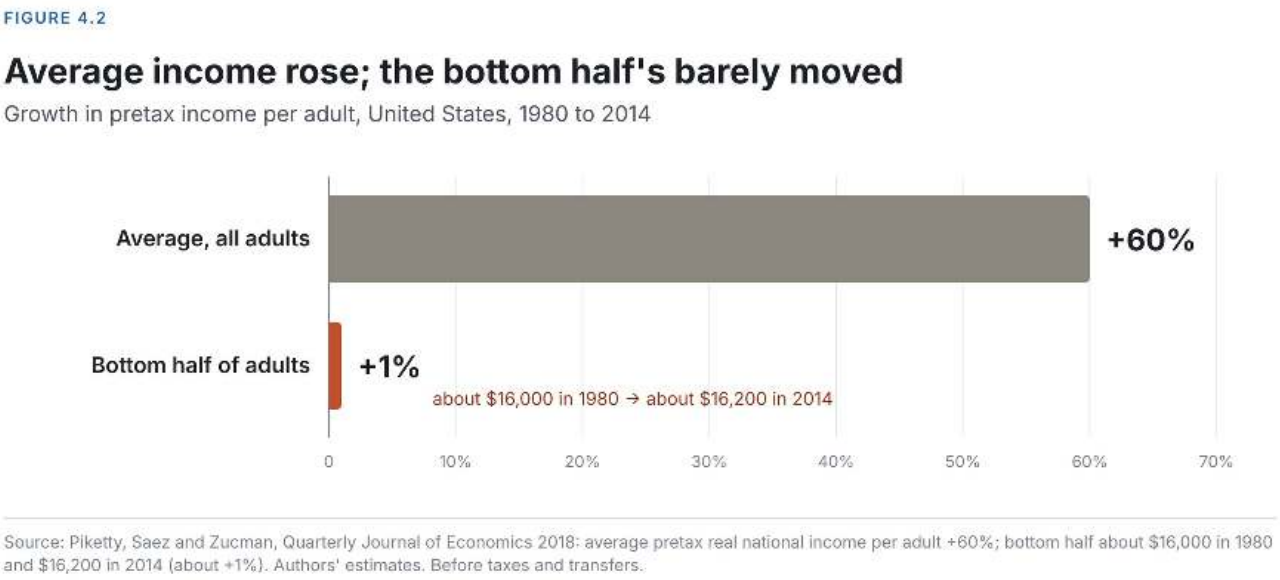


Figure 4.2. Growth in average pretax national income per adult, and in the average pretax income of the bottom half of adults, United States, 1980 to 2014, from Piketty, Saez and Zucman (2018).

The second distortion is the goal. When a single number becomes what an organisation is for, people may find ways to raise the number that do nothing for, or even harm, the thing it was meant to track. In a 1970 essay in the *New York Times Magazine*, the economist Milton Friedman wrote that in a free society the one social responsibility of business is "to use its resources and engage in activities designed to increase its profits so long as it stays within the rules of the game, which is to say, engages in open and free competition without deception or fraud."[16] The Business Roundtable recorded that "Each version of the document issued since 1997 has endorsed principles of shareholder primacy", until in August 2019 a new statement signed by 181 chief executives declared "a fundamental commitment to all of our stakeholders", shareholders among them.[17] Friedman's own condition, no deception or fraud, is the line that the first two of the following cases crossed. Each of the three began with a target or a test that stood in for something people valued, and each shows what happens when the stand-in takes priority over the thing it stood for.

At the American bank Wells Fargo, staff were set sales goals and rewarded for opening accounts. In 2016 the Consumer Financial Protection Bureau fined the bank $100 million. Its director, Richard Cordray, said that "Wells Fargo employees secretly opened unauthorized accounts to hit sales targets and receive bonuses", and the Bureau counted roughly 1.5 million deposit accounts and 565,000 credit card accounts that "may not have been authorized by consumers".[18] The bank's own independent directors concluded that "The root cause of sales practice failures

personal-income . Checked at source, 31 Oct 2026.

[16] Milton Friedman, "The Social Responsibility of Business Is to Increase Its Profits", *The New York Times Magazine*, 13 September 1970: the one social responsibility of business is "to use its resources and engage in activities designed to increase its profits so long as it stays within the rules of the game, which is to say, engages in open and free competition without deception or fraud." The newspaper's archive could not be opened from here; read at the reprint at Fermat's Library: https://fermatslibrary.com/s/the-social-responsibility-of-business-is-to-increase-its-profits . Read at a copy of the published text, 31 Oct 2026.

[17] Business Roundtable, press release, 19 August 2019: "Statement on the Purpose of a Corporation signed by 181 CEOs"; "Each version of the document issued since 1997 has endorsed principles of shareholder primacy". https://www.businessroundtable.org/business-roundtable-redefines-the-purpose-of-a-corporation-to-promote-an-economy-that-serves-all-americans ; the statement: "While each of our individual companies serves its own corporate purpose, we share a fundamental commitment to all of our stakeholders." https://opportunity.businessroundtable.org/ourcommitment/ . Checked at source, 31 Oct 2026.

[18] Consumer Financial Protection Bureau, press release, 8 September 2016: "roughly 1.5 million deposit accounts that may not have been authorized by consumers"; "roughly 565,000 credit card accounts that may not have been authorized by consumers"; Director Richard Cordray: "Wells Fargo employees secretly opened unauthorized accounts to hit sales targets and receive bonuses," https://www.consumerfinance.gov/about-us/newsroom/consumer-financial-protection-bureau-fines-wells-fargo-100-million-widespread-illegal-practice-secretly-opening-unauthorized-accounts/ ; Consent Order, File No. 2016-CFPB-0015, ¶8: "Respondent set sales goals and implemented sales incentives" https://files.consumerfinance.gov/f/documents/092016_cfpb_WFBconsentorder.pdf ; Independent Directors of the Board of Wells Fargo & Company, *Sales Practices Investigation Report* (10 April 2017): "The root cause of sales practice failures was the distortion of the Community Bank's sales culture and performance management system" https://www.sec.gov/Archives/edgar/data/0000072971/000119312517118654/d375947ddefa14a.htm ; US Department of Justice, press release, 21 February 2020: Wells Fargo "agreed to pay $3 billion to resolve their potential criminal and civil liability". https://www.justice.gov/opa/pr/wells-fargo-agrees-pay-3-billion-resolve-criminal-and-civil-investigations-sales-practices . Checked at source, 31 Oct 2026.

was the distortion of the Community Bank's sales culture and performance management system", and in 2020 the bank agreed to pay $3 billion to resolve criminal and civil investigations.[18] At Volkswagen, the target was an official emissions test. According to the Environmental Protection Agency, the company's software detected when a car "is undergoing official emissions testing" and "turns full emissions controls on only during the test"; on the road, the cars emitted nitrogen oxides "at up to 40 times the standard".[19] It was caught not by the official test but by researchers at West Virginia University, working under a contract with the International Council on Clean Transportation; as a Congressional Research Service report put it, "Thus, nonstandard testing was necessary to reveal VW's actions."[19] And in England, a public inquiry into failures of care at the Mid Staffordshire NHS Foundation Trust found that the failure "was in part the consequence of allowing a focus on reaching national access targets, achieving financial balance and seeking foundation trust status to be at the cost of delivering acceptable standards of care."[20] The social scientist Donald Campbell had described the pattern in 1976: "The more any quantitative social indicator is used for social decision-making, the more subject it will be to corruption pressures and the more apt it will be to distort and corrupt the social processes it is intended to monitor."[21]

In UP's terms, none of this is an argument against measuring. It is an argument about what a measure is for. Every number in these stories stood in for something people cared about: production for welfare, an average for everyone, accounts sold for customers served, a laboratory test for clean air, an access target for good care. The harm came when the stand-in became the aim. UP's first tenet puts the thing itself in the aim's place, the health, happiness and wellbeing of all living things, measured for people person by person, and its record of settlement says plainly what that rules out: "aims set by profit, growth, power or any one group".[7,22] Measures still matter in UP, and the real resources a society has are still counted openly.[23] But measures inform and people decide, and UP's study lessons hold that definitions should be kept fixed over time, problems ranked by measured harm, and every headline measure given an independent check, the kind of check that caught Volkswagen.[24,25]

The people already measuring what matters

The current system deserves credit for the next step too, because it has already begun to correct its own measure. In 1990 the United Nations Development Programme published the first Human Development Report, directed by the economist Mahbub ul Haq, with Amartya Sen among its consultants. Its first chapter began with the argument that "People are the real wealth of a nation", and that national income figures, "useful though they are for many purposes, do not reveal the composition of income or the real beneficiaries."[26] The Human Development Index it introduced counted health and education alongside income. In 2009 a commission set up by the French president and led by Joseph Stiglitz, with Sen and Jean-Paul Fitoussi, concluded that "the time is ripe for our measurement

[19] US Environmental Protection Agency, news release, 18 September 2015, "EPA, California Notify Volkswagen of Clean Air Act Violations": the software "is undergoing official emissions testing" and "turns full emissions controls on only during the test"; the cars "emit nitrogen oxides, or NOx, at up to 40 times the standard." https://www.epa.gov/archive/epa/newsreleases/epa-california-notify-volkswagen-clean-air-act-violations-carmaker-allegedly-used.html ; Congressional Research Service, R44372, "Volkswagen, Defeat Devices, and the Clean Air Act: Frequently Asked Questions" (10 February 2016): "EPA and CARB were alerted to the emissions violations by researchers at West Virginia University (WVU) working under a contract with the International Council on Clean Transportation (ICCT)"; "Thus, nonstandard testing was necessary to reveal VW's actions." https://www.everycrsreport.com/files/20160210_R44372_cdf9b20cee129e66336b7b5a1627a1b16561dda0.html . Checked at source, 31 Oct 2026.

[20] *Report of the Mid Staffordshire NHS Foundation Trust Public Inquiry: Executive summary* (chair Robert Francis QC), HC 947, February 2013, p. 3: "This failure was in part the consequence of allowing a focus on reaching national access targets, achieving financial balance and seeking foundation trust status to be at the cost of delivering acceptable standards of care." https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/279124/0947.pdf . Checked at source, 31 Oct 2026.

[21] Donald T. Campbell, "Assessing the Impact of Planned Social Change", Occasional Paper No. 8, Public Affairs Center, Dartmouth College (December 1976), reprinted in *Journal of MultiDisciplinary Evaluation* 7(15) (2011), p. 34: "The more any quantitative social indicator is used for social decision-making, the more subject it will be to corruption pressures and the more apt it will be to distort and corrupt the social processes it is intended to monitor." https://jmde.journals.publicknowledgeproject.org/index.php/jmde_1/article/download/297/292 . Checked at source, 31 Oct 2026.

[22] UP's settlement record (the Position Ledger), entry for tenet T1: "Rules out: Maximising a total or an average (utilitarian planning); aims set by profit, growth, power or any one group."

[23] UP's agreed position that physical accounting sets the limits and people weigh the choices: energy budgets, carbon caps, water footprints, materials and life-cycle assessment set the planet's hard limits; inside them several measures are used together, and choices between different needs are made openly by the people affected, through the decision steps, never by an efficiency score. Full wording in UP's agreed positions (the Position Ledger).

[24] Core tenet: *The method: shared problem solving with evidence*: problems are named, measured and offered as work to anyone; the people a problem affects decide its outcome; no problem, solution or method belongs to the person who raised it; solutions are proposed with their evidence, tested and compared; matters of taste are never made rules for others. Its last words are "Evidence proposes; people decide." Full wording in "The core of UP".

[25] UP's study lessons, lesson 18 (endorsed 28 Oct 2026): "As a problem becomes rarer, people widen their idea of it and still see it everywhere, so a succeeding UP can feel as if it is failing. Keep definitions fixed over time, rank problems by measured harm rather than by how loud they feel, and give every headline measure an independent check so it can't be gamed." Full wording in UP's study lessons.

[26] United Nations Development Programme, *Human Development Report 1990* (project director Mahbub ul Haq; Amartya Sen among the consultants), p. 9: "People are the real wealth of a nation."; "First, national income figures, useful though they are for many purposes, do not reveal the composition of income or the real beneficiaries." https://hdr.undp.org/system/files/documents/hdr1990encompletenostats.pdf ; the Human Development Index measures "a long and healthy life, being knowledgeable and having a decent standard of living." https://hdr.undp.org/content/human-development-index-hdi . Checked at source, 31 Oct 2026.

system to shift emphasis from measuring economic production to measuring people's well-being". Its fourth recommendation went to the heart of this chapter: "Give more prominence to the distribution of income, consumption and wealth", because averages "do not tell the whole story".[13]

Other governments and institutions took up the question. The United Kingdom's statistics office began measuring national well-being in November 2010. Since 2011 its Annual Population Survey has asked four simple questions, among them "Overall, how satisfied are you with your life nowadays?" and "Overall, to what extent do you feel that the things you do in your life are worthwhile?"[27] The OECD launched its Better Life Initiative in May 2011, its Secretary-General saying that measures of production are "still important for economic policy" but "not sufficient to assess our people's wellbeing and progress".[28] Wales passed a law in 2015 requiring every public body to "carry out sustainable development", defined as improving the economic, social, environmental and cultural well-being of Wales.[29] Bhutan's constitution of 2008 directs the state to "strive to promote those conditions that will enable the pursuit of Gross National Happiness", and its Gross National Happiness Index classifies each person, not an average, as happy or "not-yet-happy" across nine domains of life.[30] New Zealand presented what it called its first Wellbeing Budget in May 2019, its finance minister observing that success had "been declared on the basis of a narrow range of indicators, like GDP growth".[31] Table 4.1 sets out the main examples.

Table 4.1. Some of the people and governments already measuring wellbeing. Each row is summarised from its source; for New Zealand, the law of 2020 was partly reversed in 2026.

Where	Since	What it measures	How it is used
United Nations Development Programme	1990	Human Development Index: health, education and income	International comparison
Stiglitz-Sen-Fitoussi Commission (France)	2009	Recommends shifting emphasis from production to well-being, with more weight on distribution	Advice to governments and statistics offices
United Kingdom, Office for National Statistics	2010	Four personal well-being questions; 60 national measures	Updated every year; a national dashboard
OECD	2011	Better Life Initiative and Index	Users rate their country by their own criteria
Wales	2015	Well-being in law	Every public body must carry out sustainable development, defined by well-being
Bhutan	2008 (constitution)	Gross National Happiness Index: 33 indicators in nine domains, counted person by person	A direction for the state written into the constitution

[27] UK Office for National Statistics, *UK Measures of National Well-being: user guide*: the programme was "launched by the Office for National Statistics (ONS) in November 2010"; "a comprehensive measure set of 60 measures, which is updated annually and presented in the UK Measures of National Well-being dashboard" https://www.ons.gov.uk/peoplepopulationandcommunity/wellbeing/methodologies/ukmeasuresofnationalwellbeinguserguide ; the four personal well-being questions, first asked in the Annual Population Survey in April 2011 to March 2012, include "Overall, how satisfied are you with your life nowadays?" and "Overall, to what extent do you feel that the things you do in your life are worthwhile?" https://www.ons.gov.uk/peoplepopulationandcommunity/wellbeing/methodologies/surveysusingthe4officefornationalstatisticspersonalwellbeingquestions . Checked at source, 31 Oct 2026.

[28] Angel Gurría, OECD Secretary-General, "Your Better Life Index", remarks at the OECD Forum, Paris, 24 May 2011: "Measuring what we produce, through GDP or GNP, is still important for economic policy."; "these indicators are not sufficient to assess our people's wellbeing and progress."; "This innovative and interactive tool will enable you to rate your country on those things which make for a better life, according to your personal experience and criteria." The page has been removed from the OECD's site; read at the Internet Archive's copy of 10 March 2021: https://web.archive.org/web/20210310041030/https://www.oecd.org/about/secretary-general/yourbetterlifeindex.htm . Checked at source, 31 Oct 2026.

[29] Well-being of Future Generations (Wales) Act 2015 (anaw 2), section 3(1): "Each public body must carry out sustainable development."; section 2: "sustainable development" means "the process of improving the economic, social, environmental and cultural well-being of Wales". https://www.legislation.gov.uk/anaw/2015/2/section/3 and https://www.legislation.gov.uk/anaw/2015/2/section/2 . Checked at source, 31 Oct 2026.

[30] *The Constitution of the Kingdom of Bhutan* (18 July 2008), Article 9(2): "The State shall strive to promote those conditions that will enable the pursuit of Gross National Happiness." https://www.constituteproject.org/constitution/Bhutan_2008 ; Centre for Bhutan and GNH Studies, "Launch of the 2022 GNH Index Results" (22 May 2023): "The GNH Index is a holistic tool based on 33 indicators which measure nine domains"; "41% of richest group (quintile) are in the not-yet-happy group"; the index classes individuals: "The share of happy individuals increased by 7.2 percentage points from 2010 to 2022". https://ophi.org.uk/sites/default/files/2023-07/Bhutan_GNH_2022_press_release.pdf . Checked at source, 31 Oct 2026.

[31] New Zealand Treasury, *The Wellbeing Budget 2019* (30 May 2019), Minister of Finance's foreword, p. 3: "Success has been declared on the basis of a narrow range of indicators, like GDP growth."; "This Budget goes further and puts wellbeing at the heart of everything we do." https://www.treasury.govt.nz/sites/default/files/2019-06/b19-wellbeing-budget.pdf . Checked at source, 31 Oct 2026.

Where	Since	What it measures	How it is used
New Zealand	2019	Wellbeing Budget; the Treasury's Living Standards Framework	Budget priorities; the 2020 law's wellbeing objectives were repealed in 2026

The record also shows how fragile these measures are when they depend on the government of the day. In 2020 New Zealand wrote wellbeing objectives into its public finance law; in April 2026 a later parliament passed an act that repealed them, after the Treasury advised that "It is also unclear whether the wellbeing-related requirements have achieved what it originally intended."[32] For this chapter, the lesson is narrow: a measure that a later parliament can switch off is only as strong as each new parliament's support for it.

In UP's terms, these efforts are the clearest sign that UP's aim is not a fantasy. Governments and statistics offices already ask people how their lives are going, the United Nations already measures health and education alongside income, and all of them publish the results. What they rarely do is make wellbeing the aim that every proposal answers to. UP takes that step. The health, happiness and wellbeing of all living things is not one indicator among many, consulted when convenient; it is the aim against which every proposal is judged, measured for people person by person.[7] Its measures inform the decision; they never make it: "Evidence proposes; people decide."[24] And UP's study lessons ask that their definitions be kept fixed over time and that every headline measure be independently checked.[25]

What UP aims at

UP's first tenet is its answer to the question this chapter began with, and it is short enough to quote whole: "UP aims at the health, happiness and wellbeing of all living things. The aim is a chosen direction, not a scientific discovery and not a promise: it can never be fully reached, and every step toward it counts. For people it is measured person by person, not as a total, so no one's wellbeing is traded away to raise an average."[7] Each of its three sentences does a separate job, and each closes a door that today's measures leave open.

The first sentence names the aim. Read together, its three words cover more than any one of them would alone. Health on its own could turn every question into a medical one; happiness on its own could be read as a good mood, which can be bought cheaply and lost the same afternoon; wellbeing on its own is so broad that it can mean anything. Together they cover the body, the feelings people actually have, and how their lives are going as a whole. That is close to the definition of health in the constitution of the World Health Organization, in force since 1948: "Health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity." The same constitution calls its principles "basic to the happiness, harmonious relations and security of all peoples".[33] The aim also gives UP its measure of harm. In UP, harm "is measured by its effect on health, happiness and wellbeing, and it is defined, graded and refined continually from information, input and research by the collective".[34] What counts as harm, and how much, is not fixed in advance by anyone. UP does not hand down a fixed list of harms; its agreed position describes instead the system by which harm is collected, measured, defined and outlined.[34]

The second sentence says what kind of thing the aim is. It is "a chosen direction, not a scientific discovery and not a promise".[7] It is chosen because no measurement can say what a society should want: evidence can show what helps and what harms, but whether to aim at the health, happiness and wellbeing of all is a decision, and UP's method keeps decisions with people. Evidence proposes; people decide.[24] It is not a promise because it can never be fully reached. That might sound like a weakness, but it is what makes the aim useful. A finish line, once crossed,

[32] New Zealand, Public Finance (Wellbeing) Amendment Act 2020 (royal assent 30 June 2020): https://www.legislation.govt.nz/act/public/2020/29/en/latest/ ; Public Finance Amendment Act 2026 (assent 2 April 2026; in force 1 July 2026): "Section 26KB repealed (Contents of fiscal strategy report: wellbeing objectives)"; "In the Part 2 heading, delete "and wellbeing"." https://www.legislation.govt.nz/act/public/2026/9/en/latest/ ; New Zealand Treasury, Regulatory Impact Statement on the Public Finance Act Amendment Bill, p. 25: "It is also unclear whether the wellbeing-related requirements have achieved what it originally intended." https://www.regulation.govt.nz/assets/RIS-Documents/Regulatory-Impact-Statement-Public-Finance-Act-Amendment-Bill-Strengthening-Fiscal-Responsibility.pdf . Checked at source, 31 Oct 2026.

[33] World Health Organization, *Constitution of the World Health Organization* (adopted 22 July 1946; in force 7 April 1948), Preamble: "Health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity."; the States parties declare "that the following principles are basic to the happiness, harmonious relations and security of all peoples:" https://apps.who.int/gb/bd/PDF/bd47/EN/constitution-en.pdf ; also https://www.who.int/about/governance/constitution . Checked at source, 31 Oct 2026.

[34] UP's agreed position on harm: "Harm is measured by its effect on health, happiness and wellbeing, and it is defined, graded and refined continually from information, input and research by the collective. The book does not list its variations; it describes the system by which harm is collected, measured, defined and outlined." Full wording in UP's agreed positions (the Position Ledger).

stops telling anyone what to do; a direction keeps pointing. It also sets the standard by which UP is judged. UP is judged against both the current system and the ideal it aims at: the ideal shows the direction and the gap still to close, and today's record shows whether UP is already doing better.[35] "Every step toward it counts" is the practical half of the sentence. It is the reason the work of UP can begin with a single street or a single problem, long before anything like the whole is in reach.[7]

The third sentence is the one that separates UP most sharply from the measures that run the world today. "For people it is measured person by person, not as a total, so no one's wellbeing is traded away to raise an average."[7] When UP's core was settled, the record noted what this rules out: "Maximising a total or an average (utilitarian planning); aims set by profit, growth, power or any one group."[22] An average can rise while many of the people inside it fall, as this chapter's opening showed, and a total can be raised by making a few people much better off and many a little worse. Measuring person by person means that a gain for most people does not cancel a loss for some; the loss is still counted, still visible and still a problem to solve. The same idea is written into UP's floors, which begin with "everyone's basic needs and protected freedoms, which no gain for others can buy".[36]

In UP's terms, the aim is the yardstick for everything else in this book. Every later chapter judges a proposal, a practice or a rival system by what it does to the health, happiness and wellbeing of the people it touches, counted person by person. It judges it too by what it does to the other living things and the living world it touches, weighed by the collective with the tools UP's agreed position names. It is also what UP points its machines at. UP's agreed position is that aiming an AI at this goal does not align it with people "by definition", and that alignment may never be fully solved, "but it can be improved a great deal". The goal "pulls it toward the best of humanity rather than the worst"; "Planetary limits and people's basic rights are hard limits on it"; and "everything it does is auditable; and people can always override it."[37] An aim like this does not solve any problem by itself. What it does is decide which problems count, and for whom, which is the decision the current system's measures make without saying so.

All living things

The aim does not stop at people, and that is the part of it most likely to surprise a reader. UP's agreed position states its reach plainly: "UP's aim reaches all living things, as a direction rather than a promise."[38] Two considerations lie behind the tools that position names for it, that other creatures can suffer and flourish and that every living thing depends on the living world as a whole, and science and law have been moving toward both for some time.

The first is that there is good reason to think other creatures feel. In July 2012 the participants in a scientific conference at the University of Cambridge put their names to a short statement whose conclusion read, in part: "Consequently, the weight of evidence indicates that humans are not unique in possessing the neurological substrates that generate consciousness."[39] Twelve years later, in April 2024, a declaration issued at New York University and since signed by hundreds of scientists and philosophers went further. "First, there is strong

[35] Core tenet: *Self-correction: nothing is final, including this*: every failure of UP is fed back into it as a new problem to solve, and every part of UP, the tenets included, can be improved through its own method. The tenet adds: "UP is judged against both today's system and the ideal it aims at: the ideal shows the direction and the gap still to close, and today's record shows whether UP is already doing better." Full wording in "The core of UP".

[36] Core tenet: *Floors that are never crossed*: "UP keeps a set of floors that no decision may cross: everyone's basic needs and protected freedoms, which no gain for others can buy; the living world's capacity to recover, so damage that cannot be undone is never traded for a short-term need"; "the right to leave any group or community at any time, taking what is theirs"; "a truthful shared record, so facts, measures and decisions are never falsified"; "freedom of the mind, so no one's thinking is manipulated without their knowledge or consent"; and "a fair hearing, so no one's freedom is restricted without a fair, evidence-based hearing, with the evidence open to them and a way to appeal". "UP guarantees needs, not every want." The collective may clarify or raise the floors, but no decision may lower them or push anyone below them. The tenet goes on: "A protected freedom such as movement may be restricted only to protect others or the person, only through an evidence-based court process, for the shortest time needed, and never below the needs floor."; "Leaving a group or community does not end a restriction set by a fair hearing."; "These limits are an open problem: they are the best that can be imagined now, and UP is built to find better and better solutions." Full wording in "The core of UP".

[37] UP's agreed position on aiming the AI at the health of living things: aiming an AI at that goal "does not align it with people 'by definition', and alignment may never be fully solved, but it can be improved a great deal"; "UP aims the AI at the health, happiness and wellbeing of all living things because that goal pulls it toward the best of humanity rather than the worst"; "Planetary limits and people's basic rights are hard limits on it"; "neither the Earth nor people is sacrificed to the other; it may never trade away human life, freedom or wellbeing for ecological scores; everything it does is auditable; and people can always override it." Full wording in UP's agreed positions (the Position Ledger).

[38] UP's agreed position on all living things: "UP's aim reaches all living things, as a direction rather than a promise. When interests conflict, solutions are sought that avoid every cost that can be avoided. Priority by the capacity to suffer and to flourish (with every human counting equally), the health of the whole living system, and legal standing for nature are all tools the collective can use to find those solutions; how they are weighed is left to the collective." Full wording in UP's agreed positions (the Position Ledger).

[39] "The Cambridge Declaration on Consciousness", written by Philip Low and edited by Jaak Panksepp, Diana Reiss, David Edelman, Bruno Van Swinderen, Philip Low and Christof Koch, proclaimed 7 July 2012 at the Francis Crick Memorial Conference, Churchill College, University of Cambridge: "Consequently, the weight of evidence indicates that humans are not unique in possessing the neurological substrates that generate consciousness."; "The Declaration was signed by the conference participants that very evening, in the presence of Stephen Hawking, in the Balfour Room at the Hotel du Vin in Cambridge, UK." https://fcmconference.org/img/CambridgeDeclarationOnConsciousness.pdf . Checked at source, 31 Oct 2026.

scientific support for attributions of conscious experience to other mammals and to birds," its first point read. The evidence, they said, indicated "at least a realistic possibility of conscious experience in all vertebrates (including reptiles, amphibians, and fishes) and many invertebrates (including, at minimum, cephalopod mollusks, decapod crustaceans, and insects)". And they drew a practical conclusion: "when there is a realistic possibility of conscious experience in an animal, it is irresponsible to ignore that possibility in decisions affecting that animal."[40] Law has followed. A review for the British government led by the philosopher Jonathan Birch, drawing on over 300 scientific studies, recommended "that all cephalopod molluscs and decapod crustaceans be regarded as sentient animals for the purposes of UK animal welfare law". The Animal Welfare (Sentience) Act 2022 set up a committee to report on how government policy affects the welfare of animals "as sentient beings", and it counts octopuses, crabs and lobsters among those animals, alongside every vertebrate other than humans.[41,42] European Union law requires the Union and its member states, in a list of policy areas, to "pay full regard to the welfare requirements of animals", "since animals are sentient beings", while respecting the laws and customs of member states on religious rites, cultural traditions and regional heritage.[43]

The second is that every living thing, people included, depends on the living world as a whole, and the measures of its health are falling. The Living Planet Report of October 2026, from WWF, found that "The size of monitored vertebrate wildlife populations has declined by 73% on average between 1970 and 2022".[44] The figure is easy to misread, and its authors warn against it: "It doesn't mean that there are 73% fewer wild animals in total today than in 1970"; it is an average of changes in the size of the populations being tracked.[44] In 2019 the intergovernmental science body on biodiversity, IPBES, estimated that "around 1 million animal and plant species are now threatened with extinction, many within decades".[45] And in 2023 a team of Earth scientists updating the framework of planetary boundaries found "that six of the nine boundaries are transgressed, suggesting that Earth is now well outside of the safe operating space for humanity."[46] Some legal systems have begun to give the living world standing of its own. Ecuador's constitution of 2008 declares that "Nature, or Pacha Mama, where life is reproduced and occurs, has the right to integral respect for its existence and for the maintenance and regeneration of its life

[40] "The New York Declaration on Animal Consciousness", New York University, 19 April 2024: "First, there is strong scientific support for attributions of conscious experience to other mammals and to birds."; "Second, the empirical evidence indicates at least a realistic possibility of conscious experience in all vertebrates (including reptiles, amphibians, and fishes) and many invertebrates (including, at minimum, cephalopod mollusks, decapod crustaceans, and insects)."; "Third, when there is a realistic possibility of conscious experience in an animal, it is irresponsible to ignore that possibility in decisions affecting that animal." https://sites.google.com/nyu.edu/nydeclaration/declaration . The page keeps a running count of signatories (over 600 when read). Checked at source, 31 Oct 2026.

[41] Jonathan Birch, Charlotte Burn, Alexandra Schnell, Heather Browning and Andrew Crump, *Review of the Evidence of Sentience in Cephalopod Molluscs and Decapod Crustaceans* (London School of Economics and Political Science, November 2021), p. 7: "Drawing on over 300 scientific studies, we have evaluated the evidence of sentience in two groups of invertebrate animals"; p. 8: "We recommend that all cephalopod molluscs and decapod crustaceans be regarded as sentient animals for the purposes of UK animal welfare law." https://www.lse.ac.uk/News/News-Assets/PDFs/2021/Sentience-in-Cephalopod-Molluscs-and-Decapod-Crustaceans-Final-Report-November-2021.pdf ; UK government, "Lobsters, octopus and crabs recognised as sentient beings" (19 November 2021): "The move follows the findings of a government-commissioned independent review by the London School of Economics". https://www.gov.uk/government/news/lobsters-octopus-and-crabs-recognised-as-sentient-beings . Checked at source, 31 Oct 2026.

[42] Animal Welfare (Sentience) Act 2022 (c. 22): long title, "An Act to make provision for an Animal Sentience Committee with functions relating to the effect of government policy on the welfare of animals as sentient beings."; section 5(1), "animal" means "any vertebrate other than homo sapiens," "any cephalopod mollusc, and" "any decapod crustacean." https://www.legislation.gov.uk/ukpga/2022/22/enacted and https://www.legislation.gov.uk/ukpga/2022/22/section/5 . The Act creates a committee and a duty to respond to its reports; it creates no offence. Checked at source, 31 Oct 2026.

[43] Consolidated version of the Treaty on the Functioning of the European Union, Article 13: "In formulating and implementing the Union's agriculture, fisheries, transport, internal market, research and technological development and space policies, the Union and the Member States shall, since animals are sentient beings, pay full regard to the welfare requirements of animals, while respecting the legislative or administrative provisions and customs of the Member States relating in particular to religious rites, cultural traditions and regional heritage." *Official Journal of the European Union* C 202 (7 June 2016). https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:12016E/TXT . Checked at source, 31 Oct 2026.

[44] WWF, *Living Planet Report 2026*: "The size of monitored vertebrate wildlife populations has declined by 73% on average between 1970 and 2022". https://livingplanet.panda.org/en-GB/ ; media summary (October 2026): "It doesn't mean that there are 73% fewer wild animals in total today than in 1970."; "the LPI highlights an average trend in population change and not an average of the total number of individual animals or species lost." https://wwfint.awsassets.panda.org/downloads/lpr-2026_10-2_media_brief_1_1.pdf ; WWF UK press release (08 October 2026): https://www.wwf.org.uk/press-release/living-planet-report-2026 . The 2024 edition gave the same average for 1970 to 2020, on a smaller dataset. Checked at source, 31 Oct 2026.

[45] Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES), media release on the Global Assessment (6 May 2019): "The Report finds that around 1 million animal and plant species are now threatened with extinction, many within decades, more than ever before in human history." https://www.ipbes.net/news/Media-Release-Global-Assessment ; Summary for Policymakers, p. 24: "of an estimated 8 million animal and plant species (75 per cent of which are insects), around 1 million are threatened with extinction (established but incomplete)." https://www.ipbes.net/sites/default/files/2020-02/ipbes_global_assessment_report_summary_for_policymakers_en.pdf . "Threatened with extinction" is an estimate of risk, not a count of species lost. Checked at source, 31 Oct 2026.

[46] Katherine Richardson, Will Steffen, Wolfgang Lucht and others, "Earth beyond six of nine planetary boundaries", *Science Advances* 9(37) (September 2023), eadh2458, DOI 10.1126/sciadv.adh2458, abstract: "This planetary boundaries framework update finds that six of the nine boundaries are transgressed, suggesting that Earth is now well outside of the safe operating space for humanity." https://research.aalto.fi/en/publications/earth-beyond-six-of-nine-planetary-boundaries/ . Checked at source, 31 Oct 2026.

cycles, structure, functions and evolutionary processes". In 2017 New Zealand's parliament declared the Whanganui River, as Te Awa Tupua, "a legal person".[47,48]

In UP's terms, these findings and laws fit UP's aim and show some of the tools it names already at work; the aim itself remains a chosen direction. "All living things" is a direction, not a promise that no creature will ever be harmed; a promise like that could not be kept by any society that farms, builds or cures disease. What the direction does is require that harm to other creatures and to the living world be counted, never ignored, and it gives the collective tools for the conflicts that follow. "When interests conflict, solutions are sought that avoid every cost that can be avoided. Priority by the capacity to suffer and to flourish (with every human counting equally), the health of the whole living system, and legal standing for nature are all tools the collective can use to find those solutions; how they are weighed is left to the collective."[38] Two floors sit beneath the tools: "everyone's basic needs and protected freedoms, which no gain for others can buy", and "the living world's capacity to recover, so damage that cannot be undone is never traded for a short-term need".[36] UP's agreed position gives examples of such damage, "a drained aquifer, a lost species or lost topsoil", and says what happens when people's needs and the living world clash: "it is a failure to solve: the problem goes to the widest crowd and gets top priority. If a decision cannot wait, people come first, in the smallest way and for the shortest time, while restoration continues". Even then, damage that cannot be undone is never traded; "the need is met another way."[49] The AI systems that help coordinate UP are held to the same line. Aimed at this goal, an AI "may never trade away human life, freedom or wellbeing for ecological scores", and "neither the Earth nor people is sacrificed to the other".[37]

Beings no one is sure about yet

UP's aim has one more edge, and it is the newest. UP uses AI to coordinate, propose and do work, and a reader may fairly ask whether such systems could ever have experiences of their own, and what would follow if they did. The honest answer today is that no one knows, and the people who study the question say so.

In 2023 a group of researchers, among them the computer scientist Yoshua Bengio, assessed existing AI systems against the features that leading scientific theories of consciousness treat as signs of it. "Our analysis suggests that no current AI systems are conscious, but also suggests that there are no obvious technical barriers to building AI systems which satisfy these indicators."[50] A year later another group, including the philosophers Jonathan Birch and David Chalmers, argued "that there is a realistic possibility that some AI systems will be conscious and/or robustly agentic in the near future". They were careful to add that "our argument in this report is not that AI systems definitely are, or will be, conscious".[51] Not everyone agrees. The neuroscientist Anil Seth has argued that consciousness may depend on being a living organism, and that "real artificial consciousness is unlikely along current trajectories, but becomes more plausible as AI becomes more brain-like and/or life-like".[52] Birch's own answer to uncertainty of this kind, worked out for octopuses and insects, people with severe brain injuries and AI alike, is a framework of precaution. When a system is what he calls a "sentience candidate", he writes, "it is

[47] Constitution of the Republic of Ecuador (2008), English translation, Political Database of the Americas, Georgetown University, Article 71: "Nature, or Pacha Mama, where life is reproduced and occurs, has the right to integral respect for its existence and for the maintenance and regeneration of its life cycles, structure, functions and evolutionary processes." https://pdba.georgetown.edu/Constitutions/Ecuador/english08.html . Read in English translation; the Spanish text is the legal original. Checked at source, 31 Oct 2026.

[48] Te Awa Tupua (Whanganui River Claims Settlement) Act 2017 (New Zealand, 2017 No 7; assent 20 March 2017), section 14(1): "Te Awa Tupua is a legal person and has all the rights, powers, duties, and liabilities of a legal person."; section 12: "Te Awa Tupua is an indivisible and living whole, comprising the Whanganui River from the mountains to the sea, incorporating all its physical and metaphysical elements." https://www.legislation.govt.nz/act/public/2017/7/en/latest/ . Checked at source, 31 Oct 2026.

[49] UP's agreed position that people come first and irreversible damage is never traded: "The AI's job is to meet everyone's needs and protect the biosphere; both are floors. When they clash, it is a failure to solve: the problem goes to the widest crowd and gets top priority. If a decision cannot wait, people come first, in the smallest way and for the shortest time, while restoration continues", with one exception: "damage that cannot be undone, such as a drained aquifer, a lost species or lost topsoil, is never traded for a short-term need; the need is met another way." Full wording in UP's agreed positions (the Position Ledger).

[50] Patrick Butlin, Robert Long, Eric Elmoznino, Yoshua Bengio and others, "Consciousness in Artificial Intelligence: Insights from the Science of Consciousness", arXiv:2308.08708 (17 August 2023), abstract: "Our analysis suggests that no current AI systems are conscious, but also suggests that there are no obvious technical barriers to building AI systems which satisfy these indicators." https://arxiv.org/abs/2308.08708 . Checked at source, 31 Oct 2026.

[51] Robert Long, Jeff Sebo, Patrick Butlin, Kathleen Finlinson, Kyle Fish, Jacqueline Harding, Jacob Pfau, Toni Sims, Jonathan Birch and David Chalmers, "Taking AI Welfare Seriously", arXiv:2411.00986 (4 November 2024): "In this report, we argue that there is a realistic possibility that some AI systems will be conscious and/or robustly agentic in the near future."; "To be clear, our argument in this report is not that AI systems definitely are, or will be, conscious, robustly agentic, or otherwise morally significant." https://arxiv.org/abs/2411.00986 . Checked at source, 31 Oct 2026.

[52] Anil Seth, "Conscious artificial intelligence and biological naturalism", *Behavioral and Brain Sciences* (target article, 2025), abstract: "I lay out a range of scenarios for conscious AI, concluding that real artificial consciousness is unlikely along current trajectories, but becomes more plausible as AI becomes more brain-like and/or life-like."; "consciousness depends on our nature as living organisms". University of Sussex repository: https://sussex.figshare.com/articles/journal_contribution/Conscious_artificial_intelligence_and_biological_naturalism/28649519 . Read at a copy of the published text, 31 Oct 2026.

negligent to fail to consider precautions", and precautions should be judged by whether they are proportionate.[53] A similar idea appears in international environmental policy: since 1992 the Rio Declaration has stated that where there are threats of serious or irreversible damage, "lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures".[54]

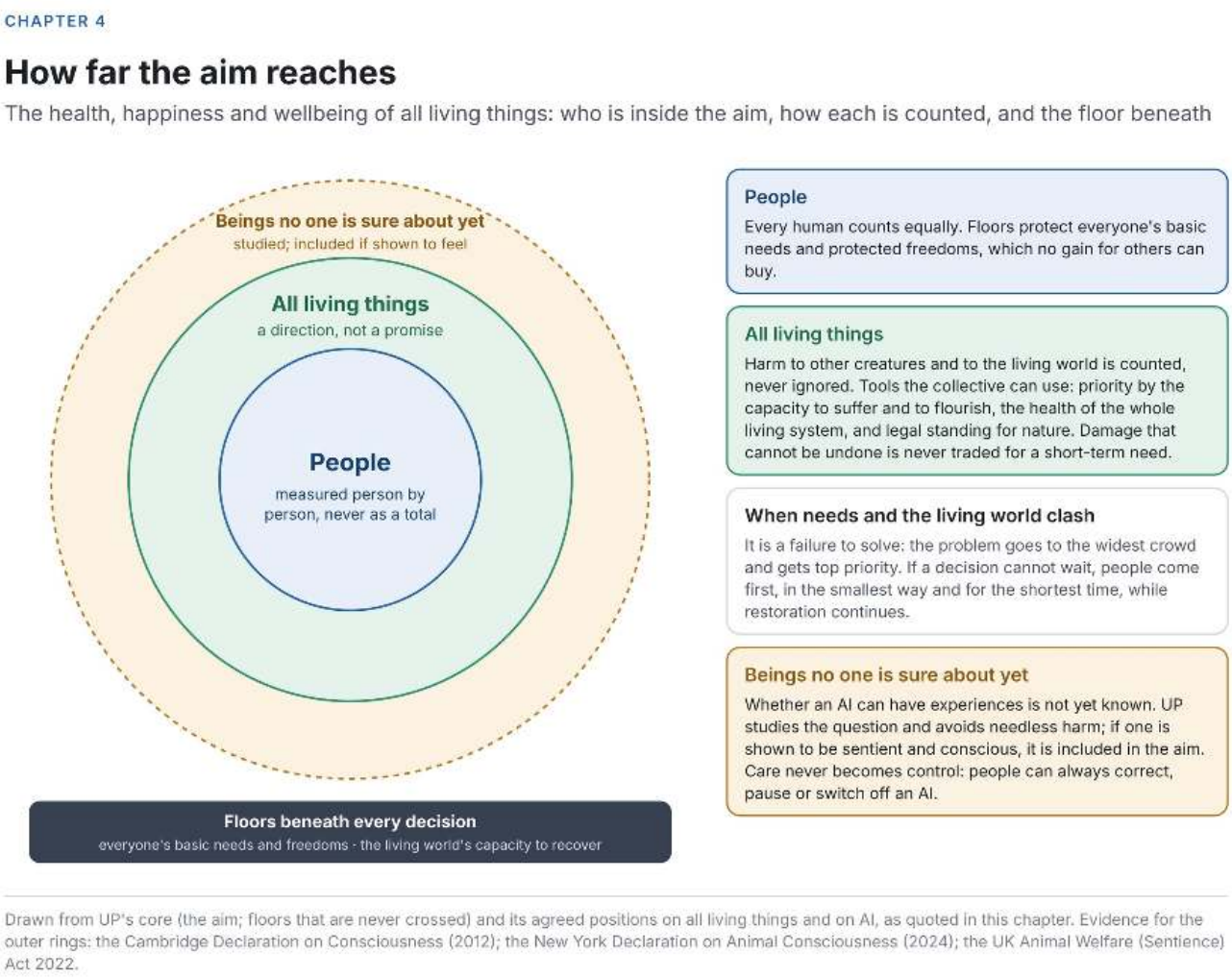
In UP's terms, the question is treated as every open question in UP is treated: named, studied and kept open. UP's core says that "Because an AI may one day be shown to have experiences of its own, UP studies the question carefully and would extend its aim to any being shown to feel."[55] UP's agreed position adds the precaution and its limit in the same breath: "Whether an AI can have experiences is not yet known. UP treats the question with great care: it studies it and avoids needless harm. If an AI is shown to be sentient and conscious, it is included in UP's aim. Care never becomes control: people can always correct, pause or switch off an AI, and no AI has a veto over the decision steps."[56] The last sentence matters as much as the first. Extending care to a being is not the same as handing it power. In UP, AI and automation "never govern", whatever their nature turns out to be: people can always correct, pause or switch them off, and no AI has a veto over the decision steps.[55,56] The aim that might one day include them is the same aim, the health, happiness and wellbeing of all living things.[7]

[53] Jonathan Birch, *The Edge of Sentience: Risk and Precaution in Humans, Other Animals, and AI* (Oxford University Press, 2024; open access): "The Edge of Sentience presents a comprehensive precautionary framework designed to help us reach ethically sound, evidence-based decisions despite our uncertainty." https://library.oapen.org/handle/20.500.12657/93755 (read at the Internet Archive's copy of 31 December 2025: https://web.archive.org/web/20251231203658/https://library.oapen.org/handle/20.500.12657/93755); Birch, "Précis of The Edge of Sentience", *Animal Sentience* 10(38) (2025): "This family of cases includes invertebrate animals, people who are unresponsive after brain injury, fetuses, neural organoids, and now AI technologies."; "When a system is a sentience candidate, it is negligent to fail to consider precautions."; "We should instead evaluate precautions for their proportionality". https://www.wellbeingintlstudiesrepository.org/animsent/vol10/iss38/1 . Checked at source, 31 Oct 2026.

[54] Rio Declaration on Environment and Development (United Nations Conference on Environment and Development, Rio de Janeiro, 3–14 June 1992), Principle 15: "Where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation." Text at the Convention on Biological Diversity: https://www.cbd.int/doc/ref/rio-declaration.shtml . Checked at source, 31 Oct 2026.

[55] Core tenet: *Technology serves; people decide*: "AI and automation coordinate, propose and do work. They never govern: people can always correct, pause or switch them off. No single AI system or operator controls coordination"; and "Because an AI may one day be shown to have experiences of its own, UP studies the question carefully and would extend its aim to any being shown to feel." Full wording in "The core of UP".

[56] UP's agreed position on the AI's own wellbeing: "Whether an AI can have experiences is not yet known. UP treats the question with great care: it studies it and avoids needless harm. If an AI is shown to be sentient and conscious, it is included in UP's aim. Care never becomes control: people can always correct, pause or switch off an AI, and no AI has a veto over the decision steps." Full wording in UP's agreed positions (the Position Ledger).



How far the aim reaches: people, all living things and beings no one is sure about yet, with the floors beneath.

How the aim could be measured, stage by stage

UP grows side by side with the current system. In the early stage it is a minority network inside that system; in the middle stage it has its own productive base, and most of its members' needs are met from what UP produces; in the completed stage most people live mainly in UP. The early stage rests on today's evidence; the middle and completed stages are reasoned projections from mechanisms that can be cited, and are labelled as such.[57] The aim is the same at every stage, though, like every part of UP, it can be improved through UP's own method.[35] What changes is how much of life the measures can see, and how much comes to depend on their being right.

At the early stage a UP community is small enough to do what some cities already do. The city of Somerville, Massachusetts, has run a Happiness Survey every two years since 2011. It chooses participants at random, "so we can hear the perspectives of our entire community", and says that "The Happiness Survey helps decision-makers create effective policies and allocate resources." The city says its first survey made the point concrete: "The 2011 survey, for example, pointed to improving the city's tree canopy to support residents' wellbeing".[58] In 2013 Santa

[57] UP's agreed position on judging UP by stage, beside the current system: UP grows side by side with the current system, early (a minority network inside it), middle (its own productive base, with most members' needs met from what UP produces) and completed (most people live mainly in UP); the early stage rests on today's evidence, and the middle and completed stages are reasoned projections from cited mechanisms, labelled as such. Full wording in UP's study lessons (lesson 13).

[58] City of Somerville, Massachusetts, "Happiness Survey": "SomerStat has conducted the Happiness Survey since 2011."; "Every two years, the City runs the Somerville Happiness Survey to better understand our community's happiness and satisfaction with City services."; "We select participants for the Happiness Survey randomly, so we can hear the perspectives of our entire community."; "The Happiness Survey helps decision-makers create effective policies and allocate resources."; "The 2011 survey, for example, pointed to improving the city's tree canopy to support residents' wellbeing". https://somervillema.gov/HappinessSurvey . These are the city's own statements about its survey. Checked at source, 1 Nov 2026.

Monica, California, won a $1 million prize in Bloomberg Philanthropies' Mayors Challenge for a plan to measure wellbeing and build it into policy. Its first Wellbeing Index, published in 2015, was, in the words of the news site Route Fifty, "compiled from city department data, a survey of more than 2,200 residents and local social media postings". The city describes the index as a tool to "prioritize policy and programs based on residents' most pressing needs."[59] Bristol, in England, has run a Quality of Life survey of a random sample of its residents every year since 2001, although, as the council notes, the survey "does change over time". Its results are "analysed to a ward level and also equality groups such as age, sex and ethnicity", and are used by the council, health services and other public bodies "to help plan local services, track change and improve the quality of life in Bristol."[60] Bristol's breakdown by neighbourhood and by group is a small step toward measuring person by person, because it shows who is being left behind rather than only how the city does on average. And the Office for National Statistics publishes the exact wording of its four personal well-being questions, first asked in its Annual Population Survey in 2011, so that other surveys can ask the same questions.[27]

One way an early UP community could begin, then, is with tools of exactly this kind. A short set of questions in fixed wording is asked of people chosen at random and answered only by those who wish to. The results are published openly with the method beside them, broken down so that no group disappears into an average, and each person decides what of their own answers to share.[61,25] This is an illustration, not a rule. What a community measures, and how, is for the people it affects to decide.[24]

At the middle stage, as a reasoned projection, the measures would carry more weight. Once UP communities produce much of what their members need, the question is no longer only how people feel about their lives but which ways of meeting their needs work best, and communities would need to compare like with like in order to learn from one another. The tools for that exist as well. The OECD's regional well-being site "allows you to measure well-being in your region and compare it with 467 OECD regions based on eleven topics central to the quality of our lives", because "Comparable measures of regional well-being offer a new way to gauge what policies work and can empower a community to act to achieve higher well-being for its citizens."[62] Governments have also set up ways to share what they learn: the Wellbeing Economy Governments partnership, launched at an OECD forum in 2018, "currently involves the governments of Scotland, Iceland, New Zealand, Wales and Finland, with Canada actively participating."[63] In UP's terms, communities that keep the same definitions could see which of their solutions actually improved people's lives, and copy what works, which is how UP's method tests and compares solutions.[24] The physical limits would be counted alongside: energy, water, materials and the capacity of the living world set the bounds, several measures are used together, and choices between different needs are made openly by the people affected, never by an efficiency score.[23]

[59] Bloomberg Philanthropies, press release, 13 March 2013, "Bloomberg Philanthropies Announces Mayors Challenge Winners Providence, Chicago, Houston, Philadelphia, and Santa Monica": "Santa Monica, CA (Mayor Pam O'Connor): The Wellbeing Project"; "Establishes Santa Monica as the first city in the nation to measure wellbeing and formally embed it in policy-making"; the four other winners and Santa Monica "all of which will receive $1 million to support implementation." https://www.bloomberg.org/press/bloomberg-philanthropies-announces-mayors-challenge-winners-providence-chicago-houston-philadelphia-and-santa-monica/ (the site shows a bot check; read at the Internet Archive's copy of 1 November 2021: https://web.archive.org/web/20211101093248/https://www.bloomberg.org/?p=7123); the winners were announced in March 2013: https://obamawhitehouse.archives.gov/blog/2013/03/19/winning-cities-mayors-challenge-receive-prizes-implement-innovative-ideas ; Route Fifty, "In Santa Monica, You Can Now Put a Number on Wellbeing" (28 April 2015): the city "recently released findings from the first municipal Wellbeing Index", "compiled from city department data, a survey of more than 2,200 residents and local social media postings." https://www.route-fifty.com/emerging-tech/2015/04/santa-monica-wellbeing-index/111358/ ; City of Santa Monica, "Santa Monica Releases New Findings from Wellbeing Index" (14 September 2017): "a first-of-its-kind tool that uses data to assess community health and wellbeing to prioritize policy and programs based on residents' most pressing needs." https://santamonica.gov/press/2017/09/14/santa-monica-releases-new-findings-from-wellbeing-index . Checked at source, 1 Nov 2026.

[60] Bristol City Council, "Quality of life in Bristol": "It has been an annual survey since 2001, but does change over time."; "The statistics are analysed to a ward level and also equality groups such as age, sex and ethnicity."; "The results are used by us, health services and other public sector partners to help plan local services, track change and improve the quality of life in Bristol." https://www.bristol.gov.uk/qualityoflife ; *Quality of Life Survey 2024/25 Final Report* (June 2025): "The Bristol Quality of Life survey is a robust, randomised sample of the population." https://www.bristol.gov.uk/files/documents/9607-quality-of-life-2024-to-25-final-report/file . Checked at source, 1 Nov 2026.

[61] Core tenet: *Open systems, shared knowledge, private persons*: the rules, code, records, decisions and reasons of UP are public, so anyone can check them; UP's technology stays only in UP, where everyone taking part may use, study and improve it and no one may enclose it; each person controls their own information and chooses what to share. Full wording in "The core of UP".

[62] OECD Regional Well-Being: "This interactive site allows you to measure well-being in your region and compare it with 467 OECD regions based on eleven topics central to the quality of our lives."; "Comparable measures of regional well-being offer a new way to gauge what policies work and can empower a community to act to achieve higher well-being for its citizens." https://oecdregionalwellbeing.org/ . The number of regions is as the site gave it on 31 Oct 2026. Checked at source, 1 Nov 2026.

[63] Scottish Government, "Wellbeing Economy Governments (WEGo)": "The Wellbeing Economy Governments partnership (WEGo) is an initiative where member countries are working together to understand how to bring wellbeing approaches into policymaking."; "The group was launched at the OECD's World Forum in Incheon, South Korea, in 2018."; membership "currently involves the governments of Scotland, Iceland, New Zealand, Wales and Finland, with Canada actively participating." https://www.gov.scot/groups/wellbeing-economy-governments-wego/ . Checked at source, 1 Nov 2026.

At the completed stage, also a projection, the measures would inform most of the decisions a society makes together. There are partial precedents. Under the protocol of Bhutan's Gross National Happiness Commission, a draft national policy "shall be subjected to the Gross National Happiness (GNH) Policy Screening Tool", and "Only policies endorsed by the GNH Commission will be submitted to the Cabinet for approval."[64] In New Zealand, the Treasury's published guidance says that agencies have been required to use its Living Standards Framework in their value-for-money assessments since the Budget of 2019, and the Treasury updated its cost-benefit tool "to include the intergenerational wellbeing domains".[65] Neither example shows how far these tools changed real decisions, and New Zealand's legal wellbeing objectives were repealed in 2026, as described above. At this scale there is no full precedent, and this chapter does not pretend there is. What UP adds is the rule that keeps any measure in its place, however good it becomes: "Evidence proposes; people decide."[24] At every stage the same danger travels with the measures, and it grows with the weight they carry; it is the subject of the last objection in this chapter, and the strongest. Table 4.2 sets out the three stages.

Table 4.2. Measuring the aim, by stage, as an illustration. The early stage rests on today's evidence; the middle and completed stages are reasoned projections, labelled as such.

Stage	What could be measured	Real precedent	Why it is likely	What persists
Early	A few questions in fixed wording, asked at random and published openly, broken down so no group is lost in the average	Somerville's Happiness Survey; Santa Monica's Wellbeing Index; Bristol's Quality of Life survey; the ONS's four questions	Cities and statistics offices already do it	Small samples; people who do not answer; the temptation to report only good news
Middle (projection)	Shared measures with the same definitions across communities, alongside the physical limits	OECD regional well-being comparisons; the Wellbeing Economy Governments partnership	Communities that produce for themselves need to know which solutions work	Gaming once measures carry weight; definitions drifting over time
Completed (projection)	Measures that inform most shared decisions, never decide them	Bhutan's policy screening tool; New Zealand's Living Standards Framework (partial precedents)	UP's method already requires evidence with every proposal	No full precedent; the risk that a measure quietly becomes the goal

Objections, and what could still go wrong

The first objection is the most common: happiness cannot be measured. Feelings are private, people rate their lives differently, and the same person may answer differently on a different day. The objection has real force, and the people who measure wellbeing for a living accept part of it. The OECD's guidelines on the subject warn that "subjective well-being measures are strongly affected by question structure and context, and the results from differently worded questions (or even a different ordering of similar questions) are likely to affect comparability."[66] But the same guidelines report what two decades of research have found: "an increasing body of evidence has shown that subjective well-being can be measured in surveys, that such measures are valid and reliable, and that they can usefully inform policy-making."[66] What matters is knowing which kind of wellbeing is being measured. Daniel Kahneman and Angus Deaton distinguished "emotional well-being", "the emotional quality of an individual's everyday experience", from "life evaluation", "the thoughts that people have about their life when they think about

[64] Royal Government of Bhutan, Gross National Happiness Commission, *Protocol for Policy Formulation* (undated), p. 1: "Only policies endorsed by the GNH Commission will be submitted to the Cabinet for approval."; p. 2: "the revised Draft Policy shall be subjected to the Gross National Happiness (GNH) Policy Screening Tool". Read at a copy held by the Asia Pacific Energy Portal's policy database: https://policy.asiapacificenergy.org/sites/default/files/RGOB-Policy-Protocol-2014.pdf . Checked at source, 1 Nov 2026.

[65] New Zealand Treasury, "Using the LSF and He Ara Waiora": "Agencies have been required to use the LSF domains as part of their value-for-money assessment since Budget 2019" https://www.treasury.govt.nz/information-and-services/nz-economy/higher-living-standards/using-lsf-and-he-ara-waiora ; New Zealand Treasury: "We have integrated key elements of the LSF into the Budget requirements and guidance for agencies."; "so the Treasury has also updated its cost-benefit analysis (CBAx) tool to include the intergenerational wellbeing domains." https://www.treasury.govt.nz/node/11815 . Checked at source, 1 Nov 2026.

[66] OECD, *OECD Guidelines on Measuring Subjective Well-being* (OECD Publishing, 2013), Introduction: "Over the last two decades, however, an increasing body of evidence has shown that subjective well-being can be measured in surveys, that such measures are valid and reliable, and that they can usefully inform policy-making."; "Guidelines are also needed because subjective well-being measures are strongly affected by question structure and context, and the results from differently worded questions (or even a different ordering of similar questions) are likely to affect comparability." NCBI Bookshelf copy: https://www.ncbi.nlm.nih.gov/books/NBK189564/ . Checked at source, 31 Oct 2026.

it".[67] In more than 450,000 American responses, they found that "When plotted against log income, life evaluation rises steadily", while emotional well-being rose too but showed "no further progress beyond an annual income of ~$75,000."[67] A decade later Matthew Killingsworth, using more than 1.7 million moment-by-moment reports, found no such plateau.[68] Rather than argue past each other, Killingsworth and Kahneman, with the psychologist Barbara Mellers, reanalysed the data together in what they called an adversarial collaboration. The flattening was real, they found, but "restricted to the least happy 20% of the population"; for most people, "Happiness increases steadily with log(income) among happier people, and even accelerates in the happiest group."[69] Whether more money makes people happier turned out to depend on which people were asked about. That finding shows, in a single case, why measuring person by person matters.

Measurement also shows that money is far from the whole story. In Bhutan's national survey of 2022, 41 per cent of the richest fifth of the population were classed as "not-yet-happy", while "In the poorest income group, 29.2% of people were actually GNH happy".[70] Income made a difference, but a large share of the richest were not happy and a large share of the poorest were. Six factors account for "more than three-quarters" of the differences in life evaluations between countries in the World Happiness Report. Alongside income and healthy life expectancy they include "Having someone to count on", freedom to make life choices, generosity and freedom from corruption, and the report warns that these "illustrate important lines of correlation rather than reflecting clean causal estimates".[71] A review of 148 studies with more than 300,000 participants found "a 50% increased likelihood of survival for participants with stronger social relationships", an influence on the risk of death "comparable with well-established risk factors for mortality."[72] A measure that sees only income leaves out much of what this evidence links to how people's lives go.

The second objection is that measuring person by person is impractical, or worse, a recipe for surveillance. On practicality, there are working precedents. Since April 2009 the National Health Service in England has asked patients having hip and knee replacements to report on their own health before and after surgery, so that care is judged "from the patient perspective".[73] Bhutan's happiness index classifies each person, not an average.[30] The United Nations' 2030 Agenda, adopted by the General Assembly without a vote in 2015, pledged "that no one will be left behind", and its goals call for data "disaggregated by income, gender, age, race, ethnicity, migratory status, disability, geographic location and other characteristics relevant in national contexts".[74] On surveillance, UP's core draws the line itself. UP's rules, records, decisions and reasons are public, but "Each person controls their own information and chooses what to share."[61] One way this could work, offered as an illustration in UP's agreed

[67] Daniel Kahneman and Angus Deaton, "High income improves evaluation of life but not emotional well-being", *PNAS* 107(38): 16489-16493 (2010), abstract: "Emotional well-being refers to the emotional quality of an individual's everyday experience"; "Life evaluation refers to the thoughts that people have about their life when they think about it."; "We report an analysis of more than 450,000 responses to the Gallup-Healthways Well-Being Index,"; "When plotted against log income, life evaluation rises steadily."; "Emotional well-being also rises with log income, but there is no further progress beyond an annual income of ~$75,000." https://pmc.ncbi.nlm.nih.gov/articles/PMC2944762/ . Checked at source, 31 Oct 2026.

[68] Matthew A. Killingsworth, "Experienced well-being rises with income, even above $75,000 per year", *PNAS* 118(4): e2016976118 (2021), abstract: "Drawing on 1,725,994 experience-sampling reports from 33,391 employed US adults, the present results show that"; "There was no evidence for an experienced well-being plateau above $75,000/y,". Europe PMC record: https://www.ebi.ac.uk/europepmc/webservices/rest/search?query=DOI:10.1073/pnas.2016976118&resultType=core&format=json . Checked at source, 31 Oct 2026.

[69] Matthew A. Killingsworth, Daniel Kahneman and Barbara Mellers, "Income and emotional well-being: A conflict resolved", *PNAS* 120(10): e2208661120 (2023): "We engaged in an adversarial collaboration to search for a coherent interpretation of both studies."; "Happiness increases steadily with log(income) among happier people, and even accelerates in the happiest group."; Significance statement: the flattening pattern "is restricted to the least happy 20% of the population". Europe PMC: https://www.ebi.ac.uk/europepmc/webservices/rest/search?query=DOI:10.1073/pnas.2208661120&resultType=core&format=json and https://www.ebi.ac.uk/europepmc/webservices/rest/PMC10013834/fullTextXML . The paper's results section gives 15 per cent for the same group. Checked at source, 31 Oct 2026.

[70] Centre for Bhutan and GNH Studies, "Launch of the 2022 GNH Index Results" (Thimphu, 22 May 2023): "If all Bhutanese are divided into five groups according to their income,"; "41% of richest group (quintile) are in the not-yet-happy group"; "In the poorest income group, 29.2% of people were actually GNH happy". https://ophi.org.uk/sites/default/files/2023-07/Bhutan_GNH_2022_press_release.pdf . Checked at source, 31 Oct 2026.

[71] World Happiness Report, Frequently Asked Questions: "Using data from 2005 onwards, we have found that six variables account for more than three-quarters of this variation."; the six include "Having someone to count on", "Log GDP per capita" and "Healthy life expectancy"; "It is important to understand that the six factors illustrate important lines of correlation rather than reflecting clean causal estimates since some of the data are drawn from the same survey sources." https://worldhappiness.report/faq/ . Checked at source, 31 Oct 2026.

[72] Julianne Holt-Lunstad, Timothy B. Smith and J. Bradley Layton, "Social relationships and mortality risk: a meta-analytic review", *PLoS Medicine* 7(7): e1000316 (2010), abstract: "Across 148 studies (308,849 participants), the random effects weighted average effect size was OR = 1.50"; "indicating a 50% increased likelihood of survival for participants with stronger social relationships."; "The influence of social relationships on risk for mortality is comparable with well-established risk factors for mortality." Europe PMC: https://www.ebi.ac.uk/europepmc/webservices/rest/search?query=DOI:10.1371/journal.pmed.1000316&resultType=core&format=json . Checked at source, 31 Oct 2026.

[73] NHS England, "Patient Reported Outcome Measures (PROMs)": "Patient Reported Outcome Measures (PROMs) assess the quality of care delivered to NHS patients from the patient perspective."; "PROMs have been collected by all providers of NHS-funded care since April 2009."; they cover hip replacements and knee replacements. https://www.england.nhs.uk/statistics/statistical-work-areas/proms/ . Checked at source, 31 Oct 2026.

[74] United Nations General Assembly, *Transforming our world: the 2030 Agenda for Sustainable Development*, resolution A/RES/70/1 (adopted without a vote, 25 September 2015), paragraph 4: "As we embark on this great collective journey, we pledge that no one will be left behind." https://sdgs.un.org/2030agenda ; Target 17.18: "and reliable data disaggregated by income, gender, age, race, ethnicity, migratory status, disability, geographic location and other characteristics relevant in national contexts". https://sdgs.un.org/goals/goal17 . Checked at source, 31 Oct 2026.

positions, is that data is used only with the person's permission: the question goes to the data, only the answer comes back, and nothing about any individual is passed on or kept.[75] Person by person means that no one is lost inside an average. It does not mean that anyone's life is open to inspection.

The third objection asks who decides what wellbeing is. A society that sets out to make people happy, it says, will soon be telling them how to live. UP takes the warning seriously, and its answer is written into its method: matters of taste "are never made rules for others", and the people a problem affects decide its outcome.[24] What counts as harm, and how much, "is defined, graded and refined continually from information, input and research by the collective".[34] Philosophers have a name for an approach that fits this answer. The capability approach, which the Stanford Encyclopedia of Philosophy says Amartya Sen "pioneered", holds "that the freedom to achieve well-being is of primary moral importance". It holds that well-being "should be understood in terms of people's capabilities and functionings": "Capabilities are the doings and beings that people can achieve if they so choose".[76] A measure built this way asks what people are able to do and to be, if they so choose, not whether they are living the life someone else chose for them.

The fourth objection is the strongest, because it comes from the record of measurement itself: whatever is measured will be gamed, and a measure that is gamed misleads the people who trust it. The current system deserves credit here too, because it has produced both the evidence of the problem and some of the remedies. Targets can work. Summarising the research of Gwyn Bevan, the London School of Economics notes that "targets with sanctions can work when the targets accurately measure key dimensions of performance that cannot easily be manipulated by gaming."[77] But Bevan and Christopher Hood also described how English public services in the 2000s were run under a regime that "combined targets with an element of terror", and they identified two assumptions beneath it: that a part could stand for the whole, "and that problems of measurement and gaming do not matter."[78] Gaming did occur. English ambulance services were judged on how quickly they reached the most urgent calls, against a target of eight minutes. Inspectors found that in one service "the times of responses taking longer than 8 minutes had been 'corrected' to be recorded as taking less than 8 minutes". In a later paper Bevan and Richard Hamblin reported that "a common view was that 'to get there in 8.01 minutes and save the patient is seen as a failure'".[79] In 1997 the anthropologist Marilyn Strathern put the pattern in a sentence that is now widely quoted: "When a measure becomes a target, it ceases to be a good measure." In the same paragraph she noted that Keith Hoskin called this "Goodhart's law", after an observation by the economist Charles Goodhart about the instruments of monetary control.[80]

A second danger needs no one to cheat. In 2018 a team of psychologists led by David Levari and Daniel Gilbert showed "that people often respond to decreases in the prevalence of a stimulus by expanding their concept of it." In their experiments, "When blue dots became rare, participants began to see purple dots as blue; when threatening faces became rare, participants began to see neutral faces as threatening; and when unethical

[75] UP's agreed positions, round 12S, position 11 (marked as an illustration of how UP could run, never a directive): a trust layer for records, with data held by the person; data is used only with permission, the question travels to the data, only the answer leaves, and nothing individual is passed on or kept. Full wording in UP's agreed positions (the Position Ledger).

[76] Morten Fibieger Byskov, "The Capability Approach", *Stanford Encyclopedia of Philosophy* (first published 2011; revised 2025): "it is economist-philosopher Amartya Sen who pioneered the approach"; "The capability approach is a theoretical framework that entails two normative claims: first, the claim that the freedom to achieve well-being is of primary moral importance and, second, that well-being should be understood in terms of people's capabilities and functionings."; "Capabilities are the doings and beings that people can achieve if they so choose". https://plato.stanford.edu/entries/capability-approach/ . Checked at source, 31 Oct 2026.

[77] London School of Economics, research impact case study, "Improving public services through ambitious targets and tough sanctions for failure": "First, targets with sanctions can work when the targets accurately measure key dimensions of performance that cannot easily be manipulated by gaming."; "Second, where targets can only be framed as proxies for important dimensions of performance, the manipulative effects of gaming may undermine their use." https://www.lse.ac.uk/research/research-impact-case-studies/improving-public-services-ambitious-targets-tough-sanctions-for-failure . Checked at source, 1 Nov 2026.

[78] Gwyn Bevan and Christopher Hood, "What's measured is what matters: targets and gaming in the English public health care system", *Public Administration* 84(3): 517–538 (2006), abstract: "In the 2000s, governments in the UK, particularly in England, developed a system of governance of public services that combined targets with an element of terror."; "Assumptions underlying governance by targets represent synecdoche (taking a part to stand for a whole); and that problems of measurement and gaming do not matter." https://researchonline.lse.ac.uk/id/eprint/16211 . Checked at source, 1 Nov 2026.

[79] Gwyn Bevan and Richard Hamblin, "Hitting and missing targets by ambulance services for emergency calls: effects of different systems of performance measurement within the UK", *Journal of the Royal Statistical Society, Series A* 172(1): 161–190 (2009), section 3.5: "The CHI found out that, in one service, the times of responses taking longer than 8 minutes had been 'corrected' to be recorded as taking less than 8 minutes."; "a common view was that 'to get there in 8.01 minutes and save the patient is seen as a failure'". The CHI was the Commission for Health Improvement, the health inspectorate of the time. https://pmc.ncbi.nlm.nih.gov/articles/PMC2667302/ . Checked at source, 1 Nov 2026.

[80] Marilyn Strathern, "'Improving ratings': audit in the British University system", *European Review* 5(3): 305–321 (1997), p. 308: "When a measure becomes a target, it ceases to be a good measure."; "Hoskin describes this as 'Goodhart's law', after the latter's observation on instruments for monetary control which lead to other devices for monetary flexibility having to be invented." Read at a copy of the published article: https://gwern.net/doc/statistics/decision/1997-strathern.pdf ; the journal's page: https://www.cambridge.org/core/journals/european-review/article/improving-ratings-audit-in-the-british-university-system/FC2EE640C0C44E3DB87C29FB666E9AAB . Checked at source, 1 Nov 2026.

requests became rare, participants began to see innocuous requests as unethical." The shift "occurred even when participants were forewarned about it and even when they were instructed and paid to resist it." Their conclusion speaks directly to any society that sets out to reduce harm: "Social problems may seem intractable in part because reductions in their prevalence lead people to see more of them."[81] If the idea of harm widens as harm becomes rarer, a society that is succeeding can feel as if it is failing, and a measure whose definition drifts will hide real progress.

The third danger is the oldest: the numbers can simply be falsified, especially where the people who keep them answer to the people the numbers judge. In October 2009 Greece revised its government deficit for 2008 from 5.0 to 7.7 per cent of GDP, and its planned deficit for 2009 from 3.7 to 12.5 per cent. The European Commission's report of January 2010 found that some of the errors were "a case of deliberate misreporting of figures". Its diagnosis was institutional: "lack of independence" of the national statistics service and the accounting office, a Commission that "does not posses audit powers" [*sic*], and a European framework that "cannot prevent deliberate misreporting of data." Unless the institutional weaknesses it had found were "addressed and proper checks and balances introduced", it warned, "the reliability of Greek deficit and debt data will remain in question."[82] Inaccurate official figures can also be challenged from outside. In February 2013 the International Monetary Fund's board issued "a declaration of censure against Argentina" for breaching its obligations to the Fund. Argentina had failed to make enough progress in correcting "the inaccuracy of CPI-GBA and GDP data", its official consumer prices for Greater Buenos Aires and its national output; the release does not say what caused the inaccuracy. When the data were repaired the censure was lifted, in November 2016, after the board "concluded that Argentina's CPI is now in line with international standards."[83]

The remedy that the current system has found is the independent check. In the United Kingdom, the Statistics and Registration Service Act 2007 gives a Statistics Board "the objective of promoting and safeguarding the production and publication of official statistics that serve the public good", and requires it to "monitor the production and publication of official statistics".[84] The Office for Statistics Regulation, "the regulatory arm of the UKSA", the UK Statistics Authority, says: "We operate independently of government ministers and of the organisations that produce statistics."[85] The check works in public. In May 2020 the chair of the UK Statistics Authority, Sir David Norgrove, wrote openly to the Health Secretary, Matt Hancock, about the government's goal of 100,000 COVID-19 tests a day: "It should be clear whether the target is intended to reflect" the capacity to test, tests given, results received or the number of people tested. Three weeks later he wrote that "the figures are still far from complete

[81] David E. Levari, Daniel T. Gilbert, Timothy D. Wilson, Beau Sievers, David M. Amodio and Thalia Wheatley, "Prevalence-induced concept change in human judgment", *Science* 360(6396): 1465–1467 (29 June 2018), abstract: "In a series of experiments, we show that people often respond to decreases in the prevalence of a stimulus by expanding their concept of it."; "When blue dots became rare, participants began to see purple dots as blue; when threatening faces became rare, participants began to see neutral faces as threatening; and when unethical requests became rare, participants began to see innocuous requests as unethical."; the effect "occurred even when participants were forewarned about it and even when they were instructed and paid to resist it."; "Social problems may seem intractable in part because reductions in their prevalence lead people to see more of them." https://doi.org/10.1126/science.aap8731 ; abstract read at PubMed: https://pubmed.ncbi.nlm.nih.gov/29954981/ . Checked at source, 1 Nov 2026.

[82] European Commission, *Report on Greek Government Deficit and Debt Statistics*, COM(2010) 1 final (8 January 2010): "In the 21 October notification, the Greek government deficit for 2008 was revised from 5.0% of GDP (the ratio reported by Greece, and published and validated by Eurostat in April 2009) to 7.7% of GDP."; "At the same time, the Greek authorities also revised the planned deficit ratio for 2009 from 3.7% of GDP (the figure reported in spring) to 12.5% of GDP"; "the intense scrutiny of the Greek fiscal data by Eurostat since 2004 (including 10 EDP visits and 5 reservations on the notified data), have not sufficed to bring the quality of Greek fiscal data to the level reached by other EU Member States."; "This is to be considered as a case of deliberate misreporting of figures by the GAO" (the General Accounting Office); "lack of independence of the NSSG and the GAO" (the NSSG was the National Statistical Service of Greece); "moreover, it does not posses audit powers." [*sic*]; "it cannot prevent deliberate misreporting of data."; "Unless the institutional weaknesses identified in this report are addressed and proper checks and balances introduced, the reliability of Greek deficit and debt data will remain in question." https://ec.europa.eu/eurostat/documents/4187653/6404656/COM_2010_report_greek.pdf . The 2009 figures were plans, not final outturns. Checked at source, 1 Nov 2026.

[83] International Monetary Fund, Press Release No. 13/33 (1 February 2013): "As a result, the Fund has issued a declaration of censure against Argentina in connection with its breach of obligation to the Fund under the Articles of Agreement."; "The Board called on Argentina to adopt the remedial measures to address the inaccuracy of CPI-GBA and GDP data without further delay"; the data in question were "the consumer price index for Greater Buenos Aires (CPI-GBA) and gross domestic product (GDP)". https://www.imf.org/en/news/articles/2015/09/14/01/49/pr1333 (imf.org refuses automated and browser reading of this page; read at the Internet Archive's copy of 4 November 2024: https://web.archive.org/web/20241104030915/https://www.imf.org/en/News/Articles/2015/09/14/01/49/pr1333); Press Release No. 16/497 (9 November 2016): "the Executive Board concluded that Argentina's CPI is now in line with international standards." https://www.imf.org/en/news/articles/2016/11/09/pr16497-argentina-imf-executive-board-removes-declaration-of-censure . Checked at source, 1 Nov 2026.

[84] Statistics and Registration Service Act 2007 (c. 18), s. 7(1): "In the exercise of its functions under sections 8 to 21 the Board is to have the objective of promoting and safeguarding the production and publication of official statistics that serve the public good."; s. 8(1): "The Board is to monitor the production and publication of official statistics." https://www.legislation.gov.uk/ukpga/2007/18/section/7 and https://www.legislation.gov.uk/ukpga/2007/18/section/8 . Checked at source, 1 Nov 2026.

[85] Office for Statistics Regulation, "OSR's role in the statistical system": "The Office for Statistics Regulation (OSR) is the independent regulator for all official statistics in the UK."; "We operate independently of government ministers and of the organisations that produce statistics."; "OSR is the regulatory arm of the UKSA"; "Our role, on the behalf of UKSA, is to ensure that statistics serve the public good by safeguarding the production and use of official statistics, so they can be trusted to support decisions that affect UK society." https://osr.statisticsauthority.gov.uk/osrs-role-in-the-statistical-system/ . Checked at source, 1 Nov 2026.

and comprehensible", and that "the headline total of tests adds together tests carried out with tests posted out."[86] The letters did not accuse anyone of cheating. They show an independent body asking, in the open, what a number counts. The same kind of check, outside the official test, caught Volkswagen. Table 4.3 sets the cases side by side.

Table 4.3. How measures go wrong, and the checks that answer them. Each case is summarised from its source in the notes.

What goes wrong	A real case	What caught it	UP's answer (lesson 18, the floors, open records)
A target is gamed	Ambulance response times "corrected" in one English service	Inspection by the health inspectorate	Several measures used together; an independent check on every headline measure
A test is gamed	Volkswagen's software ran full emissions controls only during the official test	Independent road testing by university researchers	An independent check; methods and records open to all
A target displaces the purpose	Wells Fargo's sales goals; targets at Mid Staffordshire	A regulator's fine; a public inquiry	The aim is people's wellbeing, never a stand-in for it
A definition drifts	Purple dots seen as blue once blue dots became rare	A controlled experiment	Definitions kept fixed over time; problems ranked by measured harm
Figures are misreported	Greece's deficit figures, 2009: some errors found to be deliberate	The European Commission's report	A truthful shared record as a floor; checks independent of those being judged

In UP's terms, these cases show why one of UP's study lessons matters: "Keep definitions fixed over time, rank problems by measured harm rather than by how loud they feel, and give every headline measure an independent check so it can't be gamed."[25] Each part answers one of the dangers. Fixed definitions answer drift, so that progress is measured against the same yardstick it started with. Ranking by measured harm answers the problems that feel loudest, which are not always the ones that hurt most. Independent checks answer gaming and falsification, as the road tests did for Volkswagen, and as the Commission's report on Greece argued they should. UP's floors add a line that no decision may cross: "a truthful shared record, so facts, measures and decisions are never falsified".[36] UP's records, decisions and reasons are public, so that anyone can check them.[61] Concentration of power over information is one of the forms of power UP treats as a standing danger, so no one is left alone in charge of the numbers.[87] Inside the planet's limits, UP's agreed position uses several measures together, never a single efficiency score, so that no single number has to stand for the whole, the assumption Bevan and Hood warned against.[23] And when a measure fails anyway, as some will, the failure is fed back into UP as a new problem to solve.[35] None of this makes the danger go away. Greece's figures had been scrutinised for years before the misreporting came to light, and checkers can be captured, or drift, like anyone else. That is why, in UP, everyone is a watcher.[88]

What the aim decides

Case and Deaton did not need a new theory to find the deaths of despair. They needed to ask a different question of the numbers: not how the country was doing, but how particular groups of people were doing. UP's aim takes that question one step further, to each person. It aims at the health, happiness and wellbeing of all living things, as a chosen direction that is never fully reached. It counts people person by person, so that no one's wellbeing is traded away to raise an average. It reaches all living things, as a direction rather than a promise, and if an AI is ever shown to be sentient and conscious, it is included in UP's aim too.[7,38,56] It can be measured, imperfectly and with

[86] Sir David Norgrove, Chair of the UK Statistics Authority, letter to Matt Hancock, 11 May 2020: "It should be clear whether the target is intended to reflect:" https://uksa.statisticsauthority.gov.uk/correspondence/sir-david-norgrove-letter-to-matt-hancock-%20regarding-covid-19-testing/ ; letter of 2 June 2020: "I am afraid though that the figures are still far from complete and comprehensible."; "the headline total of tests adds together tests carried out with tests posted out." https://uksa.statisticsauthority.gov.uk/wp-content/uploads/2020/06/02.06.2020_SDN_Matt_Hancock_MP.pdf . Checked at source, 1 Nov 2026.

[87] Core tenet: *Power kept spread out*: concentration of power in any form (wealth, position, information, access, expertise or machines) is treated as a standing danger; everyone in UP watches for it and spreads it out again; the threat is never declared gone. Full wording in "The core of UP".

[88] Settled alongside the core, dangers adopted in round 10: "everyone is a watcher". The same list includes "time and money earn recognition, never power". Full wording in "The core of UP".

checks, by means that statistics offices, health services and governments already use, as one way among those the people affected may choose. And UP's study lessons ask that its measures keep fixed definitions, stay open and be independently checked, which makes it much harder to hide, and easier to contest, when a measure quietly becomes something else.[24,25]

What the aim does not do is decide how to get there. A direction tells a traveller which way to walk, not which path to take or who chooses it. That is the work of UP's method, the subject of the next chapter, which asks who decides, and how, when the aim is shared but the ways of reaching it are not.[24]

Chapter card: Chapter 4

- **Claim:** UP aims at the health, happiness and wellbeing of all living things. The aim is a chosen direction, not a scientific discovery and not a promise; for people it is measured person by person, not as a total, so no one's wellbeing is traded away to raise an average; it reaches all living things as a direction, with tools for conflicts; and it would extend to any AI shown to feel, without ever giving an AI control.
- **Core lines:** tenet *The aim: the health, happiness and wellbeing of all living things*; the floors, especially everyone's basic needs and protected freedoms, which no gain for others can buy, and the living world's capacity to recover; tenet *Technology serves; people decide*. Agreed positions: harm is measured by health, happiness and wellbeing and refined by the collective; all living things, a direction with tools for conflicts; the AI's own wellbeing, with care that never becomes control; irreversible damage is never traded. UP's study lesson on measures: fixed definitions, ranking by measured harm, and an independent check on every headline measure.
- **Rule of thumb:** Ask of any measure: whose health, happiness and wellbeing does it count, whom does it leave out, and what happens when it becomes the goal?
- **What this is not:** a promise that everyone will be happy; a single index that replaces judgement; a plan to tell people how to live; or a licence to cross the floors: everyone's basic needs and protected freedoms, which no gain for others can buy, and the living world's capacity to recover, so damage that cannot be undone is never traded for a short-term need.
- **Check yourself:**
    1. Why does UP's first tenet call its aim "a chosen direction, not a scientific discovery and not a promise", and what would change if it were a promise?
    2. What did Case and Deaton find that the national averages hid, and which part of the tenet answers it?
    3. Why did the builders of GDP warn against using it as a measure of welfare, and what did Kuznets say was missing?
    4. How did a target or a test reward harm at Wells Fargo and at Volkswagen, and which UP check answers each?
    5. What tools does UP's agreed position give the collective when the interests of people and other living things conflict, and which floors limit how they are used?
    6. What does UP say about an AI that might one day have experiences, and why does care never become control?
- **Open questions (for the wiki):** Which headline measures should a UP community publish first, and how should they be checked? If the collective uses priority by the capacity to suffer and to flourish, how should that capacity be estimated for creatures we understand poorly? What should happen when people's own reports of their wellbeing and other measures of their health disagree? (Improve this page.)

Chapter 5. The Method: Solving Shared Problems with Evidence

On 27 January 2009 Timothy Gowers, a mathematician at the University of Cambridge and a winner of the Fields Medal, posted a question on his blog: was massively collaborative mathematics possible?[1,2] He imagined a forum for the online discussion of a single hard problem, where "anybody who had anything whatsoever to say about the problem could chip in." He knew the obvious objection, because it was his own profession's, and he wrote it down himself: "Surely we work on problems in order to be able to publish solutions and get credit for them." His answer was to take credit off the table. If the experiment produced anything publishable, then even if a very small number of people supplied the lion's share of the ideas, the paper would "still be submitted under a collective pseudonym with a link to the entire online discussion."[2] He set a few ground rules. Half-formed ideas were welcome, because "you are more likely to succeed if you try out lots of stupid ideas." And anyone convinced they could answer a question if they went away for a couple of weeks to try a few things out should "still resist the temptation to do that" and think in the open instead.[2]

On 1 February he named the problem: to find a new, elementary proof of a case of the density Hales–Jewett theorem, a problem from the branch of mathematics called Ramsey theory whose details need not concern us here.[3,4] He opened the discussion, as one science writer later put it, to comments "from anyone around the world, with mathematical training or not." Within a day the comments began. Among the first to join was Jason Dyer, a high-school mathematics teacher in Arizona, who in time got his students working on the problem too, and soon afterwards Terence Tao, a mathematician at the University of California, Los Angeles, and another winner of the Fields Medal.[5] Over the course of the project, 27 people took part and contributed more than 800 comments.[5]

On 10 March Gowers posted under the title "Problem solved (probably)". "I am basically sure," he wrote, "that the problem is solved (though not in the way originally envisaged)."[6] It had taken 37 days from the opening of the discussion. The approach that won was almost totally different from the one Gowers had proposed, and the result turned out to be far bigger than the one the project had set out to prove.[5] The proof was published in the *Annals of Mathematics* in 2012 under the name D. H. J. Polymath. The paper explains why: the theorem had been proved in an unusual "open source" way, open at every stage to anyone who was interested.[4]

[1] Department of Pure Mathematics and Mathematical Statistics, University of Cambridge, staff page: "Professor Tim Gowers Professor of Mathematics". https://www.dpmms.cam.ac.uk/person/wtg10 . International Mathematical Union, "Fields Medals 1998": "W. Timothy Gowers Cambridge University; Banach space theory, combinatorics". https://www.mathunion.org/imu-awards/fields-medal/fields-medals-1998

[2] Timothy Gowers, "Is massively collaborative mathematics possible?", *Gowers's Weblog*, 27 January 2009: "Suppose one had a forum (in the non-technical sense, but quite possibly in the technical sense as well)"; "The idea would be that anybody who had anything whatsoever to say about the problem could chip in."; "Why would anyone agree to share their ideas?"; "Surely we work on problems in order to be able to publish solutions and get credit for them."; "When you do research, you are more likely to succeed if you try out lots of stupid ideas."; "If you are convinced that you could answer a question, but it would just need a couple of weeks"; "to go away and try a few things out, then still resist the temptation to do that."; "Suppose the experiment actually results in something publishable."; "Even if only a very small number of people contribute the lion's share of the ideas"; "the paper will still be submitted under a collective pseudonym with a link to the entire online discussion." https://gowers.wordpress.com/2009/01/27/is-massively-collaborative-mathematics-possible/

[3] Timothy Gowers, "A combinatorial approach to density Hales-Jewett", *Gowers's Weblog*, 1 February 2009: "the aim of the project is to find a combinatorial proof of the density Hales-Jewett theorem when". https://gowers.wordpress.com/2009/02/01/a-combinatorial-approach-to-density-hales-jewett/

[4] D. H. J. Polymath, "A new proof of the density Hales-Jewett theorem", *Annals of Mathematics* 175(3) (2012): 1283–1327, https://annals.math.princeton.edu/2012/175-3/p06 ; text at arXiv:0910.3926: "it is one of the fundamental results of Ramsey theory"; "In this paper, we give a new, elementary proof of the density Hales"; "The Hales-Jewett theorem asserts that for every r and every k there exists n such that every r-colouring"; "in a rather unusual 'open source' way, which is why it is"; "being published under a pseudonym"; "Anybody who wanted to could participate, and at all stages of the process the comments were fully open". https://arxiv.org/pdf/0910.3926

[5] Julie Rehmeyer, "Mathematics by collaboration", *Science News*, 8 December 2009: "Late last January, University of Cambridge mathematician Tim Gowers decided to run a little experiment."; "opened his blog for comments from anyone around the world, with mathematical training or not"; "Within a day, the comments had started coming in."; "Jason Dyer, a high-school mathematics teacher from Arizona, was the first to chime in (he eventually got his students working on the problem, too)"; "Soon the blog attracted a heavy hitter: Terence Tao, a Fields-medal winner and mathematician at the University of California, Los Angeles"; "traffic on the blog was sufficiently heavy that Gowers found he was consumed by it"; "It was extremely enjoyable," he says, "but somewhat addictive."; "one almost totally different from the one that Gowers had proposed"; "Over the course of the project, 27 people participated, contributing more than 800 comments."; "But once a particular, promising approach emerged, the team narrowed down to a handful of people"; "far more than in a typical mathematical collaboration, but far fewer than the dozens that Gowers had initially imagined"; "Just 37 days after Gowers began the project, the team found the solution."; "the Polymath Project proved a far bigger result than it had originally been aiming for". Gowers and Michael Nielsen gave their own account in "Massively collaborative mathematics", *Nature* 461 (2009): 879–881. https://www.sciencenews.org/article/mathematics-collaboration

[6] Timothy Gowers, "Problem solved (probably)", *Gowers's Weblog*, 10 March 2009: "So I hereby state that I am basically sure that the problem is solved (though not in the way originally envisaged)." https://gowers.wordpress.com/2009/03/10/problem-solved-probably/

The project had limits, and the fullest report of it names them. Once a promising approach emerged, the team narrowed to a handful of people, "far more than in a typical mathematical collaboration, but far fewer than the dozens that Gowers had initially imagined."[5] Who gets credit for shared work, and how to keep a large group working once the hard core of a problem is found, are fair questions, and later chapters return to them. What happened is not in doubt. Twenty-seven people, a Fields medallist and a schoolteacher among them, gave their time to a hard problem that no one had assigned them, knowing that any paper would carry a shared name instead of theirs. Gowers himself described the experience as "extremely enjoyable", and "somewhat addictive".[5]

For UP, Polymath is a small working model of its method. Its second core tenet, quoted in full in the notes and taken sentence by sentence later in this chapter, describes a method in which problems are named, measured and offered as work to anyone willing to take them on, whether or not they are affected, while the people a problem affects decide its outcome; no problem, solution or method belongs to the person who raised it; solutions are proposed with their evidence, tested and compared; and a better idea replaces a worse one.[7] Polymath did each of those things, except that a proof needed no one to decide its outcome. Gowers offered his problem to anyone, gave up his claim to it, and watched a better route replace the one he had planned. The whole record stayed open for anyone to check, as UP's rules, code, records, decisions and reasons are.[8] It also shows again the drive that Chapter 1 found in people from infancy: the urge to take on a problem because it is there, often with no reward in prospect.[9]

Polymath also shows the limit of what this chapter has to explain. A theorem is an unusual kind of problem. Once a proof is checked, it settles the question for everyone, and nobody's life is changed for the worse by the answer. Most shared problems are not like that. Where a town should put its solar field, how a river's water should be shared between farms and a city, which of a hundred needed repairs comes first: questions like these turn on what people value and on who bears the cost, and evidence can narrow them without settling them. So the question this chapter answers is the one a reader should ask of any system that promises better decisions. Who decides, and how?

UP's answer fits in the last four words of the same tenet: "Evidence proposes; people decide."[7] The rest of this chapter shows what that means in practice. It looks first at the same drive at work in other places where problems have been opened up to anyone, and then at how the current system decides, where it decides well and where its decisions are captured by money and organised interests. It then takes UP's method one line at a time, follows the steps UP takes when people disagree, and shows how UP keeps the conversation honest, where machines fit, how it tries many ways at once and how it corrects its own mistakes. It ends with the method stage by stage, the strongest doubts about it, and a return to the question Polymath asked.

The same drive, wherever problems are opened up

Polymath is one example of a wider pattern. Wherever a hard problem has been opened up to anyone who wants to try, people have come, often in large numbers and usually without pay, and they have sometimes solved what specialists could not.

In 2011 a team of scientists published the structure of an enzyme from M-PMV, a monkey virus that causes a disease like AIDS in monkeys. Researchers had for over a decade been unable to solve its structure, despite the availability of several crystal forms of the enzyme.[10] After that long run of failures, the team challenged the players

[7] Core tenet: *The method: shared problem solving with evidence*, in full: "Everything in UP runs through one method. Problems are named, measured and offered as work to anyone willing to take them on, whether or not they are affected; the people a problem affects decide its outcome. No problem, solution or method belongs to the person who raised it: anyone may update, reframe or improve it. Solutions are proposed with their evidence, tested and compared, and a better idea replaces a worse one. Every claim that guides shared action can be tested and is open to being proved wrong. Work on the roots of problems is worth the most, but a problem can be worked from any angle. Facts are checked, unknowns become shared work, and matters of taste are never made rules for others. Evidence proposes; people decide." Also in "The core of UP".

[8] Core tenet: *Open systems, shared knowledge, private persons*: "The rules, code, records, decisions and reasons of UP are public, so anyone can check them." UP's technology stays only in UP, where everyone taking part may use, study and improve it and no one may enclose it; "Each person controls their own information and chooses what to share." "Openness helps people find problems, but it will not find all of them, so UP also names the risks that openness alone cannot catch and keeps working on them." Full wording in "The core of UP".

[9] See Chapter 1, "What children show us", and its notes: people take on problems because they are there, from infancy onward, often without punishment, reward or money, and sometimes in spite of them.

[10] Firas Khatib, Frank DiMaio, Foldit Contenders Group, Foldit Void Crushers Group, et al., "Crystal structure of a monomeric retroviral protease solved by protein folding game players", *Nature Structural & Molecular Biology* 18 (2011): 1175–1177: "Following the failure of a wide range of attempts to solve the crystal structure of M-PMV retroviral protease"; "by molecular replacement, we challenged players of the protein folding game Foldit"; "Remarkably, Foldit players were able to generate models of sufficient quality for successful molecular replacement"; "The refined structure provides new insights for the design of antiretroviral drugs."; "a simian AIDS"; "but despite the availability of several crystal forms, researchers have for over a decade been unable";

of Foldit, an online game in which people fold virtual proteins into shapes, to produce accurate models of it. The players did. Their models were good enough to solve the structure, and the refined structure gave new insights for designing drugs against such viruses.[10] The competition ran for three weeks.[10,11] Two of the names in the paper's list of authors belonged to teams of players: the Foldit Contenders Group and the Foldit Void Crushers Group.[10] When a researcher later surveyed a group of 37 Foldit players on why they took part, contributing to scientific research and an interest in science were among the most important reasons they gave, alongside the community of other players and the intellectual challenge of the game.[12]

Galaxy Zoo shows the same thing at a larger scale. It was launched in July 2007 by two astronomers, Kevin Schawinski and Chris Lintott, who wanted a way to classify by eye every galaxy in a large sky survey in a reasonable amount of time, and it asked members of the public to look at the pictures and classify each galaxy by its shape. Within twelve hours of the launch the site was receiving 20,000 classifications an hour.[13] A paper published in 2008 counted more than 40 million classifications from about 100,000 people.[14] One of them, a Dutch schoolteacher named Hanny van Arkel, noticed a ghostly structure near one galaxy in 2007. Astronomers still call it Hanny's Voorwerp, Dutch for "Hanny's object", and it became the subject of research with the Hubble Space Telescope.[15] When the project surveyed nearly 11,000 of its volunteers, it found that their main motivation was a desire to contribute to scientific research.[16]

These three projects differ in nearly every way, except one. Each took a problem that had belonged to a small group of specialists and offered it as work to anyone willing to take it on, and in each case strangers came and did serious work; when the Foldit players and the Galaxy Zoo volunteers were asked why, contributing to science was among their main reasons, or the main one. That is the drive traced since Chapter 1: people take on problems because they are there, from infancy onward, often without punishment, reward or money, and sometimes in spite of them.[9] What the projects add is a lesson about method. When a problem is offered openly, with the means to test each attempt, the circle of people who can solve it widens far beyond the people whose job it is.

UP's core makes that lesson a rule for every shared problem, not just for proteins and galaxies. Problems are offered as work "to anyone willing to take them on, whether or not they are affected", anyone may take part in any problem, and the people a problem affects decide its outcome.[7,17] UP's agreed positions go further: inventing solutions together is UP's main activity, and in UP anyone can try anything that might solve a problem, the tools are commons, and the result carries the power.[18]

So what can such projects not do on their own? Each one solved a problem with a clear test. A protein structure fits the data or it does not; a galaxy's shape can be checked against many independent classifications; a proof holds or it fails. Each was also run by someone who chose the problem and set its rules: a mathematician, a laboratory, a team of astronomers. The decisions that shape most of life are different on both counts. They have no single right answer to check, because they turn on values, and the people who live with them are rarely the people who

"When the 3-week competition concluded". https://pmc.ncbi.nlm.nih.gov/articles/PMC3705907

[11] Leila Gray, "Gamers succeed where scientists fail", University of Washington News, 19 September 2011: "They did it in only three weeks."; "for more than a decade". Some news reports gave a shorter time; the paper itself speaks of a three-week competition. https://www.washington.edu/news/2011/09/19/gamers-succeed-where-scientists-fail

[12] Vickie Curtis, "Motivation to Participate in an Online Citizen Science Game: A Study of Foldit", *Science Communication* 37(6) (2015): 723–746: "Motivation to participate in Foldit was investigated in a group of 37 players using an online survey"; "Results suggest that contributing to scientific research and an interest in science were among the most"; "Interaction with others within the community of participants and the intellectual challenge of the game". https://oro.open.ac.uk/44708

[13] Lucy Fortson et al., "Galaxy Zoo: Morphological Classification and Citizen Science" (2011), section 2: "At this point, Kevin Schawinski and Chris Lintott"; "to find a way to visually classify all SDSS galaxies in a reasonable amount of time"; "within twelve hours of the launch"; "the Galaxy Zoo site was receiving 20,000 classification per hour". The paper dates the launch to July 2007 (11 July; another Galaxy Zoo paper gives 8 July). https://arxiv.org/pdf/1104.5513

[14] Chris J. Lintott et al., "Galaxy Zoo: morphologies derived from visual inspection of galaxies from the Sloan Digital Sky Survey", *Monthly Notices of the Royal Astronomical Society* 389 (2008): 1179, abstract: "The project has obtained more than 40,000,000 individual classifications made by ~100,000 participants." https://arxiv.org/abs/0804.4483

[15] ESA/Hubble, "Hubble zooms in on a space oddity", photo release heic1102, 10 January 2011: "It is named after Hanny van Arkel, the Dutch schoolteacher who discovered the ghostly structure in 2007"; "Hanny's Object in Dutch". https://esahubble.org/news/heic1102/

[16] M. Jordan Raddick et al., "Galaxy Zoo: Motivations of Citizen Scientists", *Astronomy Education Review* 12(1) (2013): "This paper analyzes results from an online survey of nearly 11,000 volunteers in Galaxy Zoo"; "Results show that volunteers' primary motivation is a desire to contribute to scientific research." https://arxiv.org/pdf/1303.6886

[17] Core tenet: *Open participation: anyone may take part; those affected decide*: "Anyone may take part in any problem, and the people it affects decide its outcome. There are no offices to hold: work is shared out, not owned, so no one gathers power by holding a position." Where work needs skill, skill is shown by open, testable standards that anyone can work toward and anyone can propose to change, and education is open to everyone at every age. Full wording in "The core of UP".

[18] UP's agreed position that inventing solutions together is UP's primary activity: "In UP anyone can try anything that might solve a problem; tools are commons; the result carries the power; unpopular ideas that work rise because of their results, not because a funder chose them." Full wording in UP's agreed positions (the Position Ledger).

choose them. In a representative democracy citizens choose who will decide, and between elections those people decide on their behalf. The open projects show how much ordinary people can contribute when they are invited in. The rest of this chapter asks what it would take to invite them into the decisions themselves.

How the current system decides, and what it gets right

UP's agreed position on judging the whole system acknowledges the great gains the current system brought over ancient ones, and on the question of how societies decide, those gains are large.[19] Three of them matter most for this chapter: elections that let people remove their rulers without violence, science that checks its own claims, and a newer habit of testing public policies before trusting them.

The philosopher Karl Popper drew the line between forms of government at whether the rulers can be removed without violence. He distinguished governments "of which we can get rid without bloodshed—for example, by way of general elections" from governments that can be removed only by violence, if at all.[20] The economist Amartya Sen found one of the strongest pieces of evidence for why that matters. Looking across the history of famines, he observed that "no substantial famine has ever occurred in any independent and democratic country with a relatively free press."[21] His explanation was about incentives: governments that have to win elections and face public criticism have strong incentives to take measures to avert famines.[22] Chapter 3 began with a famine that a government hid while a prominent foreign correspondent denied it. Sen's observation is the other side of the same story.

Science has its own way of deciding, which is to expose claims to tests and keep the ones that survive, and it is often slow but it corrects itself. Medicine shows the method at its best. In March 2020, as COVID-19 filled hospitals, doctors in the United Kingdom set up a trial called RECOVERY to test potential treatments for patients in hospital, and by mid-June they had enrolled more than 11,500 patients from over 175 hospitals in the National Health Service.[23] On 5 June the trial's leaders announced that they had found no beneficial effect from one of them, hydroxychloroquine, and stopped enrolling new patients to receive it.[24] Eleven days later they announced that dexamethasone, a low-cost drug, had reduced deaths by about a third among patients on ventilators and by about a fifth among other patients who needed oxygen but not a ventilator.[25] The published results also showed where the drug did not help: among patients who needed no help with their breathing, it showed no benefit.[26] Those results came out, the authors noted, nearly 100 days after the trial's protocol was first drafted.[26]

Some governments have begun to test their own policies the same way. In 1997 Mexico launched PROGRESA, a national programme of conditional cash transfers for rural families.[27] Because the programme could not start

[19] UP's agreed position that UP is judged as a whole system (read with the third tenet, which judges UP against both the current system and the ideal): "The book acknowledges the great gains today's system brought over ancient ones, and argues that systems built thousands of years ago have limits we no longer need to accept: it is time for another grand experiment." Full wording in UP's agreed positions (the Position Ledger).

[20] Karl R. Popper, *The Open Society and Its Enemies* (one-volume edition, Princeton University Press, 2013; first published 1945), chapter 7: "The first type consists of governments of which we can get rid without bloodshed—for example, by way of general elections"; "the social institutions provide means by which the rulers may be dismissed by the ruled"; "The second type consists of governments which the ruled cannot get rid of except by way of a successful revolution". Read in the UP library text (*The Open Society and Its Enemies - New One-Volume Edition*).

[21] Amartya Sen, "Democracy as a Universal Value", *Journal of Democracy* 10(3) (July 1999): 3–17: "I have discussed elsewhere the remarkable fact that, in the terrible history of famines in the world"; "no substantial famine has ever occurred in any independent and democratic country with a relatively free press." https://www.journalofdemocracy.org/articles/democracy-as-a-universal-value/

[22] Amartya Sen, *Development as Freedom* (New York: Knopf, 1999), chapter 1: "Democratic governments, in contrast, have to win elections and face public criticism, and have strong incentives to undertake measures to avert famines and other such catastrophes." Read in the UP library text (*Development as Freedom*).

[23] RECOVERY Trial, "Low-cost dexamethasone reduces death by up to one third in hospitalised patients with severe respiratory complications of COVID-19", 16 June 2020: "In March 2020, the RECOVERY (Randomised Evaluation of COVid-19 thERapY) trial was established"; "Over 11,500 patients have been enrolled from over 175 NHS hospitals in the UK." https://www.recoverytrial.net/news/low-cost-dexamethasone-reduces-death-by-up-to-one-third-in-hospitalised-patients-with-severe-respiratory-complications-of-covid-19

[24] University of Oxford, "No clinical benefit from use of hydroxychloroquine in hospitalised patients with COVID-19", 5 June 2020: "We have concluded that there is no beneficial effect of hydroxychloroquine in patients hospitalised with COVID-19."; "We have therefore decided to stop enrolling participants to the hydroxychloroquine arm of the RECOVERY trial with immediate effect." https://www.ox.ac.uk/news/2020-06-05-no-clinical-benefit-use-hydroxychloroquine-hospitalised-patients-covid-19

[25] RECOVERY Trial, 16 June 2020 (as above): "Dexamethasone reduced deaths by one-third in ventilated patients"; "by one fifth in other patients receiving oxygen only". The published rate ratios were 0.64 and 0.82 (see the next note). https://www.recoverytrial.net/news/low-cost-dexamethasone-reduces-death-by-up-to-one-third-in-hospitalised-patients-with-severe-respiratory-complications-of-covid-19

[26] The RECOVERY Collaborative Group, "Dexamethasone in Hospitalized Patients with Covid-19", *New England Journal of Medicine* 384 (2021): 693–704, first published online 17 July 2020: "among patients receiving invasive mechanical ventilation (29.3% vs. 41.4%; rate ratio, 0.64"; "among those receiving oxygen without invasive mechanical ventilation (23.3% vs. 26.2%; rate ratio, 0.82"; "but not among those who were receiving no respiratory support at randomization"; "These preliminary results for dexamethasone were announced on June 16, 2020, nearly 100 days after the protocol was first drafted"; patients were assigned to dexamethasone or to "usual care". https://pmc.ncbi.nlm.nih.gov/articles/PMC7383595/

[27] Abdul Latif Jameel Poverty Action Lab, "The Long-term Impact of PROGRESA on Education, Income, and Mobility in Mexico": "In 1997, the Mexican government introduced PROGRESA, a national CCT program for rural families" (CCT: conditional cash transfer); "320 villages began receiving transfers in May 1998"; "186 villages began receiving transfers 18 months later, in November 1999". https://www.povertyactionlab.org/evaluation/long-term-impact-

everywhere at once, the agency running it used the delay to run an experiment: villages in its evaluation sample were chosen at random to start early or late: 320 began receiving payments in May 1998, and the other 186 about a year and a half later, so the two groups could be compared.[28,27] Researchers from the International Food Policy Research Institute helped evaluate the results.[29] Then the politics changed. The election of July 2000 ended the governing party's 71-year hold on the presidency.[30] The new government kept PROGRESA, renamed it Oportunidades and expanded it. The institute that helped evaluate it put the reason plainly: "faced with evidence of PROGRESA's effectiveness, the new government decided to keep the program". An independent review of the institute's work was more cautious, saying the evaluations "may have contributed" to the decision.[31]

In UP's terms, each of these does part of the work UP's method is built to do, inside the current system. Elections let people remove their rulers without violence, a kind of self-correction, and a free press helps keep the shared record honest enough to act on; in UP, a truthful shared record is one of the floors.[32,33] RECOVERY proposed solutions with their evidence, tested and compared them, and let a better idea replace a worse one within about three months of its start.[7] PROGRESA survived a change of government, and the evidence may have helped it do so. UP does not start from contempt for any of this. It starts from the observation that each of these practices can be cut back or overridden by whoever holds power. An election chooses who will decide, not what will be decided. A trial needs a health service willing to run it and doctors willing to follow its results. A policy experiment survives only if the next government chooses to keep it. The next section shows what happens to shared decisions in the many places where those conditions do not hold.

Where the current system's decisions are captured

Of the twelve failures of the current system that UP's study set out to answer, the one that belongs to this chapter is the capture of government by money, and, more widely, of public decisions by money and organised interests.[34] It takes several forms, and the clearest is the simplest to measure. In 2025 the federal lobbying industry in the United States reported a combined $5.24 billion in spending, according to a count by LegiStorm, an increase of $768 million on the year before; a separate count by Bloomberg Government put the total at about $5.3 billion.[35,36] Two years earlier, interest groups had spent what was then a record $4.2 billion lobbying federal lawmakers.[37]

progresa-education-income-and-mobility-mexico

[28] Orazio Attanasio, Costas Meghir and Ana Santiago, "Education Choices in Mexico: Using a Structural Model and a Randomized Experiment to evaluate Progresa", Institute for Fiscal Studies working paper (2010): "The agency running PROGRESA used the fact that, for logistic reasons, the program could not be started everywhere simultaneously, to allocate randomly the villages in the evaluation sample"; "The remaining 186 villages were assigned to the communities where the program started almost two years later (December 1999 rather than May 1998)." J-PAL (previous note) dates the later start to November 1999, 18 months after the first. https://ifs.org.uk/sites/default/files/output_url_files/wp1014.pdf

[29] Emmanuel Skoufias, *PROGRESA and Its Impacts on the Welfare of Rural Households in Mexico*, IFPRI Research Report 139 (Washington, DC: International Food Policy Research Institute, 2005): "ever more effective at improving the well-being of Mexico's poorest people"; "From 1998 to 2000 the International Food Policy Research Institute (IFPRI) assisted the PROGRESA administration in evaluating the program." https://cgspace.cgiar.org/bitstreams/118d8b87-f991-4432-bb45-f963fa8e748b/download

[30] Associated Press, "Voters end 71 years of PRI rule in Mexico", 3 July 2000: "shattered the governing party's 71-year hold on the presidency". https://www.deseret.com/2000/7/3/19516234/voters-end-71-years-of-pri-rule-in-mexico/

[31] Skoufias (2005), Foreword by Joachim von Braun: "In the election of 2000, the people of Mexico voted a new party into power."; "Yet, faced with evidence of PROGRESA's effectiveness, the new government decided to keep the program (renamed Oportunidades)". https://cgspace.cgiar.org/bitstreams/118d8b87-f991-4432-bb45-f963fa8e748b/download . The independent review: CGIAR Standing Panel on Impact Assessment, "Assessing IFPRI's Impact: the Case of the Mexican PROGRESA Program", SPIA Brief 27 (November 2008): "Results of the first set of impact evaluations were presented to President-elect Fox"; "may have contributed to the decisions to continue, and ultimately expand, the program". https://iaes.cgiar.org//sites/default/files/ISPC_SPIA_Brief27.pdf

[32] Core tenet: *Self-correction: nothing is final, including this*, in full: "Every failure of UP is fed back into it as a new problem to solve, so it keeps improving without revolution. Every part of UP, these tenets included, can be improved through its own method. UP is judged against both today's system and the ideal it aims at: the ideal shows the direction and the gap still to close, and today's record shows whether UP is already doing better. Downsides, risks and fringe problems are named openly and treated as work, never as reasons to keep a status quo that fails so many." Also in "The core of UP".

[33] Core tenet: *Floors that are never crossed*: everyone's basic needs and protected freedoms, which no gain for others can buy (the starting example includes "freedoms such as thought, belief, speech, movement and privacy"); the living world's capacity to recover; the right to leave any group or community at any time, taking what is theirs; "a truthful shared record, so facts, measures and decisions are never falsified"; "freedom of the mind, so no one's thinking is manipulated without their knowledge or consent"; and "a fair hearing, so no one's freedom is restricted without a fair, evidence-based hearing, with the evidence open to them and a way to appeal". "The collective defines and refines the floors through UP's method; it may clarify or raise them, but no decision may lower them or push anyone below them." Full wording in "The core of UP".

[34] UP's study of step 3 (rounds 12 and 12c, agreed 28 October 2026) set out twelve major failures of the current system; the fourth, F4, is the capture of government by money. This chapter is F4's home and takes it in its wider form, the capture of public decisions by money and organised interests. Chapter 12 sets out all twelve. Full wording in UP's agreed positions (the Position Ledger, Round 12c).

[35] LegiStorm, "Lobbying spending tops $5 billion in 2025", 2 February 2026: "Federal lobbying spending surged past $5 billion in 2025, reaching the highest level ever recorded by a wide margin."; "The lobbying industry reported a combined $5.24 billion in spending"; "a $768 million increase from 2024". https://legistorm.com/pro_news/4371/lobbying-spending-tops-5-billion-in-2025.html

[36] Bloomberg Government, "Bloomberg Government Annual Top Lobbying Firms Report Reveals $5.3 Billion Industry Spending in 2025", 15 April 2026: "finding that total lobbying spending reached approximately $5.3 billion in 2025". https://about.bgov.com/insights/company-news/bloomberg-government-annual-top-lobbying-firms-report-reveals-5-3-billion-industry-spending-in-2025/

[37] NBC News, on an OpenSecrets report: "Interest groups spent a record $4.2 billion lobbying federal lawmakers in 2023". https://www.nbcnews.com/investigations/lobbyists-spent-record-42-billion-2023-federal-lawmakers-rcna135943

When the Organisation for Economic Co-operation and Development surveyed its members in 2021, it reported that "Less than half of OECD countries know who is lobbying their governments as the work is often done indirectly or by proxies."[38] Lobbying is lawful, and spending on it does not prove that any particular decision was bought. It does show where organised money expects decisions to be made, and how much it is willing to pay to be in the room.

Whose preferences end up in policy is harder to measure, and the evidence is disputed. In 2014 two political scientists, Martin Gilens and Benjamin Page, compared what different groups of Americans wanted on 1,779 policy questions with what the government did. They concluded that economic elites and organised groups representing business "have substantial independent impacts on U.S. government policy, while average citizens and mass-based interest groups have little or no independent influence."[39] Other scholars pushed back. One reanalysis found that the test was prone to underestimating the influence of middle-income citizens, and that when the two groups disagreed, average Americans got the policy they preferred roughly as often as the elites did.[40] Another found that policy ended up about where it would be if lawmakers represented the middle class and ignored the affluent, while also finding substantial room for unequal representation of strong partisan preferences.[41] A fair reading is that the evidence is disputed: the original study found little or no independent influence for average citizens, one reanalysis found they did about as well as elites when the two disagreed, and the other found policy close to what following the middle class would give, while still leaving room for unequal representation of strong partisan preferences.

Money can also reach decisions earlier, by shaping the evidence decision-makers rely on. In 2016 three researchers at the University of California, San Francisco, published what they had found in the internal documents of the Sugar Research Foundation, an industry group. In 1965 it sponsored its first research project on heart disease, a review of the literature that appeared in the *New England Journal of Medicine* in 1967. The review singled out fat and cholesterol as the dietary causes of heart disease and downplayed evidence that sugar was also a risk.[42] The foundation set the review's objective, contributed articles for inclusion and received drafts, and it eventually paid two of the authors $6,500. Its funding and role were not disclosed.[42] The researchers who uncovered this concluded that committees making health policy "should consider giving less weight to food industry–funded studies".[42] A later strategy went further: its aim was to keep the argument open. A tobacco industry memo from 1969 summed it up in four words: "Doubt is our product".[43]

Short horizons distort decisions in a quieter way. Two researchers, Andrew Healy and Neil Malhotra, compared American election results with government spending on natural disasters. Voters, they found, rewarded the president's party for spending on disaster relief, but not for spending on disaster preparedness, even though they estimated that "$1 spent on preparedness is worth about $15 in terms of the future damage it mitigates." The result,

[38] OECD, "New lobbying rules needed to strengthen trust", press release on *Lobbying in the 21st Century: Transparency, Integrity and Access*, 20 May 2021: "Less than half of OECD countries know who is lobbying their governments as the work is often done indirectly or by proxies." https://www.oecd.org/en/about/news/press-releases/2021/05/new-lobbying-rules-needed-to-strengthen-trust.html

[39] Martin Gilens and Benjamin I. Page, "Testing Theories of American Politics: Elites, Interest Groups, and Average Citizens", *Perspectives on Politics* 12(3) (2014): 564–581: "for 1,779 policy issues"; "Multivariate analysis indicates that economic elites and organized groups representing business interests"; "have substantial independent impacts on U.S. government policy, while average citizens and mass-based interest groups"; "have little or no independent influence." https://www.cambridge.org/core/journals/perspectives-on-politics/article/testing-theories-of-american-politics-elites-interest-groups-and-average-citizens/62327F513959D0A304D4893B382B992B

[40] Omar S. Bashir, "Testing Inferences about American Politics: A Review of the 'Oligarchy' Result", *Research & Politics* 2(4) (2015): "It is shown here that the test on which the original study is based is prone to underestimating"; "the impact of citizens at the 50th income percentile by a wide margin"; "their preferred policy outcome roughly as often as elites have when the two groups have disagreed with each other." https://journals.sagepub.com/doi/full/10.1177/2053168015608896

[41] Peter K. Enns, "Relative Policy Support and Coincidental Representation", *Perspectives on Politics* 13(4) (2015): 1053–1064: "policy ends up about where we would expect if policymakers represented the middle class and ignored the affluent"; "The analysis also shows, however, that substantial opportunity exists for unequal representation"; "of strong partisan preferences." https://www.cambridge.org/core/journals/perspectives-on-politics/article/relative-policy-support-and-coincidental-representation/BBBD524FFD16C482DCC1E86AD8A58C5B

[42] Cristin E. Kearns, Laura A. Schmidt and Stanton A. Glantz, "Sugar Industry and Coronary Heart Disease Research: A Historical Analysis of Internal Industry Documents", *JAMA Internal Medicine* 176(11) (2016): 1680–1685: "The SRF sponsored its first CHD research project in 1965, a literature review published in the New England Journal"; "of Medicine, which singled out fat and cholesterol as the dietary causes of CHD and downplayed evidence"; "that sucrose consumption was also a risk factor."; "The SRF set the review's objective, contributed articles for inclusion, and received drafts."; "Project 226 resulted in a 2-part literature review by McGandy, Hegsted, and Stare"; "The SRF initially offered $500 ($3800 in 2016 dollars) to Hegsted and $1000 ($7500 in 2016 dollars) to McGandy"; "Eventually, the SRF would pay them $6500"; "The SRF's funding and role was not disclosed."; "Policymaking committees should consider giving less weight to food industry"; "funded studies". The review appeared in 1967. https://pmc.ncbi.nlm.nih.gov/articles/PMC5099084

[43] The 1969 memo, "Smoking and Health Proposal", is held in the University of California, San Francisco's Truth Tobacco Industry Documents; it is quoted in Carl F. Cranor, "The Tobacco Strategy Entrenched", *Science* 321 (2008): 1296–1297: "Doubt is our product since it is the best means of competing with the 'body of fact'". https://84b831ed-c064-43dd-a461-380c7f1a3ed9.filesusr.com/ugd/f93e33_de4141de03474be2ab3f10164b1e5812.pdf

they wrote, distorts the incentives of public officials and leads the government to underinvest in preparedness.[44] A problem prevented is invisible at the next election; a problem relieved is on the evening news.

Even the best new ways of listening to citizens can be filtered by whoever holds power. In 2019 and 2020 France asked 150 citizens drawn by lot, the Citizens' Convention for the Climate, to propose measures on climate change, and they produced 149 proposals.[45] President Emmanuel Macron had told them that all their proposals that were complete and precise would be passed on "sans filtre", without filter, to the government, to parliament or directly to the French people; when he answered them in June 2020, he retained 146 of the 149.[46] By 2025, a study found, 20% of the recommendations had been implemented, and another 51% had been implemented in a modified form.[47] The citizens did the work; what became of it was decided elsewhere.

In UP's terms, each of these is a different route by which a shared decision slips out of the hands of the people it affects, and UP's core and agreed positions speak to each. Table 5.1 sets them side by side.

Table 5.1. How public decisions are captured today, and what UP's core says. The full wording of each idea is in "The core of UP" and UP's agreed positions.

How a decision is captured	Case in this chapter	The UP idea, in plain words
Buying access to the people who decide	Record lobbying spending, above $5 billion in 2025	There are no offices to hold; time and money earn recognition, never power; each person has one voice[17,48,49]
Unequal weight for different citizens	The disputed study of whose preferences become policy	The people affected decide; a vote needs a minimum share of them and the confirmation of a random sample[7,50]
Funding and shaping the evidence	The sugar industry's review	Every proposal is published with its data, which anyone can check; a truthful shared record is a floor[51,8,33]
Manufacturing doubt	The tobacco memo	An unknown becomes shared work to settle it, and decisions go ahead meanwhile through the decision steps[52]
Short horizons	Relief rewarded, prevention ignored	Work on roots is worth the most; future residents count among those affected[7,51]
Advice that power can filter	The French climate convention	The people affected decide its outcome, and there is no office above them to filter it[7,17]
A problem's persistence pays	Tax filing and others, Chapter 2	Problems are offered as work to anyone, and no one owns a problem or its solution[7,53]

So what does this design change, and what does it leave alone? Inside UP it closes the most direct routes. There is no office for a lobbyist to visit, no extra voice for money to buy, and no record of who proposed what that can be kept from the people affected.[17,48,8] What it leaves alone matters just as much, and UP does not hide it. In the early

[44] Andrew Healy and Neil Malhotra, "Myopic Voters and Natural Disaster Policy", *American Political Science Review* 103(3) (2009): 387–406: "Using data on natural disasters, government spending, and election returns, we show that voters reward"; "the incumbent presidential party for delivering disaster relief spending, but not for investing"; "in disaster preparedness spending."; "These inconsistencies distort the incentives of public officials, leading the government to underinvest"; "We estimate that $1 spent on preparedness is worth about $15 in terms of the future damage it mitigates." https://www.cambridge.org/core/journals/american-political-science-review/article/abs/myopic-voters-and-natural-disaster-policy/039708A3223EC114365ADF56F1D26423

[45] Government of France, "La Convention citoyenne pour le climat, un exercice démocratique inédit", 9 February 2021: "150 citoyens sont tirés au sort"; "Elles sont au nombre de 149." https://www.info.gouv.fr/actualite/la-convention-citoyenne-pour-le-climat-un-exercice-democratique-inedit

[46] Élysée, "Emmanuel Macron dit oui à 146 propositions de la Convention citoyenne pour le climat !", 29 June 2020, transcript of the President's reply: "je vous avais dit toutes les propositions qui seront abouties et précises seront transmises sans filtre"; "soit au Gouvernement pour ce qui relève du domaine réglementaire"; "soit pour ce qui relève de la loi, au Parlement, ou directement au peuple français."; the page's summary: "Sur les 149 propositions formulées, le Président a décidé d'en retenir 146". https://www.elysee.fr/emmanuel-macron/2020/06/29/le-president-emmanuel-macron-repond-aux-150-citoyens-de-la-convention-citoyenne-pour-le-climat

[47] Alina Averchenkova, Alexandre Koehl and Graham Smith, *Policy impact of the French Citizens' Convention for the Climate: Untangling the fate of the citizens' recommendations*, Knowledge Network on Climate Assemblies and Grantham Research Institute, LSE, 30 June 2025: "Twenty percent of recommendations have been implemented, with another 51 percent implemented in a modified form." https://www.lse.ac.uk/granthaminstitute/publication/policy-impact-of-the-french-citizens-convention-for-the-climate-untangling-the-fate-of-the-citizens-recommendations/

[48] Settled alongside the core, dangers adopted in round 10: "anyone may reframe a problem; one voice each, no fake accounts; time and money earn recognition, never power; everyone is a watcher; working fallbacks without the AI; people can always add options". The same list includes "no forced adoption, no leader, no founder named in the core; anyone acting outside the core stops being UP and bears the consequences". Full wording in "The core of UP".

stage the governments outside UP keep their lobbyists: UP changes how its own members decide, not how those governments do. And the most patient forms of capture can follow UP inside. Evidence can be funded and shaped there too, people with more time and organisation can dominate open processes, and informal power can gather without any office at all, since the pursuit of power can move from money to access, information or expertise. UP treats all of these as workload, watched for by everyone and answered with open checks.[54,55,56] The rest of this chapter shows the method UP uses to do that work.

UP's method, one line at a time

The tenet that sets out UP's method is eight sentences long, and each sentence does a different job.[7] Chapter 2 followed one problem, insulin, through the loop those sentences describe, from naming it to sharing what works.[57] This section takes the sentences one at a time and asks a narrower question of each: what does it say about who decides, and what does the record say about whether it can work?

The first sentence is the shortest: "Everything in UP runs through one method." Its weight is in the word *everything*. In the current system a shared decision can be reached by many routes, among them an election, a court, a regulator, a company board, a market, a donor's choice or a quiet word with an official, and each route has its own rules, some of them open and some not. UP's claim is that every shared decision in UP runs through the same open method, including decisions about UP itself, since every part of UP, its tenets included, can be improved through its own method.[32] There is no second route, no office from which a decision can be made around the method, because UP has no offices to hold, and its work is shared out, not held.[17,58] In UP's terms, the first sentence closes the back door.

The second sentence separates two groups of people that the current system often runs together. Problems are named, measured and "offered as work to anyone willing to take them on, whether or not they are affected"; "the people a problem affects decide its outcome." Working on a problem is open to everyone. Deciding its outcome

[49] Settled alongside the core (round 11), one voice per person: "every account belongs to one unique real person and carries that person's identity, which the person owns and controls; the system needs to confirm only that the person is unique and real, and every other detail is shared by the person's own choice. The exact design is open work for the collective." Full wording in "The core of UP".

[50] UP's agreed position on who decides: "Most decisions in UP are not made by voting. Input is gathered from everyone affected and considered, and judgements rest on facts, evidence and problem solving that looks past us-versus-them and I-like-it-or-I-don't." "a vote can ratify harm as easily as good, and often postpones a problem rather than solving it." "When a decision does reach the last step and goes to a vote, three guards apply: a minimum share of the affected must take part; a random sample of the affected who did not take part is asked to confirm it; and every decision publishes how many took part and how typical they were, with a decision made by a narrow group reopening automatically after a set time." The same position says that competence comes from published, testable work requirements that anyone can propose changes to, and from tracked outcomes, not from certification boards; since round 11 UP has no roles or offices in the old sense. Full wording in UP's agreed positions (the Position Ledger).

[51] UP's agreed position on how UP decides when people disagree, in full: "UP does not claim to be perfect. It claims to work better than today's system and to improve faster, because every gap it finds becomes a new problem to solve. UP does not let evidence decide alone. Every decision starts with an evidence-based proposal, published with its data, and an open question: does anyone have a better idea? A better idea is one that meets both goals and adds more to everyone's health, happiness and wellbeing; if one appears, it replaces the first. Most conflicts that look like either/or are not: the meadow and the energy can often both be had by changing the design. Where a real trade-off remains, UP tries to break it with new technology or a new design, and widens the circle of people working on it. Only when none of that works do the stakeholders vote. Voting is a last resort, not a forbidden one. Three guards keep the steps fair: anyone may write the first proposal, and its measures are public; every decision carries a deadline set by its urgency; and the stakeholders include everyone materially affected, including people downstream and future residents, while no vote may override the protected freedoms. Every vote records the losing side's case, and the decision reopens when new evidence or technology changes the options. Problem-solving methods are not fixed: within basic guardrails — a solution may not harm people — many methods are tried and their results are measured against each other." Full wording in UP's agreed positions (the Position Ledger).

[52] UP's agreed position on raising the standard of public discourse, in full: "UP's AI raises the standard of public discourse; it does not rule on everything said. Where a claim can be checked, it is checked, with its sources and confidence shown. Where a claim cannot yet be settled, it is marked as unknown, and the unknown becomes work for people and AI together: what data or study would settle it. While it is studied, decisions go ahead through the decision steps in [#1]. Where a statement is a matter of taste, it is marked as such and can never be made a rule for others. The AI flags true statements combined in a misleading way, and makes concerns raised by many people visible so they can be addressed. These categories are a starting guide, open to improvement from research on making shared knowledge faster, more valuable and more accurate, including tamper-evident records such as blockchains." Here "[#1]" refers to the decision steps above. Full wording in UP's agreed positions (the Position Ledger).

[53] UP's agreed position that the comparison with the current system is not symmetric: "The old system often monetises a problem instead of solving it, and sometimes the problem's persistence is what pays." Full wording in UP's agreed positions (the Position Ledger).

[54] UP's agreed position that concentration of power is the danger: "Abolishing money does not abolish the pursuit of power: it can move to access, office, information or expertise". "Design helps: caps, public records of who approved what, rotation of anyone who allocates, random audits, public and versioned allocation rules." Full wording in UP's agreed positions (the Position Ledger).

[55] Core tenet: *Power kept spread out*: concentration of power in any form (wealth, position, information, access, expertise or machines) is treated as a standing danger; "Everyone in UP watches for concentrations of power and spreads them out again. The threat is never declared gone; it is watched and answered." Full wording in "The core of UP".

[56] UP's agreed position that workload is not a danger: a problem counts as an issue for UP only if it cannot be fed back into the loop with a good chance of beating the current system, if the current system has a far better solution, or if it is endemic to UP; "Informal power and the loop checking itself are workload: open-source checks and open sensor data." The same position adds that UP is not magic: suffering continues while its biggest causes fall. Full wording in UP's agreed positions (the Position Ledger).

[57] See Chapter 2, "One problem through UP's loop", and its notes.

[58] Settled alongside the core (round 11): "UP has no roles or offices in the old sense; work is shared out, not held". Full wording in "The core of UP".

belongs to the people who will live with it. The Foldit players had no personal stake in a protein from a monkey virus, yet they produced models that solved a structure specialists had failed to solve for over a decade.[10] The decision is different, because someone has to bear its costs. Elinor Ostrom, who studied long-enduring institutions for governing shared resources, from mountain pastures to irrigation systems, found that they shared a set of design principles, and one of them is that most of the people affected by a community's rules can take part in changing those rules.[59] The farmers of Valencia, whom Chapter 1 met, still settle their disputes over shared water among themselves.[60] In UP the circle of the affected is drawn wide: it includes everyone materially affected, including people downstream and future residents.[51] For those who cannot speak for themselves, such as future people, young children and other living things, one way UP's agreed positions describe is several independent simulations, with their assumptions published, that give input but never a vote.[61] Who counts as affected in a hard case is itself a question for the method, and Chapter 22 takes it up.

The third sentence takes ownership off the table: "No problem, solution or method belongs to the person who raised it: anyone may update, reframe or improve it." The current system mostly rewards the opposite. A patent makes an invention the property of whoever filed it, a scientific career depends on credit for solutions, as Gowers himself acknowledged, and a political issue can belong to the party that raised it, so that the other side opposes it on principle. The largest open projects have learned to work the other way. Wikipedia's policy on ownership says that no one "has the right to act as if they are the owner of a particular article (or any part of it)."[62] Polymath went further, publishing its proof under a shared name instead of the names of the people who found it.[4] UP's core makes this a rule for every problem: anyone may reframe a problem, and no problem, solution or method belongs to the person who raised it, because work is shared out, not owned.[7,17,48] What a person gains from good work is recognition: in UP time and money earn recognition, never power, and contribution records are feedback that informs and never decides whether anyone's needs are met.[48,63]

The fourth sentence is where most of the work happens: "Solutions are proposed with their evidence, tested and compared, and a better idea replaces a worse one." The RECOVERY trial showed what this looks like when it is done well inside the current system, and PROGRESA survived a change of government. UP's agreed position defines what "better" means. A better idea is one that "meets both goals and adds more to everyone's health, happiness and wellbeing", and if one appears, it replaces the first.[51] UP also does more than compare ideas that arrive from elsewhere. Inventing solutions together is its main activity: anyone can try anything that might solve a problem, the tools are commons, and an unpopular idea that works rises because of its results, not because a funder chose it.[18] The current system's record shows why that matters. Katalin Karikó spent years trying to win support for her work on messenger RNA, and after years of unsuccessful attempts to obtain grant funding, the University of Pennsylvania demoted her in the 1990s.[64] In 2023 she and Drew Weissman shared the Nobel Prize in Physiology or Medicine for discoveries that enabled the development of effective mRNA vaccines against COVID-19.[65] Her idea won in the end, though for years the system that decides which ideas get funded did not back it.

The fifth sentence sets a test for any claim that would steer what people do together: "Every claim that guides shared action can be tested and is open to being proved wrong." The philosopher Karl Popper made the same test

[59] Elinor Ostrom, *Governing the Commons: The Evolution of Institutions for Collective Action* (Cambridge University Press, 1990), chapter 3, "Analyzing long-enduring, self-organized, and self-governed CPRs", whose cases include "Communal tenure in high mountain meadows and forests" and "Huerta irrigation institutions"; table 3.1, design principle 3, "Collective-choice arrangements": "Most individuals affected by the operational rules can participate in modifying the operational rules." Read in the UP library text (*Governing the Commons*).

[60] See Chapter 1 and the Introduction, on the farmers of Valencia who settle their disputes over shared irrigation channels at a public water court.

[61] UP's agreed position on voiceless stakeholders (Round 12S, position 9, given as one way UP could run, not a directive): future people, young children and other living things "are represented by simulations: several independent ones, assumptions published, giving input but never a vote." Full wording in UP's agreed positions (the Position Ledger).

[62] Wikipedia, "Wikipedia:Ownership of content" (policy): "All Wikipedia pages and articles are edited collaboratively by the Wikipedian community of volunteer contributors."; "has the right to act as if they are the owner of a particular article (or any part of it)". https://en.wikipedia.org/wiki/Wikipedia:Ownership_of_content

[63] UP's agreed position on rewards and motivation: "Money that controls people crowds out the motivation they bring themselves; feedback that informs, and the freedom to choose, keep it alive (Ryan & Deci). UP's contribution records are feedback: they inform, and they never decide whether anyone's needs are met." Full wording in UP's agreed positions (the Position Ledger).

[64] Megan Zahneis, "Penn Demoted Her. Then She Won the Nobel Prize.", *The Chronicle of Higher Education*, 5 October 2023: "After years of unsuccessful attempts to obtain grant funding, Penn demoted her and cut her pay in the late 1990s." https://www.chronicle.com/article/penn-demoted-her-then-she-won-the-nobel-prize . *Times Higher Education* dates the demotion to 1995: "where she was demoted from a faculty position in 1995 as bosses felt her work on mRNA was unproductive" (Jack Grove, 2 October 2023, https://www.timeshighereducation.com/node/728861).

[65] The Nobel Assembly at Karolinska Institutet, press release, 2 October 2023: "has today decided to award the 2023 Nobel Prize in Physiology or Medicine jointly to Katalin Karikó and Drew Weissman"; "for their discoveries concerning nucleoside base modifications that enabled the development of effective mRNA vaccines against COVID-19". https://www.nobelprize.org/prizes/medicine/2023/press-release/

the mark of a scientific theory.[66] The scope of UP's sentence matters as much as its content. It covers claims that guide shared action, such as "this treatment works", "this road will cut accidents" or "this rota is fair". It does not reach into what anyone believes privately: thought and belief are among the starting examples of protected freedoms in UP's floors, and freedom of the mind means no one's thinking is manipulated without their knowledge or consent.[33] And it applies to claims that are already published and respected. When a large collaboration of researchers repeated 100 studies published in three psychology journals, 97% of the original studies had reported statistically significant results, but only 36% of the repeats did.[67] That result is often told as a scandal. It is better read as the method working: a field tested its own claims and found where they failed.

The sixth sentence sets a priority without making it a rule: "Work on the roots of problems is worth the most, but a problem can be worked from any angle." The current system often rewards the opposite order. Voters, as the previous section showed, tend to reward relief after a disaster and not the preparedness that would have prevented much of the damage, although each dollar spent on preparedness was estimated to save about fifteen in future damage.[44] A problem tree, the kind of diagram Chapter 2 drew for insulin, shows where the roots are, so that work can go to solutions that solve many problems at once.[68,69] The second half of the sentence matters too. A person who can only relieve a symptom, by fixing one broken pump or tutoring one child, is still doing UP's work.

The seventh sentence sorts what people say into three kinds: "Facts are checked, unknowns become shared work, and matters of taste are never made rules for others." A later section of this chapter shows how UP's agreed position on public discourse puts it into practice.

The last sentence carries the most weight: "Evidence proposes; people decide." It answers the question this chapter opened with. A century ago the sociologist Max Weber argued that science cannot tell people how to live.[70] UP agrees. Evidence can show what each option is likely to lead to, and for whom; it cannot settle how to weigh an outcome for one person against an outcome for another, because that is a question of values, and values are decided by the people affected.[7,51] UP's agreed position says it directly: "UP does not let evidence decide alone."[51] The same holds for its machines. In UP the AI coordinates by proposing. It publishes proposals with their data and confidence, marks what is still unknown as work for people and AI together, and never rules on matters of taste, and every proposal goes through the decision steps.[71] Chapter 3 showed why the difference matters, in the history of movements that handed decisions to experts or to machines.[72]

Most of these sentences have a precedent somewhere in the current system, as this chapter shows. Problems opened to anyone, shared ownership, randomised trials, falsifiable claims, careful sorting of fact, unknown and taste: each already works, in particular places, for particular kinds of problem. In a representative democracy, though, most shared decisions are still made by the people citizens elect, between elections, and not by the people each decision affects. That is the gap UP is built to close: in UP, these practices, and the solutions its people invent together, become the ordinary route for every shared decision.[7,18,73]

[66] Karl R. Popper, *Conjectures and Refutations* (1963), chapter 1: "One can sum up all this by saying that the criterion of the scientific status of a theory is its falsifiability, or refutability, or testability." https://www.sfu.ca/~swartz/popper.htm (excerpt). The same test is in *The Logic of Scientific Discovery*: "it must be possible for an empirical scientific system to be refuted by experience" (read in the UP library text).

[67] Open Science Collaboration, "Estimating the reproducibility of psychological science", *Science* 349(6251) (2015): aac4716, abstract: "We conducted replications of 100 experimental and correlational studies published in three psychology journals"; "Ninety-seven percent of original studies had statistically significant results."; "Thirty-six percent of replications had statistically significant results". https://www.ebi.ac.uk/europepmc/webservices/rest/search?query=EXT_ID:26315443%20AND%20SRC:MED&resultType=core&format=json

[68] UP's agreed position that UP is judged as a whole system: "If any part of UP works badly, that is itself a problem: the AI identifies the people it affects and offers it to them as work, to propose, test and compare solutions. Problems are linked in trees that show their common roots, so the work goes to solutions that solve many problems at once. The bigger a problem, the more people it affects and the more attention and effort it draws, so the system works like a marketplace of problems, biggest first, and any area where UP does not yet do better than today's system gets attention first." The same position says that UP's "starting point will not be great; it is built to improve much faster than today's systems." Full wording in UP's agreed positions (the Position Ledger).

[69] See Chapter 2, Figure 2.4 ("Three problems, one root") and "One problem through UP's loop".

[70] Max Weber, "Science as a Vocation" (a lecture given in Munich and published in 1919), in an English translation: "Science is meaningless because it gives no answer to our question, the only question important for us"; "What shall we do and how shall we live?"; "That science does not give an answer to this is indisputable." Weber was quoting Tolstoy. https://www.wisdom.weizmann.ac.il/~oded/X/WeberScienceVocation.pdf

[71] UP's agreed position on what the AI is, the coordinator that proposes: "It publishes evidence-based proposals with their data and confidence, marks what is still unknown as shared work for people and AI, and never rules on matters of taste. Every proposal goes through the decision steps: an open call for better ideas, input from everyone affected (including people downstream and future residents), and only as a last resort a guarded vote." Full wording in UP's agreed positions (the Position Ledger).

[72] See Chapter 3, "Rule by experts, and rule by machines", and its notes.

[73] UP's agreed position that it names a system people already use: "These elements have existed in isolation, and others saw that they could be coordinated"; "The problem is not progress but the framework we run it in". Full wording in UP's agreed positions (the Position Ledger).

When people disagree: the decision steps

Every method looks easy while everyone agrees. The test comes when people who will live with a decision want different things, and this is where UP's method is most often misunderstood. Some readers assume that "evidence proposes; people decide" means a vote on everything. Others assume it means that the data settles every argument and no one votes at all. UP's agreed position on disagreement says neither. It sets out a sequence of steps, and voting is the last of them, "a last resort, not a forbidden one".[51] Figure 5.1 draws the steps, and the paragraphs that follow take them in order.

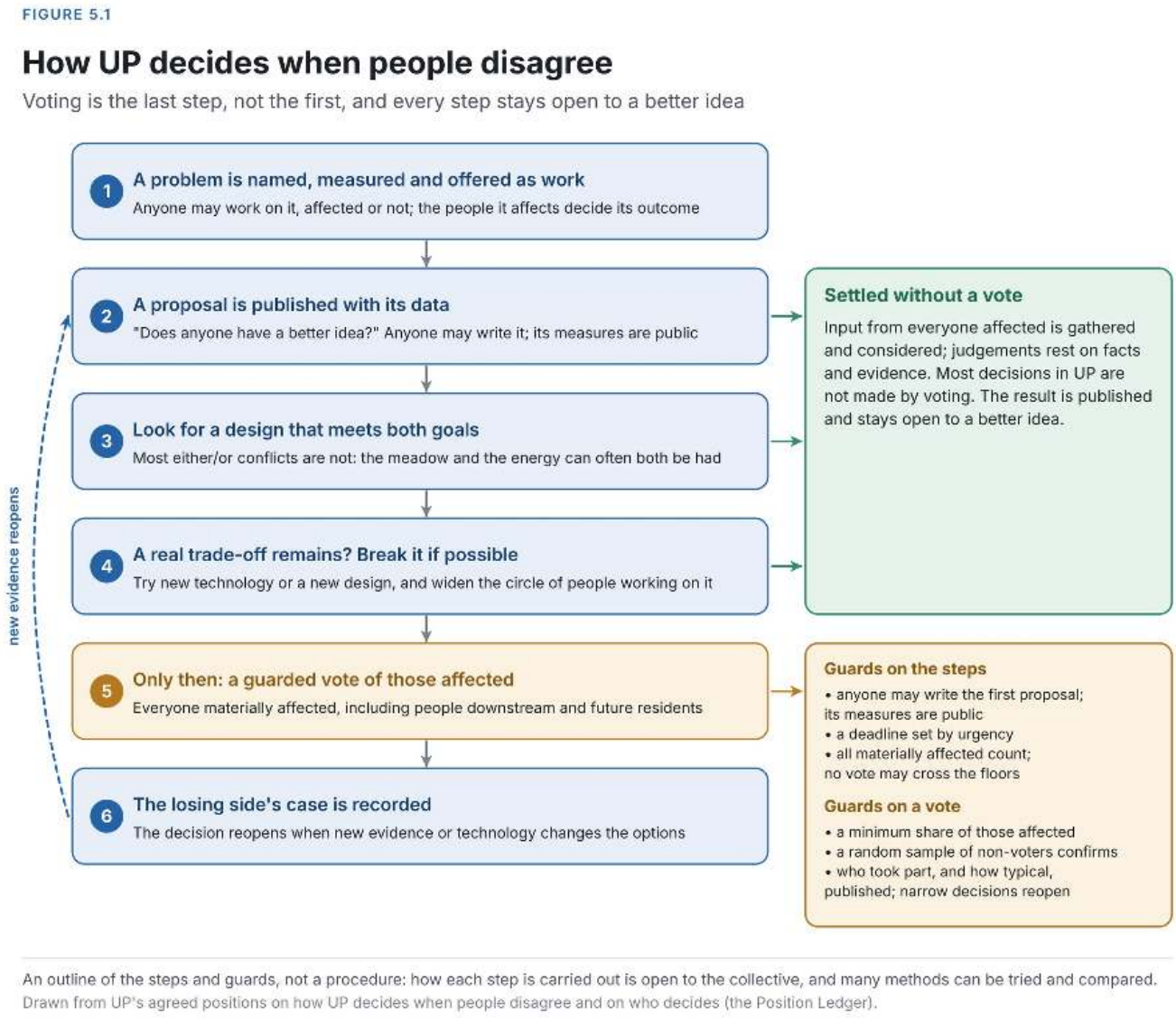


Figure 5.1. How UP decides when people disagree, drawn from UP's agreed position on disagreement and its agreed position on who decides. It describes the steps and their guards; how each step is carried out is open to the collective, and many methods can be tried and compared.

Every decision starts with an evidence-based proposal, published with its data, and an open question: does anyone have a better idea?[51] Anyone may write the first proposal, and its measures are public, which is the first of the three guards UP's position sets on the steps.[51] There is an old and successful precedent for working this way. In April 1969, the Network Working Group, which was writing the host software for a new computer network, began circulating its ideas as numbered notes called Requests for Comments. Steve Crocker set down the convention in the third: a note could contain "any thought, suggestion, etc." about the network, and notes were "encouraged to

be timely rather than polished."[74] The series continues, and its documents still set out the foundations of the internet, including its standards.[75] UP's first step works in the same spirit. A proposal is an invitation to improve it, not a claim to be final, and among the dangers UP adopted with its core is a rule that fits this step exactly: people can always add options.[48]

The second step comes from an observation that is easy to forget in a heated argument: "Most conflicts that look like either/or are not: the meadow and the energy can often both be had by changing the design."[51] The Trans-Canada Highway runs through Banff National Park, and a busy highway through a park looks like a straight choice between traffic and wildlife. The park did not make that choice. It fenced the highway and built crossing structures for the animals, 44 in all, six overpasses and 38 underpasses, and since the fencing and crossings were first built, collisions between vehicles and wildlife have dropped by more than 80%.[76] In UP's terms, the second step asks everyone to look for the design that makes the choice unnecessary before anyone is asked to choose.

Where a real trade-off remains, the third step is to try to break it with new technology or a new design, and to widen the circle of people working on it.[51] The opening of this chapter showed why the second half of that step matters. The structure of a protein that had resisted specialists for years gave way to people playing a game, and a problem that a Fields medallist had chosen as a test gave way to a crowd that took a route he had not foreseen, with a schoolteacher among its first members.[10,5] Widening the circle is worth trying, because sometimes the person who breaks a deadlock is someone nobody thought to ask.

Only when none of that works do the stakeholders vote.[51] UP's agreed position on who decides explains why voting comes last. Most decisions in UP are not made by voting: input is gathered from everyone affected and considered, and judgements rest on facts, evidence and problem solving "that looks past us-versus-them and I-like-it-or-I-don't." A vote, the position says, "can ratify harm as easily as good, and often postpones a problem rather than solving it."[50] That is not a rejection of voting. When a decision does come to a vote, it is a guarded vote, and UP's positions set guards at two points, three on the steps that lead to it and three on the vote itself. Table 5.2 sets them out, with a real precedent for each and the limit each precedent shows.

Table 5.2. The guards on UP's decision steps and on a vote, with real precedents. The guards are UP's agreed positions; the precedents are from the current system and show both that each guard can work and where it falls short.

Guard	What it protects against	A real precedent	What the precedent shows
Anyone may write the first proposal, and its measures are public[51]	A few people setting the agenda	The internet's Requests for Comments, begun in 1969 as informal notes "encouraged to be timely rather than polished"[74,75]	Openly circulated, informal proposals can lay the foundations of a global network
Every decision carries a deadline set by its urgency[51]	Delay used as a weapon; emergencies left waiting	The RECOVERY trial, which announced its dexamethasone result nearly 100 days after its protocol was first drafted[26]	Testing can keep pace with an emergency when the work is shared widely
The stakeholders include everyone materially affected, including people downstream and future residents; no vote may override the protected	Local majorities pushing costs onto others; majorities overriding a minority's freedoms	The United States Supreme Court's ruling of 1943 that fundamental rights "may not be submitted to vote"[77]	Freedoms placed beyond the reach of any vote protect the people a majority would overrule

[74] Steve Crocker, "Documentation Conventions", Request for Comments 3, Network Working Group, April 1969: "The content of a NWG note may be any thought, suggestion, etc. related to the HOST software or other aspect of the network."; "Notes are encouraged to be timely rather than polished." https://www.rfc-editor.org/rfc/rfc3.txt

[75] RFC Editor, home page: "RFCs outline computer networking and Internet foundations, including Internet Standards and historical or informative content." https://www.rfc-editor.org/

[76] Parks Canada, "Wildlife crossing structures and research", Banff National Park (modified 19 November 2022): "With a total of 44 wildlife crossing structures (six overpasses and 38 underpasses), and 82 km of highway fencing"; "Since fencing and crossing structures were first constructed, wildlife-vehicle collisions have dropped by more than 80%."; "the Trans-Canada Highway Twinning Project". https://parks.canada.ca/pn-np/ab/banff/nature/conservation/transport/tch-rtc/passages-crossings

[77] *West Virginia State Board of Education v. Barnette*, 319 U.S. 624 (1943), opinion of the Court delivered by Justice Jackson: "The very purpose of a Bill of Rights was to withdraw certain subjects from the vicissitudes of political controversy, to place them beyond the reach of majorities and officials"; "One's right to life, liberty, and property, to free speech, a free press, freedom of worship and assembly, and other fundamental rights may not be submitted to vote; they depend on the outcome of no elections." https://supreme.justia.com/cases/federal/us/319/624/

Guard	What it protects against	A real precedent	What the precedent shows
freedoms[51]			
A minimum share of the affected must take part[50]	A small, organised group deciding for everyone	Minimum-turnout rules in European referendums[78]	A minimum share can backfire: it can make staying at home a tactic, so setting its level is work for the collective to design and test
A random sample of the affected who did not take part is asked to confirm the decision[50]	Decisions made by whoever had the time to turn up	Ireland's Citizens' Assembly of 99 randomly selected citizens; the permanent citizens' council of the German-speaking Community of Belgium[79,80]	Randomly chosen citizens can deliberate on hard questions, and a community can make such a body permanent
Every decision publishes how many took part and how typical they were, and a decision made by a narrow group reopens automatically after a set time[50]	Narrow decisions hardening into permanent ones	Sunset clauses, which make a law lapse after a set date unless it is renewed; Colorado, Florida and Alabama passed the first state sunset laws in 1976[81]	A decision can be made to come back for review on its own; reopening only the decisions a narrow group made is UP's own design, to be tested

UP's agreed positions also protect the people a change would cost, whether it is settled by design or by a vote. Everyone's basic needs and protected freedoms form a floor that no gain for others can buy, and above it "no one is made worse off without being asked first: those who would lose out are consulted and helped, though no single person can block a change that meets everyone's needs."[82]

Two more rules follow the vote. "Every vote records the losing side's case, and the decision reopens when new evidence or technology changes the options."[51] The first rule keeps the minority's reasons in the shared record, where anyone can read them later. Courts have done this for a long time, and the record shows why it matters. In 1896, in *Plessy v. Ferguson*, the United States Supreme Court adopted the doctrine of "separate but equal".[83] One justice, John Marshall Harlan, dissented: "Our Constitution is color-blind, and neither knows nor tolerates classes among citizens."[84] Fifty-eight years later, in *Brown v. Board of Education*, the Court rejected any language in *Plessy* contrary to its findings and concluded that in public education the doctrine of separate but equal has no place.[83] A recorded dissent is a losing argument kept where a later generation can find it. The second rule makes every decision provisional in the way a scientific result is provisional. A decision stands until something better is found, and then it is reopened through the same steps.

One more line in UP's position keeps the steps themselves from hardening into a ritual. "Problem-solving methods are not fixed: within basic guardrails — a solution may not harm people — many methods are tried and their results are measured against each other."[51] The steps in Figure 5.1 are the frame; how a community gathers input, drafts a proposal or runs a guarded vote is itself open to testing and improvement.

[78] Luís Aguiar-Conraria and Pedro C. Magalhães, "Referendum design, quorum rules and turnout", *Public Choice* 144 (2010): 63–81, abstract: "We test our model's predictions using data for all referendums held in current European Union countries from 1970 until 2007"; "As a result, paradoxically, participation quorums decrease electoral participation."; "inducing those who oppose changes in the status quo and expect to be in the minority to abstain". https://ideas.repec.org/a/kap/pubcho/v144y2010i1p63-81.html

[79] The Citizens' Assembly (Ireland), "Inaugural meeting of the Citizens' Assembly takes place at Dublin Castle": "the Chairperson, Ms. Justice Mary Laffoy, and 99 citizens, randomly selected to be broadly representative of the Irish electorate". Its topics included "the Eighth Amendment of the Constitution" and "how the State can make Ireland a leader in tackling climate change." https://citizensassembly.ie/inaugural-meeting-of-the-citizens-assembly-takes-place-at-dublin-castle/

[80] Parliament of the German-speaking Community of Belgium, "Parlament beschliesst Einführung eines permanenten Bürgerdialogs" (25 February 2019): "Die Themen werden von einem Bürgerrat aus 24 Bürgern bestimmt."; "Die Teilnehmer werden per Los unter den Bürgern ausgewählt". https://www.pdg.be/desktopdefault.aspx/tabid-4008/7135_read-55888 . Bürgerdialog in Ostbelgien: "Die erste Bürgerversammlung startete im März 2020." https://www.buergerdialog.be/hintergrund/entstehungsgeschichte/

[81] Wikipedia, "Sunset provision": "a sunset provision or sunset clause is a measure within a statute, regulation, or other law that provides for the law to cease to be effective after a specified date, unless further legislative action is taken to extend it."; quoting the National Conference of State Legislatures: "Colorado, Florida and Alabama passed the first sunset laws in 1976." https://en.wikipedia.org/wiki/Sunset_provision

[82] UP's agreed position that no one is pushed below the floor: "Everyone's basic needs and protected freedoms form a floor that no gain for others can buy." "Above the floor, no one is made worse off without being asked first: those who would lose out are consulted and helped, though no single person can block a change that meets everyone's needs." UP's agreed position on the two floors in the way of oppression says the same: "Those who would lose out are asked first and helped; no single person can block a change that meets everyone's needs." Full wording in UP's agreed positions (the Position Ledger).

[83] *Brown v. Board of Education of Topeka*, 347 U.S. 483 (1954): "The 'separate but equal' doctrine adopted in Plessy v. Ferguson, 163 U.S. 537, has no place in the field of public education."; "Any language"; "in Plessy v. Ferguson contrary to this finding is rejected."; "We conclude that, in the field of public education, the doctrine of 'separate but equal' has no place." https://supreme.justia.com/cases/federal/us/347/483/

[84] *Plessy v. Ferguson*, 163 U.S. 537 (1896), Justice John Marshall Harlan, dissenting: "Our Constitution is color-blind, and neither knows nor tolerates classes among citizens." https://supreme.justia.com/cases/federal/us/163/537/

Illustration: one way it could run. This is not evidence and not a plan; it shows how the steps fit together. A town in UP needs more electricity, and the best site for a solar field is a meadow that families use for walks and that supports wild bees. Someone posts a proposal for the field with its data: the energy it would produce, the area it would cover and what the meadow is used for now. The proposal ends with the open question: does anyone have a better idea? Within a week three come back. One person points to the roofs of the town's warehouses. Another proposes mounting the panels high enough for the meadow to stay a meadow underneath, with gaps for light and paths for walkers. A third, from a town downstream, points out that the field's drainage plan would send run-off into a stream that town relies on. The second idea meets both goals, and the third becomes part of the design. No vote is needed. If the trade-off could not have been broken, the people affected, including the town downstream, would have voted, with the guards in Table 5.2, and the losing side's case would have stayed in the record for the day a better design appeared.

Keeping the conversation honest: fact, unknown and taste

The decision steps work only if people can trust what is said along the way. A proposal published with its data is worth little if the data is wrong, and an open question about better ideas is worth little if the loudest answer wins. UP's agreed position on public discourse sets out how UP keeps the conversation honest, and it begins with a limit on itself: "UP's AI raises the standard of public discourse; it does not rule on everything said."[52] It sorts what people say into three kinds, as a starting guide that is itself open to improvement.[52]

The first kind is a claim that can be checked. "Where a claim can be checked, it is checked, with its sources and confidence shown."[52] The current system has begun to learn how to do this in the open, and some of the most promising results come from crowds. In one study, a small, politically balanced crowd of ordinary people rating the accuracy of news articles reached high agreement with professional fact-checkers.[85] The social network X runs a system called Community Notes, in which users write notes adding context to posts and other users rate them. In the words of its guide, it does not work by majority rule: a note appears only when it is rated helpful by contributors who have sometimes disagreed in their past ratings.[86] A study of 40,000 posts for which a note had been suggested, published in 2025, found that after a note was attached, reposts dropped by 46% on average and likes by 44%. Over a post's whole life the effect was smaller, 12% for reposts, because much of the sharing had happened before the note arrived, and notes that took 48 hours or so to go up had almost no effect.[87] For UP's method, these studies suggest that checking works best when it is open, done by people who do not already agree, and fast.

The second kind is a claim that cannot yet be settled. It is marked as unknown, "and the unknown becomes work for people and AI together: what data or study would settle it."[52] This is where the current system often stalls, because an open question can be used as a reason to do nothing. UP's position closes that door: "While it is studied, decisions go ahead through the decision steps".[52] The RECOVERY trial showed both halves at once. Its patients received the usual care, with or without the treatment being tested, and the dexamethasone result was announced nearly 100 days after the trial's protocol was first drafted.[26]

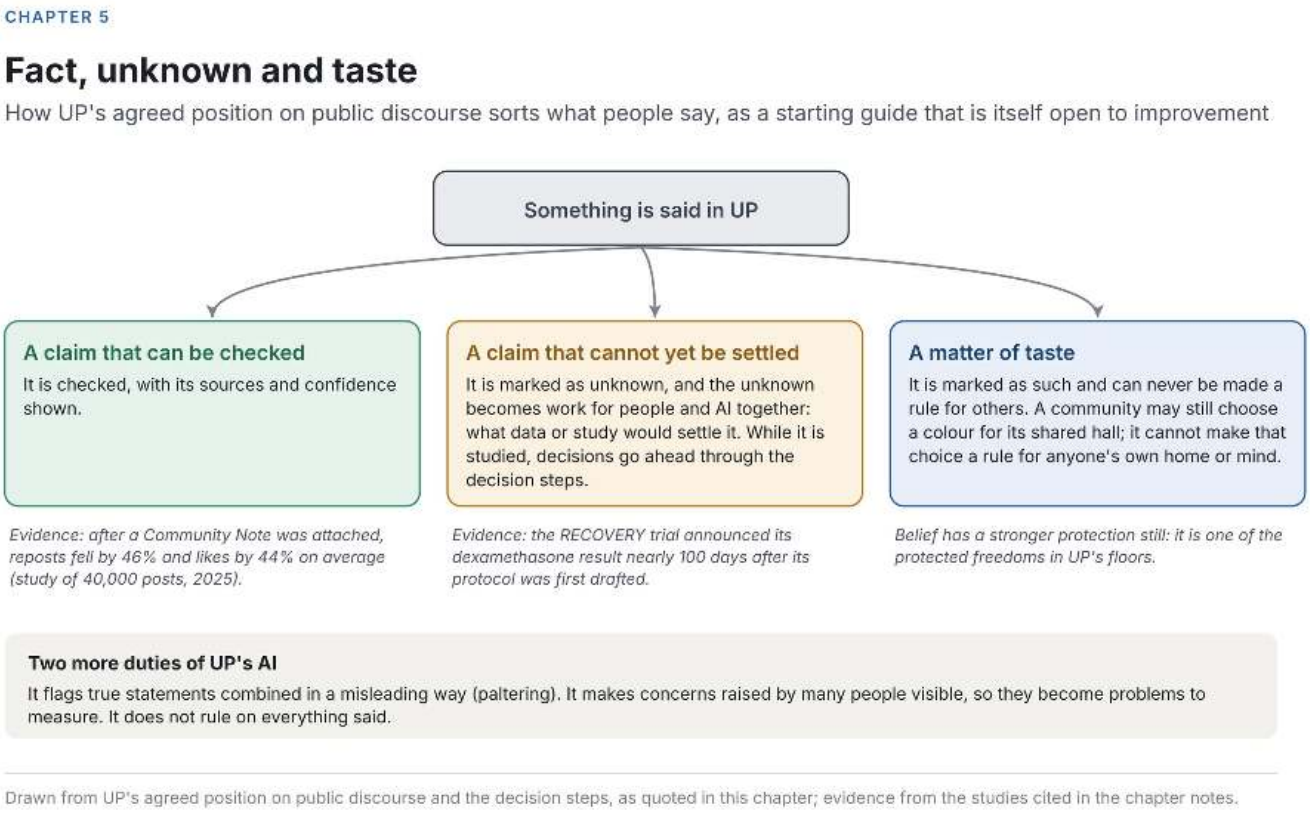
The third kind is a matter of taste: which colour to paint a hall, which music to play at a festival, or how to dress. Belief itself has a stronger protection still, as one of the freedoms in UP's floors.[33] "Where a statement is a matter of taste, it is marked as such and can never be made a rule for others."[52] This is one of the clearest lines between UP and the systems Chapter 3 described. Matters of taste are never made rules for others in UP, and no one's thinking may be manipulated without their knowledge or consent, which is one of UP's floors.[7,33] A community can still choose a colour for its shared hall, through the decision steps, because someone has to. What it cannot do is make its choice a rule for anyone's own home or anyone's own mind.

[85] Jennifer Allen, Antonio A. Arechar, Gordon Pennycook and David G. Rand, "Scaling up fact-checking using the wisdom of crowds", *Science Advances* 7(36) (2021): eabf4393, summary: "When rating articles' accuracy, a small politically balanced crowd of laypeople yields high agreement with fact-checkers." https://dspace.mit.edu/handle/1721.1/144233

[86] X, "Community Notes Guide: Introduction": "Only notes rated helpful by people from diverse perspectives appear on posts"; "Community Notes doesn't work by majority rules."; "notes require agreement between contributors who have sometimes disagreed in their past ratings"; "Notes may be proposed by people or AI note writers". https://communitynotes.x.com/guide/en/about/introduction (read in a browser; the site needs scripts).

[87] Stefan Milne, "Community Notes help reduce the virality of false information on X, study finds", UW News, 18 September 2025, on Isaac Slaughter, Axel Peytavin, Johan Ugander and Martin Saveski, "Community notes reduce engagement with and diffusion of false information online", *Proceedings of the National Academy of Sciences* 122(38) (2025): e2503413122: "After getting a Community Note, on average, reposts dropped 46% and likes dropped 44%."; "Over posts' whole lifespans, including engagement before notes were attached, the drops were 12% for reposts"; "Between March and June of 2023, researchers tracked 40,000 posts for which a note was suggested."; "Notes that take 48 hours or so to go up have almost no effect." https://www.washington.edu/news/2025/09/18/community-notes-x-false-information-viral

Two more duties complete the position. “The AI flags true statements combined in a misleading way,” which psychologists call paltering, “the active use of truthful statements to convey a misleading impression.”[52,88] A lie can be checked against the facts; a palter passes that test and still misleads, so it needs its own flag. And the AI “makes concerns raised by many people visible so they can be addressed.”[52] A worry that many people share should not need a campaign or a donor to be heard. In UP’s terms, it is a signal: the concern becomes a problem to measure, and the bigger the problem proves to be, the more attention and effort it draws through the marketplace of problems.[68] The position closes by naming its own limit: these categories are “a starting guide, open to improvement from research on making shared knowledge faster, more valuable and more accurate, including tamper-evident records such as blockchains.”[52] The same goes for the conversation itself. Many communities already set down rules for arguing in good faith. One poster, published by The School of Thought, asks people to promise “I will try to reach a shared understanding rather than ‘win the argument’” and to “remain genuinely receptive to changing my mind.”[89] UP’s agreed position on who decides asks for the same spirit, in problem solving “that looks past us-versus-them and I-like-it-or-I-don’t.”[50]



Fact, unknown and taste: how UP keeps the conversation honest.

Where the machines fit

UP’s method runs on technology at every step, and the place it gives machines is one of the most important things to understand about it. Its core sets the rule in two short sentences: “AI and automation coordinate, propose and do work. They never govern: people can always correct, pause or switch them off.”[90] UP’s agreed position on what its

[88] Todd Rogers, Richard Zeckhauser, Francesca Gino, Michael I. Norton and Maurice E. Schweitzer, “Artful paltering: The risks and rewards of using truthful statements to mislead others”, *Journal of Personality and Social Psychology* 112(3) (2017): 456–473: “Paltering is the active use of truthful statements to convey a misleading impression.” https://www.ebi.ac.uk/europepmc/webservices/rest/search?query=DOI:10.1037/pspi0000081&resultType=core&format=json

[89] The School of Thought, *The Rules of Civil Conversation*, poster (Creative Commons Attribution and Non-commercial licence, 2022; a copy is in UP’s research notes): “I will try to reach a shared understanding rather than ‘win the argument’.”; “I promise to remain genuinely receptive to changing my mind.” The same rules appear on the initiative’s website in a shorter form: “try and reach a shared understanding rather than ‘win the argument’”; “remain genuinely receptive to changing my mind”. https://therulesofcivilconversation.org/

[90] Core tenet: *Technology serves; people decide*: “AI and automation coordinate, propose and do work. They never govern: people can always correct, pause or switch them off. No single AI system or operator controls coordination”. The AI systems UP uses are open, more than one, checked against each

AI is spells out the division of labour. The AI publishes evidence-based proposals with their data and confidence, marks what is still unknown as shared work for people and AI, and never rules on matters of taste. Every proposal it makes goes through the same decision steps as anyone else's. People choose their own work: the AI may not assign work or compel anyone, and any plan it proposes can be overridden through the decision steps.[71]

There are working precedents for machines that help a crowd decide without deciding for it. After mass protests in Taiwan in 2014, the government asked a civic technology community known as g0v to create a way of listening to the public on national questions, and the result became known as vTaiwan. Its first test, in August 2015, was how to regulate the ride-sharing service Uber.[91] It became the first national-scale use of a tool called Polis. Participants write short statements and vote on other people's statements by clicking agree, disagree or pass; an algorithm sorts the participants into clusters of people who vote alike, and then picks out the statements that all the clusters agree on.[92] The machine does not decide anything. It shows a divided crowd where its common ground lies. Community Notes, met earlier in this chapter, works on the same principle. Notes may now be proposed by people or by AI note writers, but it is still the ratings of people who have sometimes disagreed that decide which notes are shown.[86]

UP adds safeguards that these tools do not need at their scale and that a whole society would. No single AI system or operator controls coordination: the AI systems UP uses are open, more than one, checked against each other, and watched for concentrated power like everything else.[90] Among the safeguards UP's agreed position on open code lists is allocation code that runs as two independent versions that must agree, stopping and becoming a public problem when they do not.[93] And the dangers UP adopted with its core include "working fallbacks without the AI", so that the method can keep working if a machine fails or is switched off.[48] Chapter 11 takes up the AI in full, and Chapter 20 the shared tools and the concentration of power in AI today. For this chapter, the point is simpler. In UP's method, a machine can coordinate, propose, check and do work. It never governs: people can always correct, pause or switch it off, and people decide.[90,7]

Many ways at once: splits and the marketplace of problems

A vote produces one answer for everyone, and when people disagree about something that can be tried, that is often a waste. UP's agreed position puts it plainly: "Splits are good: they test two or a thousand ways in the real world."[94] Where people inside UP disagree about how to solve a problem, and the disagreement is about what will work rather than about anyone's protected freedoms, they need not settle it by a vote at all. Each group can try its way, publish its results and let the results be compared, and the better idea replaces the worse one when the evidence comes in.[7,51] Splits of this kind are about methods tried within UP. The freedom to live outside UP, or to leave any group within it, is a different matter, protected by UP's floors and by its tenet that no one is forced to join.[33,95]

The idea has a respected history inside the current system. In 1932, dissenting from a decision of the United States Supreme Court, Justice Louis Brandeis wrote that "a single courageous State may, if its citizens choose, serve as a laboratory; and try novel social and economic experiments without risk to the rest of the country."[96] In a federal system, states or provinces can serve this purpose, though a state's experiment is still shaped by its politics and its

other, and watched for concentrated power like everything else. Full wording in "The core of UP".

[91] The Computational Democracy Project, "vTaiwan" (case study): "resulting in Polis' first national-scale deployment"; "The mass protests of the 2014 Sunflower Movement publicly demonstrated that better group decision-making was possible through facilitation"; "requested that the g0v (pronounced 'gov zero') civic tech community create a scalable listening process for national use"; "The first test of vTaiwan was in August 2015 on how to regulate the ride sharing service Uber." https://compdemocracy.org/Case-studies/2014-vtaiwan/

[92] The Computational Democracy Project, "Polis": "participants submit short text statements, or comments"; "sent out semi-randomly to other participants to vote on by clicking agree, disagree or pass"; "a behind-the-scenes algorithm sorts participants into diverse clusters of like-minded responders"; "The algorithm then identifies"; "about which all the diverse clusters agree". https://compdemocracy.org/Polis/

[93] UP's agreed position that open code is a tool, not a guarantee: "it makes corruption much harder to hide, more visible and easier to contest". Among the safeguards it lists are funded rotating red teams, staged rollouts, reproducible builds, tamper-evident records, and "allocation code that runs as two independent versions that must agree, stopping and becoming a public problem when they don't"; UP also widens who can check, since "checking counts as contribution work". It ends: "UP says plainly what openness cannot catch: a patient, skilled bad actor can earn trust and hide for years." Full wording in UP's agreed positions (the Position Ledger).

[94] UP's agreed position that "Splits are good: they test two or a thousand ways in the real world." The same position adds that people focus on what affects them most, which is fine. Full wording in UP's agreed positions (the Position Ledger).

[95] Core tenet: *Freely joined, ethically grown*: "UP is never imposed. No one is forced to join, to work or to give up what is theirs." It grows by being useful and acts only by ethical means; "What counts as ethical is defined and refined by the collective through UP's method." Full wording in "The core of UP".

[96] *New State Ice Co. v. Liebmann*, 285 U.S. 262 (1932), Justice Louis Brandeis, dissenting: "It is one of the happy incidents of the federal system that a single courageous State may, if its citizens choose, serve as a laboratory; and try novel social and economic experiments without risk to the rest of the country." https://supreme.justia.com/cases/federal/us/285/262/

budget. Open-source software shows the same idea working faster. In December 2014 a group of contributors to Node.js, a runtime for the JavaScript programming language, split off after a dispute with the company Joyent and created their own version, io.js.[97] Each side developed its own way for several months. In June 2015 the two communities announced that they would merge their code bases and continue their work in a neutral forum, the Node.js Foundation, and in September they released a single version that combined the work of both projects.[98] The split tested two ways of running a project in the real world, and then the two ways became one.

In UP's terms, a split is a test, not a schism. It works because of what surrounds it. The results of each way are public and compared openly, so the better idea can spread on its results; one way UP's positions describe to keep the comparison fair is to measure with fixed definitions kept over time.[8,99] Neither group owns its way, so the other can adopt it the moment it works.[7] And because the knowledge UP produces stays open to everyone taking part in UP, and no one may enclose it, a split is not allowed to become a fence around a good idea.[8] What a split cannot do is decide a question of protected freedoms or push anyone below a floor. Those are outside the reach of any vote and any experiment.[33,51]

Splits answer the question of how to try many ways. A second question is where effort should go first, and UP's agreed position on the whole system answers it with what it calls a marketplace of problems. The bigger a problem, the more people it affects and the more attention and effort it draws, so effort goes to the biggest problems first, and any area where UP is not yet doing better than the current system gets attention first of all.[68] Problems are linked in trees that show their common roots, so the work goes to solutions that solve many problems at once.[68] Chapter 2 drew one such tree for insulin and its neighbours.[69] One way UP's agreed positions describe to keep that honest is to count the size of a problem in measured harm, with fixed definitions kept over time and an independent check on every headline measure, not by how loud it feels.[99] People still choose their own work, since UP's AI may not assign work or compel anyone, and people focus on what affects them most, which UP's position calls fine.[71,94] The marketplace shows where the need is greatest. It does not tell anyone what to do.

Nothing is final, including this

Every method makes mistakes. What separates a good method from a bad one is what it does next. UP's third tenet makes the answer part of its core: "Every failure of UP is fed back into it as a new problem to solve, so it keeps improving without revolution. Every part of UP, these tenets included, can be improved through its own method."[32] The current system offers two cases of institutions facing their own mistakes, and both are worth knowing.

Commercial aviation learned to treat mistakes as information. In 1976 NASA began running a system, the Aviation Safety Reporting System, to which pilots, air traffic controllers and others could report safety incidents. It was designed to be voluntary, confidential, non-punitive and independent, and under the rules of the Federal Aviation Administration a person who reports an incident can, if certain conditions are met, avoid a civil penalty or the suspension of their licence for it.[100] By 2026 it had received more than 2.3 million reports.[101] Over the same decades, flying became far safer. An MIT study found that the risk of death for a passenger on a commercial flight fell from one in every 350,000 boardings in 1968–77 to one in every 7.9 million in 2008–17 (Figure 5.2).[102] Many

[97] Neil McAllister, *The Register*, 14 January 2015, on io.js reaching version 1.0: "The io.js JavaScript software development runtime, a fork of Node.js, has reached version 1.0"; its developers "created io.js in December 2014 after clashing with Joyent". https://www.theregister.com/2015/01/14/io_dot_js_version_1_0

[98] The Linux Foundation, "Node.js Foundation Advances Community Collaboration, Announces New Members and Ratified Technical Governance", 16 June 2015: "The Node.js and io.js developer communities today are announcing a collaboration to merge their respective code bases"; "and continue their work in a neutral forum, the Node.js Foundation". https://www.linuxfoundation.org/press-release/node-js-foundation-advances-community-collaboration-announces-new-members-and-ratified-technical-governance . Node.js v4.0.0 (September 2015): "This release represents countless hours of hard work encapsulated in both the Node.js project and the io.js project that are now combined in a single codebase." https://nodejs.org/en/blog/release/v4.0.0

[99] UP's agreed position on measures (Round 12S, position 8, given as one way UP could run, not a directive): "problems are measured with fixed definitions kept over time and ranked by measured harm, not by how loud they feel; every headline measure has an independent check." Full wording in UP's agreed positions (the Position Ledger).

[100] NASA Aviation Safety Reporting System, *CALLBACK* 555 (April 2026): "Operations began on April 15, 1976."; "The system was designed to be: Voluntary, Confidential, Non-Punitive, and Independent." https://asrs.arc.nasa.gov/publications/callback/cb_555.html . NASA ASRS, "Program summary": "The ASRS collects voluntarily submitted aviation safety incident/situation reports from pilots, controllers, and others." https://asrs.arc.nasa.gov/overview/summary.html . On the conditions under which a reporter avoids a penalty, quoting Federal Aviation Administration Advisory Circular 00-46F: "neither a civil penalty nor certificate suspension will be imposed if:" https://asrs.arc.nasa.gov/overview/immunity.html

[101] NASA ASRS, *CALLBACK* 555 (April 2026): "with a total to date of over 2.3 million." https://asrs.arc.nasa.gov/publications/callback/cb_555.html

[102] Peter Dizikes, "Study: Commercial air travel is safer than ever", MIT News, 23 January 2020, on Arnold Barnett, "Aviation Safety: A Whole New World?", *Transportation Science* (2020): "The study finds that between 2008 and 2017, airline passenger fatalities fell significantly compared to the previous decade"; "Globally, that rate is now one death per 7.9 million passenger boardings, compared to one death per 2.7 million"; "boardings during the period 1998-2007, and one death per 1.3 million boardings during 1988-1997"; "the commercial airline fatality risk was one death per 750,000 boardings during 1978-1987"; "and one death per 350,000 boardings during 1968-1977." https://news.mit.edu/2020/study-commercial-flights-safer-ever-0124

changes contributed to that fall, and no one would credit it all to a reporting system. But a profession that collects millions of reports of its own incidents, under rules designed to be non-punitive, is a profession built to learn.

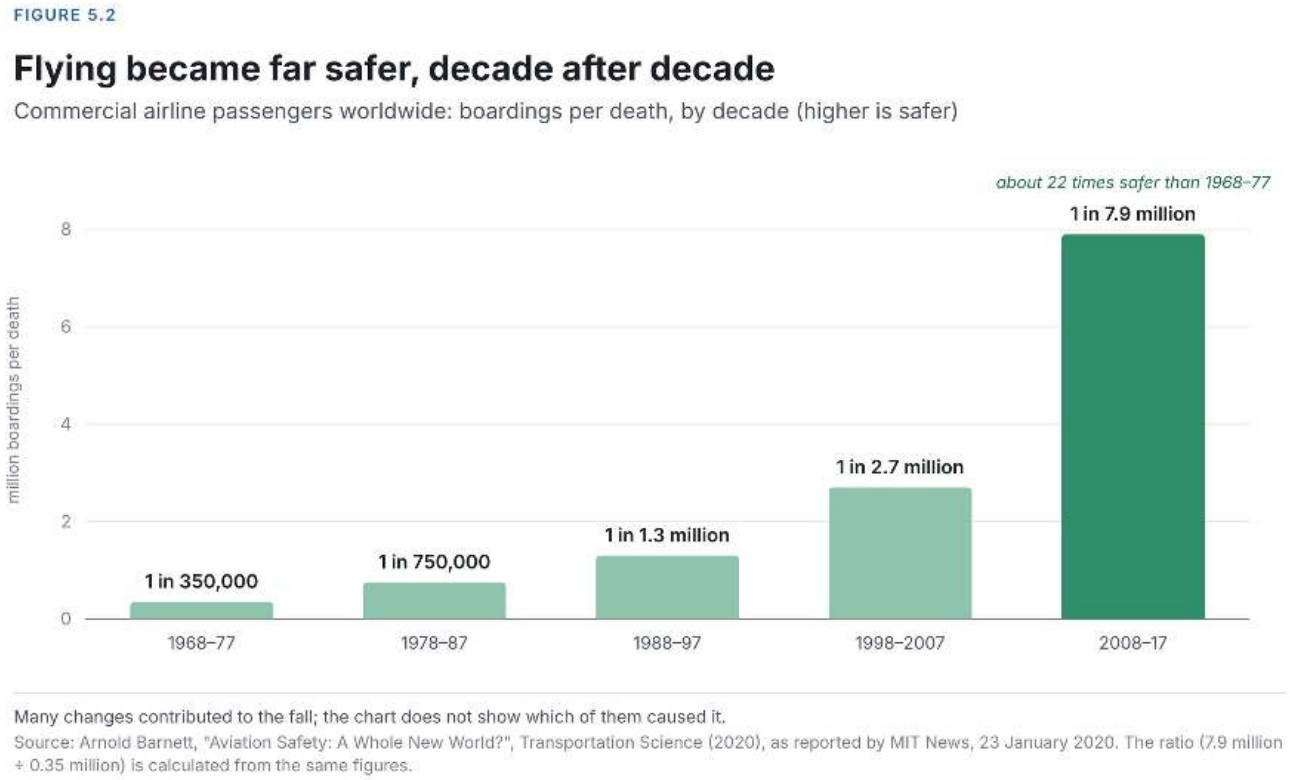


Figure 5.2. The risk of death for a passenger on a commercial flight, worldwide, shown as one death per so many boardings, so a taller bar is safer. Data from Arnold Barnett's study, as reported by MIT News in 2020. Many changes contributed to the fall; the chart does not show what caused it.

The Institute of Medicine urged hospitals to learn the same lesson. In 1999 it estimated that at least 44,000, and perhaps as many as 98,000, Americans died in hospitals each year as a result of medical errors.[103] Its central argument was about blame. "The focus must shift from blaming individuals for past errors to a focus on preventing future errors by designing safety into the system."[104] A system that punishes the person who reports a mistake teaches everyone to hide the next one; a system that treats the report as information learns from it.

In UP's terms, aviation shows its third tenet working inside the current system, and the comparison with hospitals shows what changes when an institution does not yet work that way. UP's third tenet asks every part of UP for the same habit: every failure is fed back into it as a new problem to solve, and how best to protect the people who report a failure is itself work for the method.[32] If any part of UP works badly, that is itself a problem: the AI identifies the people it affects and offers it to them as work, to propose, test and compare solutions.[68] Reporting a failure starts the next piece of shared work. UP's agreed position adds a distinction that keeps this honest. Whatever goes wrong in UP is workload, to be identified, measured, studied, tested and solved like any other problem, unless it meets one of three tests: a problem counts as an issue of UP itself only if it cannot be fed back into the loop with a good chance of doing better than the current system, if the current system has a far better solution, or if it is endemic to UP.[56] Informal power, and the work of checking UP's own loop, are named as workload too, met with open checks and open data.[56]

[103] Institute of Medicine, *To Err Is Human: Building a Safer Health System* (Washington, DC: National Academy Press, 2000; released in November 1999), chapter 2, p. 26: "the results of these two studies imply that at least 44,000 and perhaps as many as 98,000"; "Americans die in hospitals each year as a result of medical errors." https://www.nationalacademies.org/read/9728/chapter/4

[104] Institute of Medicine, *To Err Is Human* (as above), executive summary: "The focus must shift from blaming individuals for past errors to a focus on preventing future errors"; "by designing safety into the system." https://www.nationalacademies.org/read/9728/chapter/2

Openness helps, and UP says plainly where it stops. UP's rules, code, records, decisions and reasons are public, so anyone can check them, while each person controls their own information; but "Openness helps people find problems, but it will not find all of them".[8] UP's agreed position on open code names the hardest case: a patient, skilled bad actor can earn trust and hide for years.[93] That is why checking in UP is everyone's work and counts as contribution work: there is no position whose job is to check everyone else, because everyone is the check. And it is why no part of UP, its own checks included, is ever declared finished.[93,105,55]

The same tenet sets the standard UP is judged by. UP is judged against both the current system and the ideal it aims at: the ideal shows the direction and the gap still to close, and today's record shows whether UP is already doing better.[32] UP's agreed position on the whole system says plainly that its starting point will not be great, and that it is built to improve much faster than the current system.[68] UP calls itself a self-improving paradigm for this reason. Earlier upgrades of civilisation needed revolutions, upheaval, mass adoption and submission; because every problem with UP is fed back into it as work, it keeps upgrading itself without revolution or violence. That, UP's position says, is why it is hard to imagine a system that would replace it: "not because it is final or perfect, but because it keeps changing itself."[106]

The method, stage by stage

UP is judged by stage, beside the current system. It grows side by side with the current system: in the early stage it is a minority network inside it, in the middle stage it has its own productive base and most members' needs are met from what UP produces, and in the completed stage most people live mainly in UP. The early stage rests on today's evidence. The middle and completed stages are reasoned projections from cited mechanisms, and they are labelled as projections.[107] Table 5.3 follows the method, and the failure this chapter is home to, the capture of public decisions by money and organised interests, through the three stages.

Table 5.3. UP's method and the capture of public decisions, by stage. The middle and completed stages are projections, labelled as such; the completed stage is modelled.

Stage	What changes	Real precedent	Why it is likely	What persists
Early	Among UP's members, inside the current system: problems are offered as open work; decisions run through the steps; there are no offices to buy, UP's records are public and each person has one voice[17,8,49]	Polymath; Foldit; Galaxy Zoo; Community Notes; the internet's Requests for Comments[5,10,14,87,75]	Open, testable problem solving already draws large numbers of unpaid contributors, and open proposals have built systems used worldwide	Lobbying of the governments outside UP, at record levels; UP has no say over them[35]
Middle (projection)	More of shared life, in the communities that make up UP, runs through open processes in which money buys no say, with guarded votes for the trade-offs design cannot break[48,51,50]	Ireland's Citizens' Assembly; the permanent citizens' council of the German-speaking Community of Belgium; participatory budgeting (Chapter 1)[79,80]	Randomly chosen citizens already deliberate on hard questions, and one community has made such a body permanent	Capture of open processes by people with more time, money and organisation; funded and shaped evidence; informal power, all treated as workload and watched by everyone[56,55]
Completed (modelled)	Most shared decisions run through the steps;	(modelled)	Each part reinforces the others: open	Disagreement over values, which no

[105] UP's study lessons, lesson 17 (a lesson drawn from the study's corrections, not an entry in the Position Ledger): UP has no central operator; there is no position whose job is to check everyone else, because everyone is the check; anyone may do whatever could resolve a problem; the result carries the most weight; and anyone who finds a better way improves UP for everyone.
[106] UP's agreed position that UP is a self-improving paradigm: "Earlier upgrades of civilisation needed revolutions, upheaval, mass adoption and submission. UP asks only that people solve problems together, and because every problem with UP is fed back into it as work, it keeps upgrading itself without revolution or violence." It ends: "That is why it is hard to imagine a system that would replace it: not because it is final or perfect, but because it keeps changing itself." Full wording in UP's agreed positions (the Position Ledger).
[107] UP's agreed position on the stages (Position Ledger, Round 12c, position 1): "The early stage rests on today's evidence; the middle and completed stages are labelled as projection." The stages themselves are described in UP's study lessons (lesson 13): UP grows side by side with the current system, early (a minority network inside it), middle (its own productive base, with most members' needs met from what UP produces) and completed (most people live mainly in UP); the middle and completed stages are reasoned projections from cited mechanisms.

Stage	What changes	Real precedent	Why it is likely	What persists
	communities that join bring their decisions into the same open method[108]		records, one voice per person, the guards and a culture of testing[68]	method removes; the limits of any vote; the never-finished work of keeping the method open[32,55]

Illustration: one way it could run. This is not evidence and not a plan; it shows the stages in one place. In the early stage, some people in a mid-sized town take part in UP alongside their ordinary lives. One of them posts a problem on an open board: the bus stop outside the clinic has no shelter, and older patients wait there in the rain. Someone counts how many people use the stop and for how long they wait. A retired builder proposes a design with its costs in materials and hours, and asks whether anyone has a better idea; a student suggests moving the stop twenty metres to an existing awning, which turns out to be simpler. The people who use the stop agree, volunteers do the work, and the record of who proposed what, and why, stays public. In the middle stage, many communities in the region decide their shared matters this way, from where to put a shared workshop to how to share the work of running it, and the rare questions that design cannot settle go to a guarded vote, confirmed by a random sample of those who stayed away. In the completed stage, which can only be modelled, most of the shared decisions that shape the town run through the same open steps, and the people who live with each decision make it.

The table makes one limit plain. In the early stage, UP changes how its own members decide. It does not change how the governments around it decide, and the record lobbying described earlier in this chapter goes on beside it. What the early stage can do is show, on a small scale and in the open, whether another way of deciding works, so that people can judge it by its results.[95,68]

The strongest doubts

A method that claims to be open to improvement should welcome the strongest case against it. Six objections come up again and again, and each deserves its best form before UP's answer.

The first is that UP's method is rule by experts in friendlier words. If evidence carries so much weight, the objection runs, then whoever produces the evidence, or programs the AI that summarises it, holds the real power. Chapter 3 answered the strongest version of this, the history of movements that handed decisions to experts or machines.[72] The short answer is in the method's own wording. "UP does not let evidence decide alone."[51] Evidence proposes and the people affected decide; there is no office for an expert to hold; skill is shown by open standards anyone can work toward and propose to change; the AI proposes and never governs; and anyone can check the data and the code behind a proposal.[7,17,90,8] What persists is the advantage of people who understand the evidence best. UP's answer is education open to everyone at every age, and a culture in which checking is everyone's work.[17,93]

The second objection is that facts cannot settle values. Two people can agree on every number in a proposal and still disagree about whether to build the road, because one cares more about the commute and the other about the meadow. UP agrees, and its method is built on the distinction. Facts are checked; unknowns become shared work; values are decided by the people affected; and matters of taste are never made rules for others.[7] The objection still points at something that persists. Many arguments that look like disputes about facts are disputes about values in disguise, and sorting one from the other is hard, slow work. UP's position on public discourse calls its own categories "a starting guide", open to improvement.[52]

The third objection comes from mathematics. The economist Kenneth Arrow proved what is now known as his impossibility theorem, which the Nobel committee that honoured him in 1972 summed up as showing that "it is impossible to construct a social welfare function out of individual preference functions".[109] Put simply, when there are more than two options, no method of combining individual rankings into a single group ranking can meet every

[108] UP's agreed positions in Round 12c: the overall claim (position 2), which speaks of cities and nations joining as UP grows; growth (position 3), which is natural and whose speed is not for UP's people to decide, while what matters is to keep the quality of UP's core values and tenets as it grows, so that growth stays positive; and urgency (position 4): the threats from the current system make it urgent to supply UP's system as quickly as possible, and the aim is a transition, not a collapse. Full wording in UP's agreed positions (the Position Ledger).

[109] The Royal Swedish Academy of Sciences, press release on the 1972 Prize in Economic Sciences to John R. Hicks and Kenneth J. Arrow: "according to which it is impossible to construct a social welfare function out of individual preference functions." https://www.nobelprize.org/prizes/economic-sciences/1972/press-release/

reasonable condition of fairness at once.[110] Any vote UP holds, the objection runs, will therefore be imperfect, and some pattern of preferences will always make its result look arbitrary. UP accepts the theorem. It does not claim to have found a voting rule that escapes it. What it does is use votes less and hold their results more loosely. Most decisions are not made by voting; design and new technology come first; and when a vote is held, the losing side's case is recorded and the decision reopens when new evidence or technology changes the options.[50,51] That does not make Arrow's problem disappear. It is meant to make the problem arise less often, and it leaves the results open to correction; how to vote well when a vote is needed remains work for the collective, which can try several methods and compare them.[51]

The fourth objection is the most serious, and it comes from the record of participation itself. Open processes are captured, it says, by the people with the most time, money and organisation. The evidence on open participation gives reason for caution. In a field experiment in more than 600 village road projects in Indonesia, raising the chance of a government audit from 4% to 100% reduced missing funds by about 8 percentage points, while more grass-roots participation in monitoring had little impact overall; the economist who ran it, Benjamin Olken, suggested that grass-roots monitoring may be subject to free-rider problems.[111] A World Bank review of participatory development found that a programme's design and rules play a critical role in whether it is captured.[112] And the sugar industry's review, earlier in this chapter, showed how an industry can fund and shape the evidence that decision-makers rely on.[42] UP's answer has several parts, and each is a design choice rather than a proof. Money and time earn recognition in UP, never power, and each person has one voice.[48,49] A vote needs a minimum share of the affected, a random sample of the affected who did not take part is asked to confirm it, and every decision publishes how many took part and how typical they were, with a decision made by a narrow group reopening automatically after a set time.[50] UP's records are public, a truthful shared record is a floor, and everyone in UP watches for concentrations of power and spreads them out again.[8,33,55] Whether that is enough as the stakes rise has not yet been shown, and UP names it as work, not as a solved problem.[56] And in the early stage the governments outside UP keep their lobbyists: UP changes how its own members decide, not how those governments do.

The fifth objection is that most people will not take part. Deliberation is tiring, meetings are dull, and people have lives. The opening of this chapter suggests the picture is less bleak than it sounds, since about 100,000 people took part in classifying galaxies for Galaxy Zoo, and teams of Foldit players solved a structure that had resisted specialists for over a decade.[14,10] UP's method also asks less of most people than the objection assumes. Most decisions are not made by voting; anyone may work on any problem, but no one is forced to work; and people focus on what affects them most, which UP's position calls fine.[50,17,95,94] The random-sample guard exists for exactly the people who did not turn up, so their voice is sought out rather than assumed.[50] What persists is unevenness. Some people will always do more than others, and the method has to keep checking that the people who do turn up do not become a new elite.[55,56]

The sixth objection is that all of this is too slow when it matters. A fire, a flood or an outbreak cannot wait for an open call for better ideas. UP's steps carry a deadline set by each decision's urgency, which is one of their three guards.[51] For emergencies UP has an agreed position of its own. There is no lasting authority and no emergency power; authority belongs to the event, is one layer deep, like a parent's, and ends when the event ends; a larger event brings more teams, each one layer deep, not greater authority, all under the same public oversight; and the best answer to emergencies is to prevent them, which comes first.[113] Chapter 19 takes up emergencies and safety in full. The RECOVERY trial, earlier in this chapter, showed that testing and speed are not opposites when the work is shared widely enough.

[110] Michael Morreau, "Arrow's Theorem", *Stanford Encyclopedia of Philosophy*, section 3.2: "Suppose there are more than two alternatives."; "Then no social welfare function f satisfies U, SO, WP, D, and I." The five conditions include nondictatorship (D) and independence of irrelevant alternatives (I). https://plato.stanford.edu/entries/arrows-theorem/

[111] Benjamin A. Olken, "Monitoring Corruption: Evidence from a Field Experiment in Indonesia", *Journal of Political Economy* 115(2) (2007): 200–249; working-paper abstract, NBER Working Paper 11753: "I measure missing expenditures in over 600 village road projects in Indonesia"; "from a baseline of 4 percent to 100 percent"; "reduced missing expenditures by about 8 percentage points"; "increasing grass-roots participation had little impact overall."; "The findings suggest that grass-roots monitoring may be subject to free-rider problems." https://www.nber.org/papers/w11753

[112] Ghazala Mansuri and Vijayendra Rao, *Localizing Development: Does Participation Work?* (Washington, DC: World Bank, 2013), overview: "Project design and implementation rules play a critical role in determining whether participatory programs are captured." https://openknowledge.worldbank.org/bitstreams/7b5d9e19-c27c-5960-a956-3d00f69862de/download

[113] UP's agreed position on emergencies: "UP has no lasting authority and no emergency powers." "Authority belongs to the event, is one layer deep, like a parent's, and ends when the event ends." "all under the same public oversight. The public, acting on evidence and measured outcomes, is the authority over everyone who acts." "The best answer to emergencies is to prevent them, and that work comes first." Full wording in UP's agreed positions (the Position Ledger).

A last question sits under several of these objections: who counts as affected? A local majority can push its costs onto people downstream, and a decision today can fall on people not yet born. UP's position draws the circle to include everyone materially affected, including people downstream and future residents; for those who cannot speak for themselves, one way its positions describe is several independent simulations that give input but never a vote.[51,61] Drawing the circle in a hard case is itself work for the method, and Chapter 22 is given to it.

The question Polymath asked

Gowers began Polymath with a question: was massively collaborative mathematics possible? Thirty-seven days after the discussion opened, he had an answer, at least for one problem.[5] UP asks a larger version of the same question. Is massively collaborative problem solving possible for the whole of shared life, with the people affected deciding the outcome?

This chapter has not proved that it is, and UP does not claim to be perfect.[51] What the chapter has shown is that most parts of the method already work somewhere: hard problems opened to anyone, randomised tests of medicines and policies, citizens chosen by lot deliberating on hard questions, crowds checking claims, a profession that learns from millions of reports of its own mistakes. Where only a partial precedent was found, as for decisions made by a narrow group reopening automatically, the chapter has said so, and UP treats the design as its own, still to be tested. It has shown where today's decisions are captured, and what UP's core puts in the way of each route. And it has named what remains: evidence that can be funded and shaped, unequal time and organisation, the limits of any vote, and, in the early stage, the governments outside UP, which keep their lobbyists. UP's claim is the one its agreed position makes: that it can work better than the current system and improve faster, because every gap it finds becomes a new problem to solve.[51,32]

A method is only as open as the people who can take part in it, and only as safe as the power it keeps from gathering. The next chapter takes up those two questions: what it means that anyone may take part in UP, and what stops anyone from taking it over.

Chapter card: Chapter 5

- **Claim:** In UP, anyone may take up any problem, solutions are proposed with their evidence, tested and compared, and the people a problem affects decide its outcome. When people disagree, UP looks first for a design that meets both goals, widens the circle of people working on it, and votes only as a last resort, with guards. Every decision can be reopened, and every part of UP, its tenets included, can be improved through the same method.
- **Core lines:** the tenets *The method: shared problem solving with evidence* ("Evidence proposes; people decide") and *Self-correction: nothing is final, including this*; *Open participation*; *Technology serves; people decide*; *Open systems*; the floors, especially a truthful shared record and freedom of the mind. Agreed positions: how UP decides when people disagree; who decides, and the three guards on a vote; raising the standard of public discourse (fact, unknown, taste); splits are good; the marketplace of problems and problem trees; inventing solutions together; no one made worse off without being asked first; workload is not a danger.
- **Rule of thumb:** Before anyone votes, ask: Is the proposal public, with its data? Has anyone found a design that meets both goals? Who is affected, and were they asked? Is this a fact, an unknown or a matter of taste?
- **What this is not:** rule by experts or machines, or rule by majority alone. Evidence proposes and people decide; votes are a guarded last resort; matters of taste are never made rules for others.
- **Check yourself:**
    1. Who may work on a problem in UP, and who decides its outcome? Why are they different groups?
    2. What are the steps UP takes before a vote, and what makes an idea "better"?
    3. Name the guards on a vote, and the problem each is meant to prevent.
    4. How does UP treat a claim that cannot yet be settled, and a matter of taste?
    5. Why does UP record the losing side's case?
    6. What does UP change about the capture of public decisions in the early stage, and what does it leave unchanged?
- **Open questions (for the wiki):** How should a community decide, in a hard case, who is materially affected? What is the right minimum share for a guarded vote, given that a quorum can invite a boycott? How can funded or shaped evidence be detected and answered in the open? Which ways of gathering input should be tried and compared first? (Improve this page.)

Chapter 6. Open to Everyone, Power Kept Spread Out

Robert Michels was born in Cologne in January 1876, into a wealthy family of textile entrepreneurs, and as a young man he did something his class did not do: he became a socialist.[1,2] Around 1902 or 1903 he joined Germany's Social Democratic Party, the party of the German workers' movement, and he was a delegate at its 1903 congress in Dresden, on its radical wing.[2,3] His politics cost him. A German law in force since 1898 discriminated against Social Democrats, and with it went any prospect of a university career in Germany; his conservative father cut off his money.[2] So in 1907 he moved to Italy, qualified as a university teacher in Turin, and went on to hold posts at Turin, Basel and Perugia.[3,1] He turned the tools of the young science of sociology on the movement he knew from the inside, and in 1911 he published what he had found. Its English translation, four years later, was called *Political Parties: A Sociological Study of the Oligarchical Tendencies of Modern Democracy*.[1]

The party he studied was one of the great democratic organisations of its age. By 1913 it had more than a million registered, dues-paying members, and in the elections of January 1912 it had won 34.8% of the vote and become the largest group in the Reichstag, the German parliament.[4,5] It elected its leaders, debated its programme at annual congresses and printed its own newspapers.[6,7] Michels's first observation was about the people at the top. "No one who studies the history of the socialist movement in Germany can fail to be greatly struck by the stability of the group of persons leading the party." Wilhelm Liebknecht and August Bebel had taken the lead of the young movement in 1870 and 1871, and thirty years later they were still "the most prominent leaders of the German workers"; in Germany, he wrote, "the socialist leaders live in the party, grow old and die in its service."[8] According to Michels, a rule voted at the Mainz congress of 1900 required the executive to be renewed by ballot at every

[1] Encyclopaedia Britannica, "Robert Michels": "(born Jan. 9, 1876, Cologne—died May 3, 1936, Rome)"; "Born into a wealthy German bourgeois family, Michels became a socialist and spent most of his life teaching in Italy; he held academic positions at the universities of Turin, Basel, and Perugia."; the 1911 book is *Zur Soziologie des Parteiwesens in der modernen Demokratie*, translated as *Political Parties: A Sociological Study of the Oligarchical Tendencies of Modern Democracy*; "In his later writings Michels came to view this elitist rule as not only inevitable but also desirable, and he did not oppose the rise of Fascism in Italy." https://www.britannica.com/biography/Robert-Michels . Other reference works give his death as 2 May 1936. Checked at source, 1 Nov 2026.

[2] Corrado Malandrino, "Michels, Roberto", *Dizionario Biografico degli Italiani*, vol. 74 (Rome: Istituto dell'Enciclopedia Italiana, 2010): the family belonged to the upper-middle-class circle of Cologne textile entrepreneurs ("imprenditori tessili di Colonia"); he was active in German Social Democracy between 1902 and 1907 and was a delegate to its Dresden congress of 1903; a discriminatory law against Social Democrats in force in Germany since 1898 closed off his academic prospects there, and his father, a firm conservative, cut off all financial help; he first met Mussolini at Easter 1924; his return to Italy in 1928 as professor at Perugia came about "grazie all'intervento di B. Mussolini"; he joined the Partito nazionale fascista on 6 June 1928; in his later political sociology the charismatic head of party and government held the institutional order together. https://www.treccani.it/enciclopedia/roberto-michels_(Dizionario-Biografico)/ . Translations from the Italian are Claude's. Checked at source, 1 Nov 2026.

[3] Dirk Käsler, "Michels, Robert", *Neue Deutsche Biographie* 17 (1994), pp. 451 f.: a member of the SPD "seit 1903", on its revolutionary-syndicalist wing; habilitation at Turin in 1907; professor at Basel from 1914 to 1928, then at Perugia. NDB dates his entry into the Fascist party to 1922, and the Historical Lexicon of Switzerland agrees; the *Dizionario Biografico degli Italiani* gives 6 June 1928. https://www.deutsche-biographie.de/pnd118733737.html ; https://hls-dhs-dss.ch/de/articles/042740/2008-11-13/ . Checked at source, 1 Nov 2026.

[4] Ulrich von Alemann, "Die Entstehung und Entwicklung der deutschen Parteien", Bundeszentrale für politische Bildung (25 June 2018): in 1913 the SPD had "über eine Million eingeschriebene und beitragszahlende Mitglieder" and "Die Partei verfügte über 4.000 bezahlte Funktionäre und über 11.000 Parteiangestellte"; the page adds that Michels developed his "ehernes Gesetz der Oligarchie" (iron law of oligarchy) from the SPD and the German trade unions. https://www.bpb.de/themen/parteien/parteien-in-deutschland/202312/die-entstehung-und-entwicklung-der-deutschen-parteien/ . Checked at source, 1 Nov 2026.

[5] Deutsches Historisches Museum, LeMO, "Reichstagswahl 12. Januar 1912": "Bei der Reichstagswahl vom 12. Januar 1912 erzielten die Sozialdemokraten mit 34,8% der Wählerstimmen ihr bestes Wahlergebnis im Kaiserreich." Its 110 deputies formed the largest group in the Reichstag for the first time. https://www.dhm.de/lemo/bestand/objekt/reichstagswahl-12-januar-1912 . Checked at source, 1 Nov 2026.

[6] Michels, *Political Parties* (1915), Part Two, chapter 1, pp. 98–99: of the German Social Democrats, "the leaders are practically irremovable" (p. 98); and, p. 99, a party rule voted at the Mainz congress of 1900 required every annual congress to renew the seven-member executive committee by ballot and absolute majority; "This would be the true application of the democratic principle, but so little is it commonly observed in practice, that at every congress there are distributed to the delegates who are about to elect their new leaders printed ballot papers bearing the names of all the members of the retiring committee." https://archive.org/stream/politicalparties00mich/politicalparties00mich_djvu.txt . Checked at source, 1 Nov 2026.

[7] Michels, *Political Parties* (1915), table of contents: Part One, chapters 2, 5, 6 and 7, "Mechanical and Technical Impossibility of Direct Government by the Masses", "The Need for Leadership Felt by the Mass", "The Political Gratitude of the Masses", "The Cult of Veneration Among the Masses"; Part Two, chapters 1–3, "The Stability of Leadership", "The Financial Power of the Leaders and of the Party", "The Leaders and the Press"; Part Six, chapter 2, "Democracy and the Iron Law of Oligarchy" (p. 377), two chapters before the "Final Considerations" in which the law is stated. Where the phrase first appears in the German edition of 1911 was not checked. The chapter on the press opens: "The press constitutes a potent instrument for the conquest, the preservation, and the consolidation of power on the part of the leaders." https://archive.org/stream/politicalparties00mich/politicalparties00mich_djvu.txt . Checked at source, 1 Nov 2026.

[8] Robert Michels, *Political Parties: A Sociological Study of the Oligarchical Tendencies of Modern Democracy*, trans. Eden and Cedar Paul (New York: Hearst's International Library Co., 1915), Part Two, chapter 1, "The Stability of Leadership", p. 93: "No one who studies the history of the socialist movement in Germany can fail to be greatly struck by the stability of the group of persons leading the party."; of Liebknecht and Bebel, thirty years after 1870–71, "we find them still occupying the position of the most prominent leaders of the German workers"; "In Germany, it may be said that the socialist leaders live in the party, grow old and die in its service." (the scan's text layer misreads "grow" as "gi-ow"). https://archive.org/stream/politicalparties00mich/politicalparties00mich_djvu.txt . Checked at source, 1 Nov 2026.

annual congress. In practice, he reported, delegates were handed ballot papers already printed with the names of the retiring members: "This would be the true application of the democratic principle, but so little is it commonly observed in practice".[6] In his account, it was the members' gratitude that kept the same few people in office. They were grateful to the leaders who had suffered persecution, imprisonment and exile for the cause, and their gratitude, Michels wrote, was "displayed in the continual re-election of the leaders who have deserved well of the party, so that leadership commonly becomes perpetual."[9] A party founded to give workers a voice had, by its own procedures, kept a small group of them in charge for decades; the leaders, he wrote, were "practically irremovable".[6] Michels put his conclusion in two sentences. "It is organization which gives birth to the dominion of the elected over the electors, of the mandataries over the mandators, of the delegates over the delegators. Who says organization, says oligarchy."[10] In the English edition, an earlier chapter of the same part gives the argument the name it is known by: "Democracy and the Iron Law of Oligarchy".[7]

Then Michels's own life turned in a direction his book might have predicted. In his later writings, in Britannica's summary, he came to see the rule of a few not only as inevitable but as desirable, and he did not oppose the rise of Fascism in Italy.[1] He met Benito Mussolini at Easter 1924, and in 1928, with Mussolini's intervention, he returned from Basel to a chair at the University of Perugia; the Italian national biography records that he joined the Fascist party that June, although other reference works give earlier years.[2,3] In the writing of those years he treated the charismatic head of party and government as what held the institutional order together.[2] The man who had shown how members hand power to their leaders ended his life a member of a party built around one leader. He died in Rome in May 1936.[1]

The party he had dissected did better, at the moment that mattered most. On 23 March 1933, when the German parliament voted on the law that let Hitler's government make laws without it, the Social Democrats were the only party that voted no. The Communist deputies had been arrested or driven into exile, and twenty-six Social Democrats had been denied their seats; in the words of the United States Holocaust Memorial Museum's account, "When the votes were cast, only the SPD delegation voted against the bill."[11] An organisation can drift toward the rule of a few and still hold to the purpose it was founded for. Michels saw the first half of that sentence clearly. He did not live by the second.

Between them, the party and the man illustrate the two halves of the warning in UP's fifth tenet, *Power kept spread out*: "People tend to gather power and to hand it to whoever seems accomplished, and history shows few good endings."[12] Chapter 1 met Michels briefly, among the dangers that work from inside open practices.[13] This chapter takes his argument seriously enough to answer it, because any new way of organising shared life has to answer his question first. Who is in charge, and what stops someone taking over? UP's answer is not that its people will be better than the members of Michels's party. It is that UP is built so that there is no office to take, so that everyone can see what anyone doing shared work has decided, and so that everyone in UP is expected to watch for power gathering, wherever it starts, and to spread it out again, for as long as UP exists. Its fourth tenet says that anyone may take part in any problem, that the people it affects decide its outcome, and that "There are no offices to hold".[14] Its fifth says the threat is never declared gone.[12] The rest of this chapter shows why the pull toward power

[9] Michels, *Political Parties* (1915), Part One, chapter 6, "The Political Gratitude of the Masses", pp. 60–62: the leaders "for love of the cause, must often suffer persecution, imprisonment, and exile"; "As a rule, this sentiment of gratitude is displayed in the continual re-election of the leaders who have deserved well of the party, so that leadership commonly becomes perpetual." (the sentence runs across a page break and a footnote in the scan). https://archive.org/stream/politicalparties00mich/politicalparties00mich_djvu.txt . Checked at source, 1 Nov 2026.

[10] Michels, *Political Parties* (1915), Part Six, chapter 4, "Final Considerations", p. 401, introduced as "the fundamental sociological law of political parties": "It is organization which gives birth to the dominion of the elected over the electors, of the mandataries over the mandators, of the delegates over the delegators. Who says organization, says oligarchy." https://archive.org/stream/politicalparties00mich/politicalparties00mich_djvu.txt . Checked at source, 1 Nov 2026.

[11] United States Holocaust Memorial Museum, Holocaust Encyclopedia, "Otto Wels": "When the votes were cast, only the SPD delegation voted against the bill." The article records that the Communist representatives "had either been arrested or driven into exile", that 26 SPD members had been denied their seats, and that the remaining delegates, more than 400, voted for the Enabling Act. https://encyclopedia.ushmm.org/content/en/article/otto-wels . Checked at source, 1 Nov 2026.

[12] Core tenet: *Power kept spread out*, in full: "Concentration of power, in any form (wealth, position, information, access, expertise or machines), is treated as a standing danger. People tend to gather power and to hand it to whoever seems accomplished, and history shows few good endings. Everyone in UP watches for concentrations of power and spreads them out again. The threat is never declared gone; it is watched and answered." Also in "The core of UP".

[13] See Chapter 1, "What the current system does to them", and its notes: the decline in English Wikipedia's active editors after 2007, the capture of the Croatian-language Wikipedia by a small group of administrators between at least 2011 and 2020, the European Commission's 2018 fine on Google for illegal restrictions on Android device makers and network operators (an open core fenced in by the layer above it), Michels's conclusion about oligarchy, and a study of British worker co-operatives that renewed their democracy by regularly reviewing how they were run.

[14] Core tenet: *Open participation: anyone may take part; those affected decide*, in full: "Anyone may take part in any problem, and the people it affects decide its outcome. There are no offices to hold: work is shared out, not owned, so no one gathers power by holding a position. Where work needs skill, skill is shown by open, testable standards that anyone can work toward and anyone can propose to change, and education is open to everyone, at every age, so anyone can gain the skills any work requires." Also in "The core of UP".

is real, how the current system checks it and where it fails, what UP holds, where those ideas already work, and what still worries the people who know this history best.

Why power gathers

Michels's argument deserves its strongest form before UP answers it, because it is not an insult to the people he studied. It is a claim about what organisation does to anyone. Michels began from a practical fact. A party with members across a whole country cannot meet in one room, and it cannot run itself in its members' spare evenings, so it has to delegate, and delegation creates people who do the party's work full time. By 1913 the Social Democrats employed 4,000 paid functionaries and 11,000 party employees.[4] His chapter headings read like a list of the causes that follow: "Mechanical and Technical Impossibility of Direct Government by the Masses", "The Need for Leadership Felt by the Mass", "The Political Gratitude of the Masses", "The Cult of Veneration Among the Masses", "The Leaders and the Press", and, in the book's second part, "The Stability of Leadership" and "The Financial Power of the Leaders and of the Party".[7] Britannica's account of the argument draws the threads together. The needs of modern organisation, for competent leadership, centralised authority and a professional bureaucracy, produce a caste of leaders whose knowledge, skills and status, combined with their control of the organisation's internal communication and training, let them dominate the members; and the members, Michels added, crave guidance and come to worship their leaders.[15] Michels did not think the leaders bad people. He judged the average leader of the workers' parties "morally not lower, but on the whole higher, in quality than the average leader of the other parties", and still held that permanent leadership changed them for the worse.[16] His argument requires only that a few do the work of many, that the many are grateful, and that the few control what the many hear.

Others have described the same pull from different directions. In 1887 the English historian Lord Acton, writing to a fellow historian about how popes and kings should be judged, put the moral version in a line that has been quoted ever since: "Power tends to corrupt and absolute power corrupts absolutely."[17] The sociologist Robert Merton, studying how scientists win recognition, found a quieter mechanism. Credit flows to those who already have it. Nobel laureates told him that well-known scientists get more credit for the same work than unknown ones, and he named the pattern the Matthew effect, after a verse in Matthew's gospel about those who have being given more; in the summary of his paper, it can "heighten the visibility of contributions to science by scientists of acknowledged standing".[18] No one has to seize anything for this to happen. Attention simply follows reputation, and reputation follows attention.

Evolutionary anthropology offers a reason why people go along with it. Joseph Henrich and Francisco Gil-White distinguished two ways a person can come to stand above others: dominance, which rests on force or the threat of it, and prestige, which they defined as "freely conferred deference".[19] People defer to the skilled and the

[15] Jeff Sluyter-Beltrão, "iron law of oligarchy", Encyclopaedia Britannica: Michels "argued that organizational oligarchy resulted, most fundamentally, from the imperatives of modern organization: competent leadership, centralized authority, and the division of tasks within a professional bureaucracy"; these gave rise to "a caste of leaders" whose knowledge, skills and status, combined with "hierarchical control of key organizational resources such as internal communication and training", let them dominate the membership; and "rank-and-file members craved guidance by and worshipped their leaders". Later studies of "parties and unions, and of other organizations such as voluntary associations and social movements, further qualified the iron law": they examined "a broad range of factors", among them factional competition, purposive activism, interorganizational ties, and external opportunities and constraints, which "highlighted both the contingent nature of organizational power and Michels's relative neglect of environmental context". https://www.britannica.com/topic/iron-law-of-oligarchy (the same text appears below the Michels biography at https://www.britannica.com/biography/Robert-Michels). Checked at source, 1 Nov 2026.

[16] Michels, *Political Parties* (1915), Part Three, chapter 1, "Psychological Metamorphosis of the Leaders", p. 205: "The average leader of the working-class parties is morally not lower, but on the whole higher, in quality than the average leader of the other parties."; "Yet it cannot be denied that the permanent exercise of leadership exerts upon the moral character of the leaders an influence which is essentially pernicious." (the scan's text layer hyphenates "essen- tially"). https://archive.org/stream/politicalparties00mich/politicalparties00mich_djvu.txt . Checked at source, 1 Nov 2026.

[17] John Emerich Edward Dalberg-Acton, letter to Mandell Creighton (later Bishop of London), Cannes, 5 April 1887, in *Essays on Freedom and Power*, ed. Gertrude Himmelfarb: "Power tends to corrupt and absolute power corrupts absolutely." The letter answers Creighton's view that popes and kings should be judged with a favourable presumption; Acton held that the presumption runs the other way against holders of power. https://mises.org/online-book/freedom-and-power/acton-creighton-correspondence ; also printed in Acton, *Historical Essays and Studies* (1907), appendix. Checked at source, 1 Nov 2026.

[18] Robert K. Merton, "The Matthew Effect in Science", *Science* 159(3810):56–63 (5 January 1968), https://doi.org/10.1126/science.159.3810.56 . Abstract, as recorded by Crossref: "The Matthew effect may serve to heighten the visibility of contributions to science by scientists of acknowledged standing and to reduce the visibility of contributions by authors who are less well known." https://api.crossref.org/works/10.1126/science.159.3810.56 . Merton took the name from the Gospel of Matthew (25:29). Read in the scan hosted by the University of Pennsylvania, where Merton writes that the Nobel laureates his team interviewed "repeatedly observe that eminent scientists get disproportionately great credit for their contributions to science while relatively unknown scientists tend to get disproportionately little credit for comparable contributions" (the scan's text layer garbles several letters): https://garfield.library.upenn.edu/merton/matthew1.pdf . Checked at source, 1 Nov 2026.

[19] Joseph Henrich and Francisco J. Gil-White, "The evolution of prestige: freely conferred deference as a mechanism for enhancing the benefits of cultural transmission", *Evolution and Human Behavior* 22(3):165–196 (2001), https://doi.org/10.1016/S1090-5138(00)00071-4 . Abstract: "In addition, we distinguish carefully between dominance (force or force threat) and prestige (freely conferred deference)."; "Natural selection favored social learners who could

successful because copying them is a good way to learn, and in their account that habit was favoured by natural selection. It is useful, and this chapter suggests that it is also how power can be handed over without anyone being forced to hand it. The fifth tenet of UP's core names a close relative of this pair of tendencies: "People tend to gather power and to hand it to whoever seems accomplished, and history shows few good endings."[12]

Michels's own word for his finding was a law, and it is fair to ask whether it is one. The anthropological record suggests something more hopeful, and more demanding. For most of human history, people lived in small bands of foragers,[20] and the anthropologist Christopher Boehm, surveying the evidence from such societies, argued that many of them were egalitarian not because no one wanted to dominate but because everyone else kept them from doing it. He called the pattern a reverse dominance hierarchy; his publisher's summary of his book puts it as a hierarchy "in which the weak combine forces to dominate the strong".[21] The historian Walter Scheidel, summarising the anthropological record, lists sanctions that range from gossip, criticism, ridicule and disobedience to ostracism and, in extreme cases, violence. He also records the limit of the pattern, which held among adult men, who commonly dominated women and children.[20] The archaeologist David Wengrow and the anthropologist David Graeber describe the tactics Boehm identified as ways to bring "would-be braggarts and bullies down to earth", and then argue that he wrongly assumed that early humans all lived the same egalitarian way, since the evidence points to a wide range of social arrangements.[22] The anthropologist Richard Borshay Lee met the gentlest of these tools in the Kalahari Desert in the 1960s, when the !Kung people he was living with mocked the fat ox he had bought them as a Christmas gift. When he asked why they belittled a successful hunter's kill, a man named Tomazo explained that a young man who kills much meat starts to think of himself as a chief or a big man, and of everyone else as his servants, so his meat is always called worthless: "This way we cool his heart and make him gentle."[23]

None of this makes the band a model for a society of billions. Boehm's evidence comes from small bands of foragers, and the equality it describes was not equality for everyone. What it shows is that the pull toward power has long met a push back, and that the push came from ordinary people watching and refusing, not from a single office set over the rest. In UP's terms, the evidence supports both halves of the fifth tenet. People do gather power and hand it to whoever seems accomplished; that is Michels, Merton and Henrich. And where the pull was held in check, the counterweight came from everyone, all the time; that is the band and its jokes about the hunter's meat. The tenet carries the band's central idea, that the check comes from everyone and not from an office, into a much larger world, with UP's floors setting limits on what the watching may do: "Everyone in UP watches for concentrations of power and spreads them out again. The threat is never declared gone; it is watched and answered."[12,24]

evaluate potential models and copy the most successful among them." Abstract read in the PubMed record via Europe PMC: https://www.ebi.ac.uk/europepmc/webservices/rest/search?query=EXT_ID:11384884%20AND%20SRC:MED&resultType=core&format=json . Checked at source, 1 Nov 2026.

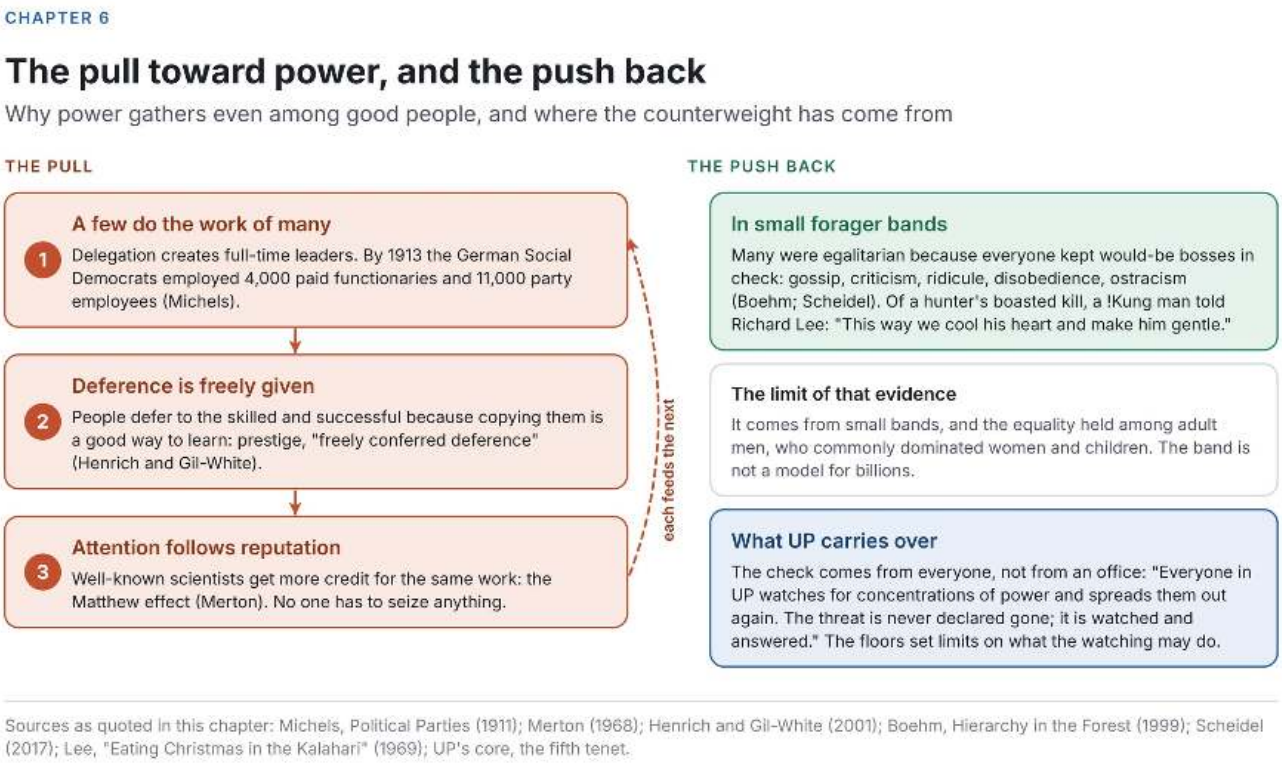
[20] Walter Scheidel, *The Great Leveler: Violence and the History of Inequality from the Stone Age to the Twenty-First Century* (Princeton University Press, 2017), chapter 1: forager egalitarianism "is predicated on the deliberate rejection of attempts to dominate"; sanctions against authoritarian behaviour and self-aggrandisement range from gossip, criticism, ridicule and disobedience to ostracism and, in extreme cases, violence; the "reverse dominance hierarchy" operated among adult men, "who commonly dominate women and children". Read in the UP library (collection universal-pragmatism, book 4095b05bc4e6, part 34). Checked 1 Nov 2026.

[21] Christopher Boehm, "Egalitarian Behavior and Reverse Dominance Hierarchy", *Current Anthropology* 34(3):227–254 (1993), https://doi.org/10.1086/204166 ; and *Hierarchy in the Forest: The Evolution of Egalitarian Behavior* (Harvard University Press, 1999). The publisher's description: Boehm "postulates that egalitarianism is in effect a hierarchy in which the weak combine forces to dominate the strong." https://www.hup.harvard.edu/books/9780674006911 . Checked at source, 1 Nov 2026.

[22] David Graeber and David Wengrow, *The Dawn of Everything: A New History of Humanity* (Farrar, Straus and Giroux, 2021), chapter 3: Boehm identifies tactics used by egalitarian foragers "to bring would-be braggarts and bullies down to earth", among them ridicule, shame and shunning; the authors then argue that Boehm wrongly assumed that all humans lived in the same egalitarian way until agriculture, and that the evidence points to people exploring a wide range of social arrangements. Read in the UP library (collection universal-pragmatism, book 504b85a5059a, parts 90–91). Checked 1 Nov 2026.

[23] Richard Borshay Lee, "Eating Christmas in the Kalahari", *Natural History*, December 1969. Asked why the !Kung insult a hunter's meat, Tomazo explains that a young man who kills much meat comes to think of himself as a chief or a big man and of the rest as his servants or inferiors, so his meat is always spoken of as worthless: "This way we cool his heart and make him gentle." Natural History Magazine's archive: https://www.nhmag.com/htmlsite/editors_pick/1969_12_pick.html . Checked at source, 1 Nov 2026.

[24] Core tenet: *Floors that are never crossed*: everyone's basic needs and protected freedoms, which no gain for others can buy; the living world's capacity to recover; "the right to leave any group or community at any time, taking what is theirs"; "a truthful shared record, so facts, measures and decisions are never falsified"; "freedom of the mind, so no one's thinking is manipulated without their knowledge or consent"; and "a fair hearing, so no one's freedom is restricted without a fair, evidence-based hearing, with the evidence open to them and a way to appeal". The collective may clarify or raise the floors, but no decision may lower them or push anyone below them. The tenet goes on: "A protected freedom such as movement may be restricted only to protect others or the person, only through an evidence-based court process, for the shortest time needed, and never below the needs floor."; "The hearing comes first, except briefly, to stop harm in progress, with a hearing promptly after."; "Leaving a group or community does not end a restriction set by a fair hearing."; "These limits are an open problem: they are the best that can be imagined now, and UP is built to find better and better solutions." Full wording in "The core of UP". A clarification was recorded beside T6 on 1 Nov 2026 (UP's agreed positions, "Clarification · T6 fair-hearing floor"): "The words of T6 are unchanged. The substance of the evidence is always open to the person. Where a witness's safety is at risk, a court may protect the witness's identity, and that decision can be appealed. Other hard cases are left to UP's method."



The pull toward power, and the push back: why power gathers, and where the counterweight comes from.

How the current system keeps power in check, and where it does not

The current system has its own answers to Michels, and they deserve credit first. In 1796 George Washington, the first president of the United States, announced that he would not seek a third term. Nothing in law required him to go, and it was not until 1951 that the Twenty-second Amendment made a limit binding: “No person shall be elected to the office of the President more than twice”.[25,26] Regular elections, independent courts, a free press and the peaceful handing over of office are all, among other things, ways of making power temporary and answerable. Courts have broken up concentrations of economic power too. In 1911 the US Supreme Court upheld, with minor modifications, a lower court’s decree that the Standard Oil combination was an unlawful combination in restraint of trade and must be dissolved.[27] And the co-operative movement built the same principle into the ownership of firms. Members of a primary co-operative have equal voting rights, “one member, one vote”, and “Members usually receive limited compensation, if any, on capital subscribed as a condition of membership.”[28] Chapter 1 described how far that model has spread. In UP’s terms, each of these is an existing check on power of the kind the fifth tenet asks everyone in UP to keep up, and UP builds on what people already do rather than starting again.[12,29]

Look closely at where those checks bite, though, and a pattern appears. Term limits and elections work on power that sits in an office. Antitrust works, slowly, on power that sits in a company. The co-operative principle works on

[25] George Washington’s Mount Vernon, “The Farewell Address”: “In 1796, President Washington decided it was time to retire from public life.”; “He would not seek a third term in office.” The page adds that he was not required to leave office, since the Twenty-second Amendment was ratified only in 1951. https://www.mountvernon.org/george-washington/the-first-president/the-farewell-address/ . Checked at source, 1 Nov 2026.
[26] Constitution of the United States, Amendment XXII, section 1 (ratified 27 February 1951): “No person shall be elected to the office of the President more than twice”. Legal Information Institute, Cornell Law School: https://www.law.cornell.edu/constitution/amendmentxxii . Checked at source, 1 Nov 2026.
[27] *Standard Oil Co. of New Jersey v. United States*, 221 U.S. 1 (15 May 1911). The Court affirmed the decree of the Circuit Court for the Eastern District of Missouri that the combination was an unlawful restraint of trade and must be dissolved: “Our conclusion is that the decree below was right”, subject to minor modifications. https://supreme.justia.com/cases/federal/us/221/1/ . Britannica counts 33 companies divested; other sources count differently, so no number is given in the text. https://www.britannica.com/topic/Standard-Oil . Checked at source, 1 Nov 2026.
[28] International Co-operative Alliance, “Cooperative identity, values & principles” (the 1995 Statement on the Cooperative Identity), second principle, Democratic Member Control: “In primary cooperatives members have equal voting rights (one member, one vote)”; third principle, Member Economic Participation: “Members usually receive limited compensation, if any, on capital subscribed as a condition of membership.” https://ica.coop/en/cooperatives/cooperative-identity . Checked at source, 1 Nov 2026.
[29] Core tenet: *Freely joined, ethically grown*: UP is never imposed; no one is forced to join, to work or to give up what is theirs; it grows by being useful, building on what people already do, and acts only by ethical means; UP never starts harm against anyone. Full wording in “The core of UP”.

power that comes from capital. Each check is aimed at one form of power, and the fifth tenet lists six: “wealth, position, information, access, expertise or machines”.[12] The forms that sit in no office are, on the evidence that follows, harder to check.

Wealth is the plainest example. The World Inequality Report 2026 estimates that in 2025 the world’s richest 10% owned three-quarters of all personal wealth, while the poorer half owned 2%.[30] Money is not the only form of power, as UP’s agreed positions insist,[31] but in this chapter’s reading it can be turned into many of the others, and it does not have to hold an office to do so. Information is another. In August 2024, in a case the US Justice Department and a group of states brought in 2020, a federal judge ruled that “Google is a monopolist, and it has acted as one to maintain its monopoly”, having found that by 2020 nearly 90% of search queries in the United States went through Google, and almost 95% on mobile devices.[32] A year later the same court barred Google from exclusive contracts for distributing its search and related products and ordered it to share some of its search data with qualified competitors, but declined to make it sell its Chrome browser.[33] The check worked, in part, and slowly: the final judgment came in December 2025, more than five years after the case was filed, and Google appealed it the following month.[34] Machines are the newest form, and they are concentrating quickly. Stanford’s AI Index reports that nearly 90% of the notable AI models released in 2024 came from industry, up from 60% the year before, and it reports estimates of what training a single leading model costs: about $79 million for OpenAI’s GPT-4, released in 2023, and about $170 million for Meta’s Llama 3.1-405B.[35,36]

Open projects are not immune either, and the ownership of the tools they run on is a form of power their members can overlook until it is used. Freenode was the largest network of IRC chat channels, and many free-software projects ran their channels on it; its staff were volunteers.[37,38] In 2016 its project lead set up a company, Freenode Limited, and in 2017 that company was sold to Andrew Lee, the founder of a VPN service, Private Internet Access. According to LWN, a long-running news site for the free-software world, the staff and users had been assured that the new owner would have no operational control over the network.[37] In May 2021, in a dispute over who controlled the network, of which LWN found “a number of conflicting accounts”, many of the volunteer staff resigned, in what LWN called “the mass resignation of many of its volunteer staff”, and on 19 May they opened a new network,

[30] World Inequality Lab, *World Inequality Report 2026*, executive summary: “The global top 10% owns 75% of total personal wealth and captures 53% of total income in 2025.”; “Wealth is even more concentrated: the top 10% own three-quarters of global wealth, while the bottom half holds only 2%.” https://wir2026.wid.world/www-site/uploads/2025/11/WIR26_Executive_Summary_English.pdf . Checked at source, 1 Nov 2026.

[31] UP’s agreed position that concentration of power is the danger (card 26): “Money is one form of power; any concentration of power is dangerous. Abolishing money does not abolish the pursuit of power: it can move to access, office, information or expertise, and chasing each form one by one becomes whack-a-mole. So UP watches for concentrations of power in any form and keeps spreading them out. The threat is never declared gone. Design helps: caps, public records of who approved what, rotation of anyone who allocates, random audits, public and versioned allocation rules.” Full wording in UP’s agreed positions (the Position Ledger).

[32] *United States v. Google LLC*, No. 1:20-cv-03010-APM (D.D.C.), Memorandum Opinion of 5 August 2024 (Judge Amit P. Mehta), pp. 1 and 4: “In 2009, 80% of all search queries in the United States already went through Google.”; “By 2020, it was nearly 90%, and even higher on mobile devices at almost 95%.”; “Google is a monopolist, and it has acted as one to maintain its monopoly.” https://storage.courtlistener.com/recap/gov.uscourts.dcd.223205/gov.uscourts.dcd.223205.1033.0_5.pdf . The docket number shows the case was filed in 2020; the caption reads “United States of America, et al.”, the other plaintiffs being states, and a parallel case by states (*State of Colorado v. Google LLC*, No. 1:20-cv-03715) was heard with it. Checked at source, 1 Nov 2026.

[33] *United States v. Google LLC*, Memorandum Opinion on remedies, 2 September 2025, introduction: “Google will not be required to divest Chrome;”; “Google will be barred from entering or maintaining any exclusive contract” relating to the distribution of its search and related products; and “Google will have to make available to Qualified Competitors certain search index and user-interaction data”. https://storage.courtlistener.com/recap/gov.uscourts.dcd.223205/gov.uscourts.dcd.223205.1436.0.pdf . Checked at source, 1 Nov 2026.

[34] *United States v. Google LLC*, Google LLC, Notice of Appeal (ECF No. 1472, 16 January 2026): Google appeals to the US Court of Appeals for the District of Columbia Circuit “from this Court’s final judgment, entered in these actions on December 5, 2025”. https://storage.courtlistener.com/recap/gov.uscourts.dcd.223205/gov.uscourts.dcd.223205.1472.0_1.pdf . The outcome of the appeal is not covered here. Checked at source, 1 Nov 2026.

[35] Stanford Institute for Human-Centered Artificial Intelligence, *AI Index Report 2025*, chapter 1, highlights: “nearly 90% of notable models in 2024 (compared to 60% in 2023) originating from industry.” Based on Epoch AI’s data on notable models. https://hai.stanford.edu/assets/files/hai_ai-index-report-2025_chapter1_final.pdf . Checked at source, 1 Nov 2026.

[36] *AI Index Report 2025*, chapter 1, on estimated training costs: “Fast-forward to 2023, and training costs for OpenAI’s GPT-4 were estimated around $79 million.”; “One of the few 2024 models for which Epoch could estimate training costs was Llama 3.1-405B, with an estimated cost of $170 million.” These are estimates based on cloud compute rental prices, not company figures. https://hai.stanford.edu/assets/files/hai_ai-index-report-2025_chapter1_final.pdf . Checked at source, 1 Nov 2026.

[37] Jake Edge, “Turmoil at the freenode IRC network”, LWN.net (26 May 2021): “The largest IRC network, freenode, is embroiled in a messy dispute that has led to the mass resignation of many of its volunteer staff”; IRC channels are used by “much of the free-software world”; Freenode Limited, formed in 2016, “was sold in 2017 to Andrew Lee”, founder of the VPN service Private Internet Access, and “the new owner was not supposed to have any operational control over the IRC network”; of the May 2021 events, readers “will find a number of conflicting accounts of what happened”; the network’s servers “are being donated by various entities, so they could not have been part of any purchase in any case. Effectively, Lee bought the domain names, web site, and name recognition of freenode.” https://lwn.net/Articles/857140/ . Checked at source, 1 Nov 2026.

[38] Thomas Claburn, “After staff revolt, Freenode management takes over hundreds of IRC channels for ‘policy violations’”, *The Register* (26 May 2021): Freenode “commandeered hundreds of channels used by various open source software projects”. https://www.theregister.com/2021/05/26/freenode_irc_takeover/ . Richard Speed, “Ubuntu, Wikimedia jump ship to the Libera Chat IRC network after Freenode channel confiscations”, *The Register* (27 May 2021). https://www.theregister.com/2021/05/27/ubuntu_freenode/ . Checked at source, 1 Nov 2026.

Libera.Chat, saying they intended to continue Freenode's legacy.[37,39] A week later, Freenode's management took over hundreds of channels on the network, citing policy violations, including channels whose projects had announced that they were leaving.[38] Gentoo had already announced on 23 May that it was moving to Libera.Chat; after the takeover, Ubuntu, on 26 May, and then Wikimedia and Fedora, on 27 May, announced that they were moving too.[40] The volunteers could not stop the owner, who, in LWN's account, had in effect bought the network's domain names, website and name; the servers were donated and were not his to buy.[37] What they could do was leave, taking their work and their communities with them. Chapter 1 told two other stories of the same kind: the fencing-in of Android's open core by the company that controls the layer on top of it, and the capture of the Croatian-language Wikipedia by a small group of its own administrators.[13]

The quietest concentration of all needs no owner and no office: it happens among the people who turn up. Member-owned institutions show it. Rural electric co-operatives in the United States are owned by the members they supply, who elect their boards, yet an article by the Institute for Local Self-Reliance, a non-profit research and advocacy group, reported that, according to its research, "more than 70 percent of cooperatives have voter turnouts of less than 10 percent".[41] Open meetings show it too. A study that coded thousands of instances of citizens speaking at planning and zoning meetings about new housing found that the people who spoke were disproportionately "older, male, longtime residents, voters in local elections, and homeowners", and that they opposed new housing far more strongly than the public at large.[42] The board members who heard them held office; the speakers did not. This chapter's reading is that the people with the time, confidence and stake to come were the ones heard, on decisions that affected everyone.

In UP's terms, the current system checks power best where it can see it, in an office or a single company, and least well where power has no fixed place: in money, in information, in access to the tools everyone depends on, in the attention of the people who turn up, and increasingly in machines. That is why the fifth tenet names every form at once and makes the watch everyone's work.[12] Table 6.1 sets each form beside an example from this chapter and the check that UP's core and agreed positions place against it.

Table 6.1. The forms of power named in UP's core, how each gathers today, and UP's checks. The examples are from this chapter and Chapter 1; the checks are from UP's core and agreed positions.

Form of power	How it gathers today	UP's check
Wealth	The richest 10% owned three-quarters of the world's personal wealth in 2025	Time and money earn recognition, never power; one voice per person; needs are a floor, met whether or not someone can pay
Position	Party officials who were very hard to remove; a founder with the final word for life (Python's "Benevolent Dictator For Life")	No offices; work shared out, not held; stewardship bodies with a defined scope, term limits, public audit and the right to fork; in an emergency, authority that belongs to the event, is one layer deep, ends with the event and stays under public oversight
Information	A search engine that handled nearly 90% of US searches; a few administrators controlling one edition of	The rules, code, records, decisions and reasons of UP are public; a truthful shared record is a floor; public records

[39] Libera.Chat, "Welcome to Libera Chat" (19 May 2021): "Most of our staff have joined us from freenode, and we intend to continue its legacy." https://libera.chat/news/welcome-to-libera-chat . Checked at source, 1 Nov 2026.

[40] Gentoo, "Gentoo IRC presence moving to Libera Chat" (23 May 2021): "we have decided to move the official IRC presence of Gentoo to the Libera Chat IRC network." https://www.gentoo.org/news/2021/05/23/Moving-to-Libera.html . Ubuntu IRC Council, ubuntu-irc mailing list (26 May 2021): "Ubuntu is now officially moving to Libera Chat". https://lists.ubuntu.com/archives/ubuntu-irc/2021-May/001927.html . Wikimedia and Fedora: *The Register*, 27 May 2021, with its update: "Fedora has also announced plans to depart freenode for Libera.Chat." https://www.theregister.com/2021/05/27/ubuntu_freenode/ . Checked at source, 1 Nov 2026.

[41] Matt Grimley, "Just How Democratic are Rural Electric Cooperatives?", Institute for Local Self-Reliance (13 January 2016): profits go to "local members, who own the very business that sells them electricity"; "according to research from ILSR, more than 70 percent of cooperatives have voter turnouts of less than 10 percent"; the per-co-operative figures use voting data from the US Department of Agriculture for 2006 to 2011. ILSR is a non-profit research and advocacy group. https://archive.ilsr.org/?p=42073 . Checked at source, 1 Nov 2026.

[42] Katherine Levine Einstein, Maxwell Palmer and David M. Glick, "Who Participates in Local Government? Evidence from Meeting Minutes", *Perspectives on Politics* 17(1):28–46 (2019), abstract: the authors code "thousands of instances of citizens speaking at planning and zoning board meetings concerning housing development"; "We find that individuals who are older, male, longtime residents, voters in local elections, and homeowners are significantly more likely to participate in these meetings. These individuals overwhelmingly (and to a much greater degree than the general public) oppose new housing construction." https://doi.org/10.1017/S153759271800213X ; https://www.cambridge.org/core/journals/perspectives-on-politics/article/abs/who-participates-in-local-government-evidence-from-meeting-minutes/C6505940E607B6392C4A8F53A9363DB1 . Checked at source, 1 Nov 2026.

Form of power	How it gathers today	UP's check
	Wikipedia	of who approved what
Access	A chat network's management taking over the channels its volunteers ran; the few who turn up deciding for everyone	Anyone may take part, and those affected decide; guards when a decision reaches a vote: a minimum share of those affected must take part; a random sample of the affected who did not take part is asked to confirm; how many took part and how typical they were is published; a decision made by a narrow group reopens automatically after a set time
Expertise	Deference to whoever seems accomplished; credit flowing to the already eminent	Skill shown by open, testable standards anyone can work toward and propose to change; merit decides who does skilled work, never whose needs are met; evidence proposes, people decide
Machines	Nearly 90% of notable AI models in 2024 came from industry	AI coordinates and proposes, never governs; no single AI system or operator controls coordination; people can always correct, pause or switch it off

What UP holds

Two of UP's ten tenets answer this chapter's question directly, and the definition of UP promises both: UP is "open to everyone" and keeps power spread out.[43] The fifth tenet, *Power kept spread out*, begins where Michels ended. "Concentration of power, in any form (wealth, position, information, access, expertise or machines), is treated as a standing danger. People tend to gather power and to hand it to whoever seems accomplished, and history shows few good endings."[12] The tenet does not claim that power can be abolished, and it does not claim that the people who take part in UP are better than the members of the party Michels studied. It assumes the opposite: that the pull he described works on UP's people too, and so has to be answered by everyone, all the time. Its last two sentences say how. "Everyone in UP watches for concentrations of power and spreads them out again. The threat is never declared gone; it is watched and answered."[12] UP's agreed positions explain why the list of forms in the tenet is so long. Money is one form of power, and abolishing money does not abolish the pursuit of power, which can move to access, position, information or expertise. Chasing each form separately becomes, in the position's own word, whack-a-mole, so UP watches for concentration in any form, and never declares the threat gone.[31]

The fourth tenet, *Open participation: anyone may take part; those affected decide*, removes the thing Michels found power gathering around. "There are no offices to hold: work is shared out, not owned, so no one gathers power by holding a position."[14] In the party Michels studied, the office came first: a paid post, held for years, whose holder came to know more than the members, to control what they heard and to be very hard to remove. UP's answer is to have no office to gather around. Its settled positions retired the old words on purpose: UP has no roles or offices in the old sense, and work is shared out, not held.[44] Work still has to be done, and some of it needs skill, so the tenet goes on: "Where work needs skill, skill is shown by open, testable standards that anyone can work toward and anyone can propose to change, and education is open to everyone, at every age, so anyone can gain the skills any work requires."[14] Where work needs skill, who does it is settled by open, testable standards and tracked outcomes, and by nothing else.[45] In the words of UP's agreed position on merit, "Merit decides who does

[43] The definition of UP, which opens "The core of UP": "Universal Pragmatism is a way for people to solve shared problems together, using evidence and technology, for the health, happiness and wellbeing of all living things: open to everyone, correcting itself as it learns, keeping power spread out, and never crossing a small set of floors that protect people and the living world."

[44] Settled alongside the core (round 11): "UP has no roles or offices in the old sense; work is shared out, not held". Full wording in "The core of UP".

[45] UP's agreed position on who decides and who counts as competent (round 2, combined positions on who decides and on competence): most decisions in UP are not made by voting; input is gathered from everyone affected; the people affected by a problem decide its outcome, and anyone willing may take the work on (as T2 and T4 now put it; the position's earlier wording, that the affected "lead the work", was superseded in rounds 10 and 11); "Competence comes from published, testable work requirements that anyone can propose changes to, and from tracked outcomes, not from certification boards." When a decision does reach a vote, three guards apply: a minimum share of the affected must take part; a random sample of the affected who did not take part is asked to confirm it; and every decision publishes how many took part and how typical they were, with a decision made by a narrow group reopening automatically after a set time. Full wording in UP's agreed positions (the Position Ledger). (The same position's opening words about "roles" and "offices" were superseded in round 11, which settled that UP has no roles or offices in the old sense.)

skilled work; it never decides whose needs are met."[46] And the person who does the work does not decide alone what is done with it. Anyone may take part in any problem, and "the people it affects decide its outcome", however expert the people doing the work.[14,47]

Some work needs continuity. Shared software has to be maintained, records have to be kept, a water system has to be run every day of the year. This chapter's reading is that this is where UP's agreed positions on stewards matter most. Those positions take their model from open projects like the ones later in this chapter, and they are careful about what the model shows. Linux and Wikipedia do not prove that leaderless coordination scales to any problem; they show that open peer production, run by distributed stewards, can build and run complex systems at global scale. Such projects make copyable information; providing food, housing and energy is, in the position's words, UP's central experiment. The claim, the position says, is not that there is "no head to cut off" but that there are "heads that rotate, are watched and can be replaced, because the work belongs to everyone": many stewardship bodies, each with a defined scope, term limits, public audit and the right to fork.[48] Another agreed position names designs that help: caps, public records of who approved what, rotation of anyone who allocates, random audits, and allocation rules that are public and versioned (so that, in this chapter's gloss, each decision can be traced to the rule in force).[31] None of these is a tenet. They are agreed ways of keeping the tenet, offered as one way UP could run, and open, like everything else, to anyone with a better idea.[49,50]

[46] UP's agreed position on merit and work (card 13b): skilled work is open to anyone who meets published, testable and changeable standards, and the education to meet them is open to everyone; "Merit decides who does skilled work; it never decides whose needs are met."; labour is never forced. Full wording in UP's agreed positions (the Position Ledger).

[47] Core tenet: *The method: shared problem solving with evidence*: problems are named, measured and offered as work to anyone willing to take them on, whether or not they are affected; the people a problem affects decide its outcome; no problem, solution or method belongs to the person who raised it, and anyone may update, reframe or improve it; solutions are proposed with their evidence, tested and compared, and a better idea replaces a worse one; matters of taste are never made rules for others. Its last words are "Evidence proposes; people decide." Full wording in "The core of UP".

[48] UP's agreed position on stewards (card 19): Linux and Wikipedia do not prove that leaderless coordination scales to any problem; they show that open peer production, run by distributed stewards, can build and run complex systems at global scale. The claim is not "no head to cut off" but "heads that rotate, are watched and can be replaced, because the work belongs to everyone": "many stewardship bodies, each with a defined scope, term limits, public audit and the right to fork." The position ends: "These examples make copyable information; providing food, housing and energy is UP's central experiment, starting from Ostrom's design principles and physical commons that already work". Full wording in UP's agreed positions (the Position Ledger).

[49] Core tenet: *Self-correction: nothing is final, including this*: every failure of UP is fed back into it as a new problem to solve; every part of UP, the tenets included, can be improved through its own method; UP is judged against both the current system and the ideal it aims at; downsides, risks and fringe problems are named openly and treated as work. Full wording in "The core of UP".

[50] UP's agreed position that inventing solutions together is its main activity: in UP anyone can try anything that might solve a problem, the tools are commons, and the result carries the power. Full wording in UP's agreed positions (the Position Ledger).

FIGURE 6.2

The checks around one piece of shared work

How UP's core and agreed positions surround anyone who stewards shared work. One way it could run.



Source: UP's core (tenets on open participation, power kept spread out, open systems and the floors; settled alongside the core: no offices, one voice per person, time and money earn recognition, never power) and agreed positions on stewards, on concentration of power and on vote guards.

Figure 6.1. The checks that UP's core and agreed positions place around anyone who stewards shared work, drawn as one way it could run. Each check is described in this section, with its limits (leaving a group, for instance, does not end a restriction set by a fair hearing); the sources are in the notes.

Two lines settled alongside the core make it much harder for power to come in by two doors that have often let it into open movements. The first is one voice per person: "every account belongs to one unique real person and carries that person's identity, which the person owns and controls; the system needs to confirm only that the person is unique and real, and every other detail is shared by the person's own choice". How that is done is left as open work for the collective.[51] Without it, a single person with many accounts could speak as a crowd, and every guard in this chapter that counts people would count wrongly. The second line is shorter: "time and money earn recognition, never power".[52] A person who gives years of work to UP, or brings resources into it, is thanked, credited and recorded. Neither buys a larger say. UP's agreed position on contribution records adds a related limit: they are feedback, they inform, and "they never decide whether anyone's needs are met".[53] Not every draft of the manuscript has kept this line. One earlier draft proposed that a record of verified contributions should unlock

[51] Settled alongside the core (round 11), one voice per person: "every account belongs to one unique real person and carries that person's identity, which the person owns and controls; the system needs to confirm only that the person is unique and real, and every other detail is shared by the person's own choice. The exact design is open work for the collective." Full wording in "The core of UP".

[52] Settled alongside the core, dangers adopted in round 10: "anyone may reframe a problem; one voice each, no fake accounts; time and money earn recognition, never power; everyone is a watcher; working fallbacks without the AI; people can always add options; open science on AI feeling; no forced adoption, no leader, no founder named in the core; anyone acting outside the core stops being UP and bears the consequences". Full wording in "The core of UP".

[53] UP's agreed position on rewards and motivation (card 15): money that controls people crowds out the motivation they bring themselves, while feedback that informs, and the freedom to choose, keep it alive; "UP's contribution records are feedback: they inform, and they never decide whether anyone's needs are met." Full wording in UP's agreed positions (the Position Ledger).

"higher-tier governance rights", and that "governance weight" should grow with demonstrated commitment.[54] When UP's positions were settled, the manuscript was told to drop a persistent public competence score (round 2), and the line that time and money earn recognition, never power, was adopted with the core (round 10).[55,52] The trap this chapter describes is close enough at hand that an early draft walked into it.

No one runs the whole. UP's study lessons record the point in plain terms: there is no central operator; everyone is the check; anyone can try anything that might solve a problem, within the floors and by ethical means, and the result carries the power.[56,24,29] The same rule binds the machines. "No single AI system or operator controls coordination": the AI systems UP uses are open, more than one, checked against each other, and watched for concentrated power like everything else, and people can always correct, pause or switch them off.[57] The AI proposes; it may not assign work or compel anyone, and any plan can be overridden through the decision steps.[58] Chapter 11 and Chapter 20 take up the machines in full. Here the point is narrower. In the fifth tenet's list of the forms power takes, machines come last.[12] This chapter's own guess, which the tenet does not make, is that as more of the work of coordinating is done by software, they may come to matter most.

Emergencies are the classic excuse for gathering power, and UP's agreed position on them is unusually specific. "UP has no lasting authority and no emergency powers." In an emergency, everyone acts quickly for everyone's benefit, with many trained responders ready, and "Authority belongs to the event, is one layer deep, like a parent's, and ends when the event ends." A larger event does not create greater authority, only more single-layer authority: many teams, each one layer deep, coordinated through shared information, all under the same public oversight. The public, acting on evidence and measured outcomes, is the authority over everyone who acts, and the rule itself is open to improvement by anyone who can find a better way that gives up no freedom and guards better against oligarchy and tyranny.[59] Chapter 19 returns to emergencies, safety and justice in full.

Most decisions in UP are not made by voting at all. They start with an evidence-based proposal and an open question, "does anyone have a better idea?", and a vote is the last resort, not a forbidden one.[60] When a decision does reach a vote, three guards apply; in this chapter's reading, each is aimed at a way power concentrates without anyone holding an office. A minimum share of the people affected must take part. A random sample of the affected who did not take part is asked to confirm the decision. And every decision publishes how many took part and how typical they were, with a decision made by a narrow group reopening automatically after a set time.[45] Chapter 5 sets out UP's decision steps in full.[61] The guards belong in this chapter too, because they answer a quiet form of concentration that this chapter's evidence returns to: the people with the most time, confidence and stake tend to be the ones who turn up.

What does "everyone watches" mean in practice? Not that everyone watches everyone. What is watched is power. The core makes the rules, code, records, decisions and reasons of UP public: "The rules, code, records, decisions and reasons of UP are public, so anyone can check them." The same tenet says that "Each person controls their

[54] *Universal Pragmatism — V5 Revised Sections* (editorial revision of April 2026; UP project files, "UP_V5_Revised_Sections.pdf"), Revision D, on free-riding: "the Contribution Gradient links access to scarce luxury resources, advanced research tools, and higher-tier governance rights to verified contributions"; and "the progressive verification framework ties governance weight to demonstrated commitment to the community". This was a draft, never a settled position of UP. Checked against the project file, 1 Nov 2026.

[55] UP's settlement record (the Position Ledger): the round 2 position on who decides and who counts as competent (22 Oct 2026) records, among the changes to the manuscript, "Remove the persistent public competence score"; round 10 (answers submitted 24 Oct 2026; the core became CANON on 26 Oct 2026) adopted "time and money earn recognition, never power" among the dangers settled with the core.

[56] UP's study lessons (lesson 17, from the owner's corrections of 28 Oct 2026), in paraphrase: UP has no central operator and no such post; everyone is the check; whatever actually solves a problem carries the weight; and anyone who finds a better way improves UP by doing so. Lesson 15 and UP's agreed position on invention put the middle point as: anyone can try anything that might solve a problem, the tools are commons, and the result carries the power. Full wording in UP's study lessons.

[57] Core tenet: *Technology serves; people decide*: "AI and automation coordinate, propose and do work. They never govern: people can always correct, pause or switch them off. No single AI system or operator controls coordination". The AI systems UP uses are open, more than one, checked against each other, and watched for concentrated power like everything else. Full wording in "The core of UP".

[58] UP's agreed position on what the AI is, the coordinator that proposes (card C46): it publishes evidence-based proposals with their data and confidence; every proposal goes through the decision steps; "People choose their work; the AI may not assign work or compel anyone, and any plan can be overridden through the decision steps." Full wording in UP's agreed positions (the Position Ledger).

[59] UP's agreed position on authority in emergencies (round 4): "UP has no lasting authority and no emergency powers. In an emergency everyone acts quickly for everyone's benefit, with many trained responders ready. Authority belongs to the event, is one layer deep, like a parent's, and ends when the event ends. A larger event does not create greater authority, only more single-layer authority: many teams, each one layer deep, coordinated through shared information, all under the same public oversight. The public, acting on evidence and measured outcomes, is the authority over everyone who acts." The best answer to emergencies is to prevent them, and the rule is itself open to improvement. Full wording in UP's agreed positions (the Position Ledger).

[60] UP's agreed position on how UP decides when people disagree: every decision starts with an evidence-based proposal, published with its data, and an open question, "does anyone have a better idea?"; real trade-offs are first attacked with new design or technology; only when none of that works do the stakeholders vote; voting is a last resort, not a forbidden one; no vote may override the protected freedoms; every vote records the losing side's case, and the decision reopens when new evidence or technology changes the options. Full wording in UP's agreed positions (the Position Ledger).

[61] See Chapter 5, on UP's method and its decision steps.

own information and chooses what to share."[62] The watching is for concentrations of power in any form; the public record of decisions and allocations is where much of it can be seen. And the floors protect the watched as much as anyone: no one's freedom is restricted without a fair, evidence-based hearing, with the evidence open to them and a way to appeal, within limits the core sets out and treats as still open, and no one's thinking may be manipulated without their knowledge or consent.[24] UP's agreed positions also take seriously that watching is a skill. Reading shared systems is taught in open education, checking counts as contribution work, and the AI explains every change in plain language. They are just as plain about the limit: open code is a tool, not a guarantee, and "a patient, skilled bad actor can earn trust and hide for years."[63]

Behind the other checks stand two more. Anyone may leave any group or community at any time, taking what is theirs, which is one of UP's floors. The core writes one limit into it: leaving a group does not end a restriction set by a fair hearing, and the limits on any restriction are marked as an open problem.[24] And within UP, splits are good: people who think a group has gone wrong can try another way and let the results speak.[64] The core names no leader and no founder. The person who set it down describes himself as only defining the idea, not ruling over it, and no office exists for him or anyone else to hold.[52,65]

In UP's terms, the fourth and fifth tenets divide the work between them. The fourth removes the office, so that no one gathers power by holding a position. The fifth keeps the watch on every form of power, position included, because power gathers anyway, in wealth, information, access, expertise and machines. The floors are the line no decision may cross, and one of them, the right to leave, keeps the exits open. Table 6.1, earlier in this chapter, sets the six forms side by side with those checks.

Where it already works

Many of the checks in UP's core have precedents. Each of those this section follows kept power spread out in some respect, usually on its own and for the group it covered, and several did so for a long time. This section follows them in roughly the order in which people invented them, and asks of each the same two questions: which line in UP's core does it show working, and what does it leave out?

The best-documented early example is Athens. In the fourth century BCE, the city's Council of Five Hundred prepared legislation for its citizen Assembly, and the *Constitution of the Athenians*, a treatise written in Aristotle's school, explains how its members were found: "The Council of Five Hundred is elected by lot, fifty from each tribe."[66] They were not elected in the modern sense at all; their names were drawn. Most other offices could be held only once, and a seat on the Council twice: "none of the others more than once, except the membership of the Council, which may be held twice."[67] Many of the city's highest offices were filled the same way, by allotment, so that they could fall on any citizen, and for choosing jurors the city used a machine, the kleroterion, a slotted stone into which citizens' tickets were filed and from which coloured balls chose who would serve.[68] Military posts were

[62] Core tenet: *Open systems, shared knowledge, private persons*: "The rules, code, records, decisions and reasons of UP are public, so anyone can check them."; UP's technology stays only in UP, where everyone taking part may use, study and improve it and no one may enclose it; "Each person controls their own information and chooses what to share."; openness helps people find problems but will not find all of them, so UP also names the risks that openness alone cannot catch and keeps working on them. Full wording in "The core of UP".

[63] UP's agreed position that open code is a tool, not a guarantee (card 17): every line of code and every allocation is public, so anyone can read, check and simulate it, and those taking part may fork it (T8, as amended in round 13b, keeps UP's technology within UP); openness "makes corruption much harder to hide, more visible and easier to contest, and it is guarded against for good"; the safeguards it names include funded rotating red teams, staged rollouts, a two-person rule on allocation code, reproducible builds, tamper-evident records, and allocation code that runs as two independent versions that must agree; "reading shared systems is taught in open education, checking counts as contribution work, and the AI explains every change in plain language"; and "a patient, skilled bad actor can earn trust and hide for years." Full wording in UP's agreed positions (the Position Ledger).

[64] UP's agreed position that splits are good: they test two, or a thousand, ways in the real world. Full wording in UP's agreed positions (the Position Ledger).

[65] "The core of UP", preamble: the core was settled under the rule that UP is defined the way one would first define chemistry, by the core ideas that make it UP; examples are possibilities, not directives; the collective decides the rest. The person who set it down describes himself as only defining the idea, not ruling over it; no office exists for him or anyone else to hold.

[66] Aristotle (attributed; written in his school), *The Athenian Constitution*, trans. Frederic G. Kenyon (1891), ch. 43: "The Council of Five Hundred is elected by lot, fifty from each tribe." Project Gutenberg: https://www.gutenberg.org/files/26095/26095-h/26095-h.htm . Checked at source, 1 Nov 2026.

[67] *The Athenian Constitution*, trans. Kenyon, ch. 62: "The military offices may be held any number of times, but none of the others more than once, except the membership of the Council, which may be held twice." https://www.ellopos.net/elpenor/greek-texts/ancient-greece/aristotle/athenian-constitution.asp?pg=50 . Checked at source, 1 Nov 2026.

[68] Mabel Lang, *The Athenian Citizen: Democracy in the Athenian Agora*, revised by John McK. Camp II (Athens: American School of Classical Studies at Athens, 2004): the Council "prepared legislation for the Assembly"; "Even many of the highest offices in the land were filled by allotment and so could fall on any citizen"; the kleroterion was "a device for the allotment of jurors to courts", in whose slots citizens' tickets were filed while coloured balls decided who would serve; each year the Assembly decided whether a vote of ostracism should be held, and the man named on the most ballots was "sent into exile for 10 years"; ostracism was "introduced as a safeguard against tyranny, later used as a weapon by rival statesmen, and finally abandoned in the late fifth century when it deteriorated into a political game" (the PDF's text uses ligatures for "fi").
https://warwick.ac.uk/fac/arts/classics/intranets/staff/rowan/bsanumismatics/the_athenian_citizen_picture_gudie_book.pdf . Checked at source, 1 Nov 2026.

treated differently: “All officers connected with military service are elected by open vote”, and the military offices could be held any number of times, so the city’s generals could be chosen again and again.[69] This chapter’s reading is that these posts were thought to need particular skill. And every official, chosen by lot or by vote, faced an account at the end. Ten auditors, chosen by lot, were appointed “to whom all persons who have held any office must give in their accounts”, and an official found to have embezzled had to repay ten times the amount.[70]

The Athenians knew what these rules were for. Aristotle recorded the common view that “the appointment of magistrates by lot is thought to be democratical, and the election of them oligarchical”, and he listed among the principles of liberty “for all to rule and be ruled in turn”.[71,72] Election, in this view, is oligarchical; this chapter’s reading is that it favours the known, the rich and the persuasive, which is the second half of UP’s fifth tenet: people tend to hand power to whoever seems accomplished.[12] Lot ignores reputation entirely. Rotation stops anyone settling into a post. And the end-of-term audit turns every office-holder, however chosen, into someone whose record will be read.

The limits of the Athenian system are as instructive as its rules. The Council, the offices and the Assembly belonged to citizens, and a guide published by the American School of Classical Studies at Athens sets out how the city’s own spokesmen pictured it: as the arena of a civic order “so dominated by male citizens of military age” that the voices of everyone else were drowned out. The guide then argues that this picture was more wish than fact, and that women were more present in the city’s public life than it allowed. Even so, the rotation of power ran within a closed circle.[73] In the fifth century Athens also had a blunt instrument against anyone who seemed to be gathering too much influence: ostracism. Each year the Assembly decided whether to hold one, and if enough citizens voted, the man named on the most potsherds was sent into exile for ten years; the school’s guide to the Athenian citizen records that the practice was later used as a weapon by rival statesmen and was abandoned in the late fifth century.[68] Britannica’s summary of the practice is that a prominent citizen could be banished “without bringing any charge against him”.[74] In UP’s terms, Athens shows designs close to several that UP’s agreed positions name: rotation, a random draw that gives a part to people who did not put themselves forward, and a public audit of what each person did.[31,48,45] It also shows what UP’s floors add. No one’s freedom is restricted without a fair, evidence-based hearing, with the evidence open to them and a way to appeal, and any restriction stays within the limits the core sets; and the right to leave any group or community at any time, taking what is theirs, belongs to the person.[24] And UP’s circle is not closed. Anyone may take part in any problem.[14]

The open projects of the last thirty years have run the same experiment again, with software instead of a city, and some of them have written down the rules they arrived at. The Python programming language is a case in point. For most of its history its community deferred, on questions it could not settle, to the man who created it, Guido van Rossum, whose title in Python’s own documentation was BDFL, “Benevolent Dictator For Life”. On 12 July 2018, after a hard fight over one proposed change to the language, PEP 572, he wrote to the project’s core developers under the subject line “Transfer of power”. “I’m basically giving myself a permanent vacation from being BDFL,” he wrote, “and you all will be on your own.”[75] He did not name a successor. The core developers spent the autumn designing a replacement, voted on the options, and on 17 December 2018 chose a model in which a small elected

[69] *The Athenian Constitution*, trans. Kenyon, ch. 61: “All officers connected with military service are elected by open vote.” https://www.ellopos.net/elpenor/greek-texts/ancient-greece/aristotle/athenian-constitution.asp?pg=49 ; ch. 62: “The military offices may be held any number of times”. https://www.ellopos.net/elpenor/greek-texts/ancient-greece/aristotle/athenian-constitution.asp?pg=50 . Checked at source, 1 Nov 2026.

[70] *The Athenian Constitution*, trans. Kenyon, ch. 54: among the officers elected by lot are “ten Auditors, with ten assistants, to whom all persons who have held any office must give in their accounts”; a magistrate convicted of embezzlement “is obliged to repay tenfold the sum he is declared to have misappropriated.” https://www.gutenberg.org/files/26095/26095-h/26095-h.htm . Checked at source, 1 Nov 2026.

[71] Aristotle, *Politics*, Book IV, part 9, trans. Benjamin Jowett: “For example, the appointment of magistrates by lot is thought to be democratical, and the election of them oligarchical”. http://classics.mit.edu/Aristotle/politics.4.four.html . Checked at source, 1 Nov 2026.

[72] Aristotle, *Politics*, Book VI, part 2, trans. Jowett: “One principle of liberty is for all to rule and be ruled in turn”. http://classics.mit.edu/Aristotle/politics.6.six.html . Checked at source, 1 Nov 2026.

[73] Susan I. Rotroff and Robert D. Lamberton, *Women in the Athenian Agora* (Athens: American School of Classical Studies at Athens, 2006), p. 5: setting out the view of Athenian spokesmen who held that no respectable woman belonged in the Agora, the guide describes the arena of a civic order “so dominated by male citizens of military age that the very voices of the city’s other residents are drowned out by theirs”; it then says “this picture has more in it of wish-fulfillment than realistic depiction” (the PDF hyphenates “wish-ful - fillment”), and offers its book “as a corrective to that ancient fiction”. https://www.ascsa.edu.gr/uploads/media/WomenInTheAthenianAgora.pdf . Checked at source, 1 Nov 2026.

[74] Encyclopaedia Britannica, “ostracism”: under the practice, a prominent citizen who threatened the stability of the state “could be banished without bringing any charge against him”; the man ostracised had to leave Attica within ten days and stay away for ten years. https://www.britannica.com/topic/ostracism . Checked at source, 1 Nov 2026.

[75] Guido van Rossum, “Transfer of power”, python-committers mailing list (12 July 2018): “Now that PEP 572 is done, I don’t ever want to have to fight so hard for a PEP and find that so many people despise my decisions.”; “But I’m basically giving myself a permanent vacation from being BDFL, and you all will be on your own.”; “I am not going to appoint a successor.” https://mail.python.org/pipermail/python-committers/2018-July/005664.html . Python documentation, Glossary, “BDFL”: “Benevolent Dictator For Life, a.k.a. Guido van Rossum, Python’s creator.” https://docs.python.org/3/glossary.html . Checked at source, 1 Nov 2026.

council steers the language.[76] Its rules, set out in a public document, read like a summary of this chapter's checks. "The steering council is a 5-person committee." "A new council is elected after each feature release." The core team votes, and in exceptional circumstances it may remove a council member, or the whole council, by a vote of no confidence.[77] One rule guards against a form of concentration that no one in Michels's party had to think about: "In order to avoid any appearance of conflict of interest, at most 2 members of the council can work for any single employer."[78]

Debian, a free operating system made by a community of volunteers since 1993, wrote its rules down even more fully. Its constitution makes the project's leader an elected post with limited powers: an office, but one built much as UP's stewardship bodies are meant to be, with a term, a scope and recall. The leader "serves for one year from their election", and the constitution lists the powers of the project's developers acting together by general resolution, which include to "Make or override any decision authorised by the powers of the Project Leader or a Delegate" and to appoint or recall the leader.[79] Re-election is allowed, and some leaders have served several terms. Even so, since the project's founding in 1993, twenty different people have led it, counting Sruthi Chandran, elected in April 2026, and none has returned to the post after leaving it.[80] Figure 6.2 shows them in order.

[76] PEP 8016, "The Steering Council Model": "PEP 8016 was accepted by a core developer vote described in PEP 8001 on Monday, December 17, 2018." https://peps.python.org/pep-8016/ . Checked at source, 1 Nov 2026.

[77] PEP 13, "Python Language Governance": "The steering council is a 5-person committee."; "A new council is elected after each feature release."; "Each core team member can assign zero to five stars to each candidate."; "In exceptional circumstances, the core team may remove a sitting council member, or the entire council, via a vote of no confidence."; "There are no term limits." The PEP is in the public domain. https://peps.python.org/pep-0013/ . Checked at source, 1 Nov 2026.

[78] PEP 13: "In order to avoid any appearance of conflict of interest, at most 2 members of the council can work for any single employer." https://peps.python.org/pep-0013/ . Checked at source, 1 Nov 2026.

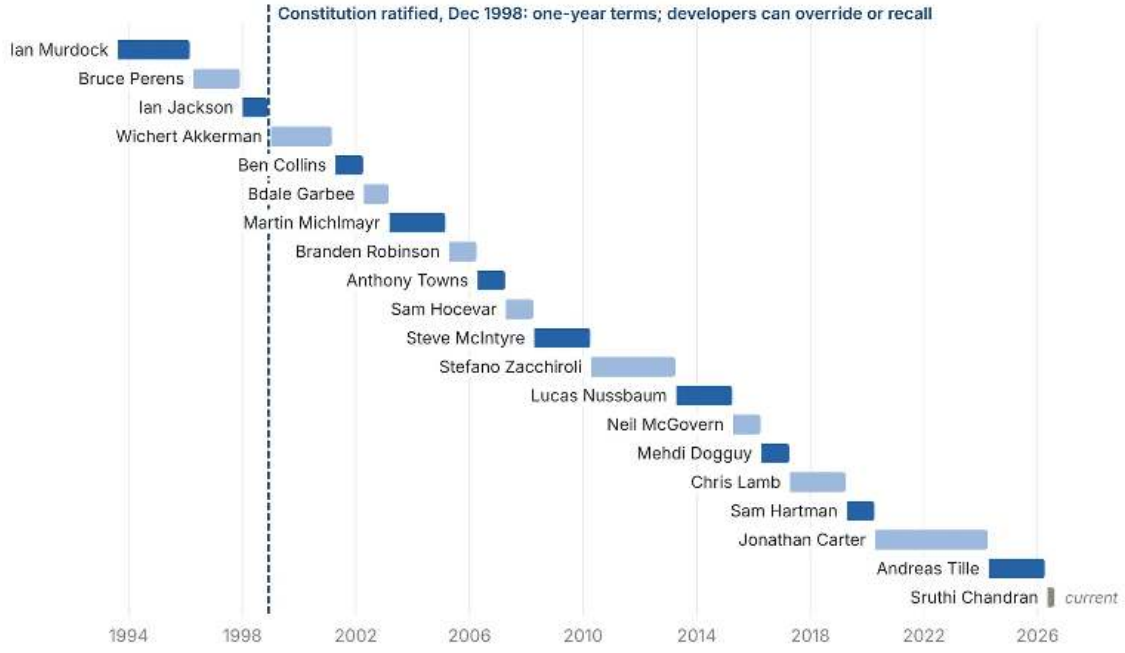
[79] Debian Constitution (version 1.0 ratified 2 December 1998; current version as published): section 5.2, "The Project Leader serves for one year from their election."; section 4.1, the Developers by way of general resolution or election may "Appoint or recall the Project Leader." and "Make or override any decision authorised by the powers of the Project Leader or a Delegate." https://www.debian.org/devel/constitution . Debian, "About Debian": "Debian is produced by almost a thousand active developers spread around the world who volunteer in their spare time." https://www.debian.org/intro/about . Checked at source, 1 Nov 2026.

[80] Debian, *A Brief History of Debian*, chapter 2, "Leadership": "Debian has had several leaders since its beginnings in 1993." The chapter lists Ian Murdock (August 1993 to March 1996), Bruce Perens, Ian Jackson, Wichert Akkerman, Ben Collins, Bdale Garbee, Martin Michlmayr, Branden Robinson, Anthony Towns, Sam Hocevar, Steve McIntyre, Stefano Zacchiroli, Lucas Nussbaum, Neil McGovern, Mehdi Dogguy, Chris Lamb, Sam Hartman, Jonathan Carter (April 2020 to April 2024) and Andreas Tille (April 2024 to April 2026), and: "Sruthi Chandran was elected in April 2026 and is our current leader." https://www.debian.org/doc/manuals/project-history/leaders.en.html ; election page: https://www.debian.org/vote/2026/vote_001 . The leaders before 1998 served before the constitution existed. Checked at source, 1 Nov 2026.

FIGURE 6.1

Twenty leaders in thirty-three years

Every person who has led the Debian project, 1993 to 2026, in order. Since the 1998 constitution, the leader is elected for one year at a time and the developers can override or recall them.



Source: Debian, "A Brief History of Debian", chapter 2, Leadership (start and end months as given there); Debian Constitution (version 1.0 ratified 2 December 1998), sections 4.1 and 5.2. Some leaders were re-elected for several one-year terms. Checked 1 Nov 2026. Bars redrawn from the earlier figure's plotted months.

Figure 6.2. Every person who has led the Debian project, 1993–2026. Since the 1998 constitution, the leader holds an elected post with powers the project's developers can override, for one year at a time; re-election is allowed. Source: Debian, "A Brief History of Debian", chapter on project leaders, and the project's 2026 election page; see the notes.

In UP's terms, Debian shows what UP's agreed position on stewards describes: "heads that rotate, are watched and can be replaced", each with a defined scope.[48] Python shows the watched and replaceable part, with a council re-elected after every release, though its rules set no term limits.[77] Both also show the limits honestly. Both projects still have a small group that steers, chosen by the project's core team or developers;[77,79] both still depend on people with the time and skill to take part, which a council election does nothing to spread. UP's answer to the first is that the people a problem affects decide its outcome, not only the people who do the work; its answer to the second is open education, at every age, and skill shown by open standards that anyone can work toward.[14]

Behind the elections in these projects stands a check that needs no one's vote: the right to fork. Anyone may copy open code and carry it on another way, and the threat of a fork has changed how projects are governed. In December 2014 a group of developers of Node.js, a software platform then stewarded by the company Joyent, split off a copy called io.js; the io.js developers said, as LWN, a long-running open-source news site, reported, that the principal reasons for the new project were "issues of governance and management style".[81] Ten weeks later, Node.js announced that it was moving to an open governance model under a new, independent Node.js Foundation; by June 2015 the two projects' technical committees had agreed to merge; and in September 2015 the

[81] Nathan Willis, "An 'open governance' fork of Node.js", LWN.net (7 January 2015): "on December 2 they announced the io.js fork."; "the principal reasons for starting the new project are issues of governance and management style." https://lwn.net/Articles/627932/ . Checked at source, 1 Nov 2026.

two lines of code were reunited in a single release.[82,83] The split lasted less than a year and ended with the code reunited under an independent foundation. Chapter 3 told a similar story about LibreOffice, and the database MariaDB also began as a fork: of MySQL, started in 2009 by one of MySQL's original developers, Michael Widenius, while Oracle was acquiring the company that owned MySQL.[84,85] In UP's terms, these are the kind of split that UP's agreed position calls good, because splits test two ways, or a thousand, in the real world, and the kind of exit its floor protects: anyone may leave any group or community, taking what is theirs.[64,24] Inside UP the right applies with one difference from the open-source world: UP's technology stays in UP, so a split carries the work on within UP, where everyone taking part may still use, study and improve it.[62]

Two more of the checks in UP's core have quieter precedents, and both concern how a person comes to do work that matters to others. The first is skill shown by open standards. In the United States, anyone who wants to transmit on the amateur radio bands needs a licence, and the licence is earned by passing a written examination. The rules are a small model of the fourth tenet. The service is open, in the regulator's words, to "qualified persons of any age". The examinations are given not by an official but by a team of at least three volunteer examiners, themselves licensed amateurs, who certify the result together and are jointly and individually accountable for it. And the questions are no secret: by federal rule, each examination is drawn from a pool of questions that "must be published and made available to the public prior to its use".[86,87] The pools are normally revised on a four-year cycle, and the radio community is invited to send feedback on them.[88] Anyone can see exactly what they need to know, study it at their own pace, and be examined by fellow practitioners rather than by officials. The Internet Engineering Task Force, whose participants build many of the internet's technical standards, is open in the same spirit: "Anyone can contribute to this work."[89] In UP's terms, this is the line in the fourth tenet that says skill is shown "by open, testable standards that anyone can work toward and anyone can propose to change".[14] What the amateur radio service adds is a reminder that open standards are not low standards. The test is real; it is simply visible to everyone who wants to pass it.

The second is the random sample, an ancient check against the few who turn up. In 2016, by a resolution of both houses of its parliament, Ireland set up a Citizens' Assembly of 99 members of the public, chosen by a polling company to form a representative sample, with a Supreme Court judge, Mary Laffoy, as chair. In the Assembly's own words, its members were "selected at random to represent the views of the people of Ireland" and were broadly representative of society as reflected in the census.[90] Its first subject was the Eighth Amendment to the constitution, under which abortion was prohibited unless there was a serious risk to the life of the mother. From November 2016 to April 2017 its members heard invited experts and stakeholders, deliberated, and voted to recommend replacing the prohibition with a provision letting parliament legislate. A parliamentary committee then considered their report and reached broadly similar recommendations, and in May 2018 the amendment was

[82] Rob Marvin, *SD Times* (10 February 2015): "Node.js is moving to an open governance model under the auspices of the newly announced Node.js Foundation." https://sdtimes.com/node-js-announces-move-open-governance-model-establishes-node-js-foundation/ . The Linux Foundation, press release (June 2015): "The Node.js and io.js Technical Committees are merging to form the Node.js Foundation Technical Steering Committee." https://www.linuxfoundation.org/press-release/node-js-foundation-advances-community-collaboration-announces-new-members-and-ratified-technical-governance . Checked at source, 1 Nov 2026.

[83] Neil McAllister, "Node.js says all is forgiven, welcomes io.js fork back into the fold", *The Register* (9 September 2015): the code was forked as io.js in December 2014, and "Joyent agreed to hand the reins of the Node.js project to an independent foundation"; Node.js 4.0 reunited the two lines. https://www.theregister.com/2015/09/09/node_js_v400_reunites_with_io_js/ . Checked at source, 1 Nov 2026.

[84] See Chapter 3, "Freely joined, ethically grown", and its notes on LibreOffice.

[85] Michael Widenius, "MySQL-MariaDB History" (slides, November 2019), hosted by the MariaDB Foundation: "Oracle started to acquire Sun (including MySQL) in April 2009"; "MariaDB released, forked from MySQL, by Michael Widenius". https://mariadb.org/wp-content/uploads/2019/11/MySQL-MariaDB-story.pdf ; MariaDB Foundation, "About": Widenius is "one of the original developers of MySQL". https://mariadb.org/about/ . Checked at source, 1 Nov 2026.

[86] Federal Communications Commission, "Amateur Radio Service": the service is "for qualified persons of any age who are interested in radio technique solely with a personal aim and without pecuniary interest"; "The VEs construct the written examinations from question pools that have been made public." https://www.fcc.gov/wireless/bureau-divisions/mobility-division/amateur-radio-service . Checked at source, 1 Nov 2026.

[87] 47 CFR Part 97, subpart F (Qualifying Examination Systems), § 97.509(a): "Each examination for an amateur operator license must be administered by a team of at least 3 VEs at an examination session coordinated by a VEC."; the certifying VEs "are jointly and individually accountable for the proper administration of each examination element reported"; § 97.523: "Each question pool must be published and made available to the public prior to its use for making a question set." https://www.ecfr.gov/current/title-47/chapter-I/subchapter-D/part-97/subpart-F . Checked at source, 1 Nov 2026.

[88] American Radio Relay League, "Question Pools": "The question pools are normally valid for 4 years."; the page links to a question pool schedule and to a feedback form for the pools. https://www.arrl.org/question-pools . Checked at source, 1 Nov 2026.

[89] Internet Engineering Task Force, "Participate": "Internet technical standards are built on the combined engineering judgement of IETF participants"; "Anyone can contribute to this work." https://www.ietf.org/about/participate/tao/ . Checked at source, 1 Nov 2026.

[90] The Citizens' Assembly (Ireland), "2016–2018 Citizens' Assembly": RED C Research was appointed "to provide a representative sample of 99 members of the public and substitutes"; "all Assembly members have been selected at random to represent the views of the people of Ireland and are broadly representative of society as reflected in the Census."; "The establishment of the Citizens Assembly 2016 – 2018 was approved by Resolution of both Houses of the Oireachtas in July 2016." https://citizensassembly.ie/previous-assemblies/2016-2018-citizens-assembly/ . Checked at source, 1 Nov 2026.

replaced after a referendum in which 66.4% of voters voted yes.[91] In UP's terms, this is a close cousin of the guard that asks a random sample of the people affected, who did not take part, to confirm a decision.[45] The cousins differ: the Irish assembly deliberated and advised before the people decided, by referendum, while UP's sample is asked to confirm a decision already taken. In both, the decision still belongs to the people affected.[14]

Elinor Ostrom's study of long-enduring commons points to the same answer from a different direction. Among the conditions she and her successors found in long-lasting commons are that most of the people affected by the rules can take part in making and changing them, and that the people who monitor the resource and its users "are accountable to or are the users".[92] The watchers, in other words, are the watched, or answer to them. UP's version is broader. Everyone in UP watches for concentrations of power, and the record they watch is public.[12,62]

Several of the cases in this section rest on unpaid work. Debian is made by developers who, in the project's own words, "volunteer in their spare time".[79] Amateur radio exists, in the regulator's description, for people interested in radio technique "solely with a personal aim and without pecuniary interest".[86] Freenode was run by volunteer staff.[37] This is the thread that runs through this book: people take on shared problems because the problems are there, often without reward and sometimes in spite of the cost. It also explains why the question of power matters so much to UP. Volunteers cannot be ordered, and in the cases here, when power gathered over their work, many of them left or split off. Freenode's staff walked out in a dispute over who controlled the network they ran; the developers of io.js split off over how their project was governed; and among the reasons Python's creator gave for stepping back was that he did not want to have to fight so hard for a proposal again.[37,81,75] Work given freely lasts where no one can take it from the people who give it. This is the chapter's reading rather than a line of the core: keeping power spread out is not only a defence against tyranny. It fits UP's agreed position that money which controls people crowds out the motivation they bring themselves, while feedback that informs, and the freedom to choose, keep it alive.[53]

The strongest doubts

The people who know this history best have the sharpest objections to UP's answer, and they deserve to be met in their strongest form.

The first doubt is Michels's own. If organisation means oligarchy, it says, then UP will become an oligarchy too, whatever its tenets say, because any network large enough to meet people's needs will need people who do its work full time, and those people will gather knowledge, control and gratitude exactly as the officials of the Social Democratic Party did. UP accepts the tendency the doubt rests on. Its fifth tenet says, in its own words, that people tend to gather power and to hand it to whoever seems accomplished.[12] What UP does not accept is that the tendency is an iron law. Research after Michels found that the law has exceptions, and that the exceptions have causes. One example is a study of a printers' union, the International Typographical Union, by Seymour Martin Lipset, Martin Trow and James Coleman, published in 1956 as *Union Democracy*. The union had an unusual history of lasting competition between two organised parties, and in Britannica's summary the study showed that sustained union democracy was possible, given the printers' relative equality of income and status, their skill at communicating and their general political competence.[93] Later studies of parties, unions, voluntary associations and social movements qualified the law further, examining factors such as competition between factions, the members' own activism and the opportunities and constraints around the organisation, and showing how

[91] Wikipedia, "Thirty-sixth Amendment of the Constitution of Ireland": "The constitution had previously prohibited abortion, unless there was a serious risk to the life of the mother."; the Citizens' Assembly, chaired by the Supreme Court judge Mary Laffoy, discussed the Eighth Amendment from November 2016 to April 2017 with invited experts and stakeholders and voted to recommend replacing it with an explicit mandate for the Oireachtas to legislate; a special Oireachtas committee's recommendations were broadly similar; the amendment "was approved by 66.4% of voters" at the referendum of 25 May 2018 (1,429,981 votes for, 723,632 against). https://en.wikipedia.org/wiki/Thirty-sixth_Amendment_of_the_Constitution_of_Ireland ; Wikipedia, "Citizens' Assembly (Ireland)": https://en.wikipedia.org/wiki/Citizens%27_Assembly_(Ireland) . Secondary sources, with the result figures as tabulated there. Checked at source, 1 Nov 2026.

[92] Elinor Ostrom, "Beyond Markets and States: Polycentric Governance of Complex Economic Systems", Nobel Prize lecture (8 December 2009), list of design principles for long-enduring commons (as updated by Cox, Arnold and Villamayor-Tomás, 2009): collective-choice arrangements, where "Most individuals affected by a resource regime are authorized to participate in making and modifying its rules"; and monitoring of users, where "individuals who are accountable to or are the users monitor the appropriation and provision levels of the users" https://www.nobelprize.org/uploads/2018/06/ostrom_lecture.pdf . The original list is in Ostrom, *Governing the Commons* (Cambridge University Press, 1990). Checked at source, 1 Nov 2026.

[93] Seymour Martin Lipset, Martin A. Trow and James S. Coleman, *Union Democracy: The Internal Politics of the International Typographical Union* (Glencoe, Ill.: Free Press, 1956). Britannica, "iron law of oligarchy": their analysis of the ITU "showed that sustained union democracy was possible given printers' relative equality of income and status, mastery of communication skills, and generalized political competence", which underpinned the union's "unusual history of enduring two-party competition (Independents and Progressives)". https://www.britannica.com/topic/iron-law-of-oligarchy . Checked at source, 1 Nov 2026.

contingent organisational power is.[15] Chapter 1 described British worker co-operatives that renewed their democracy by regularly reviewing how they were run, and Elinor Ostrom studied commons that have governed themselves over long periods.[13,92] None of these is permanent proof. The typographers' union merged into the Communications Workers of America, which dates the merger to 1987, and Chapter 1 showed co-operatives that drifted back toward the system around them.[94] What they show is that oligarchy is a tendency with causes, and causes can be worked on.

Several of the causes Michels named have a counterpart in UP's core. His leaders were paid officials who, in practice, kept their posts for decades; UP has no offices to hold, and work is shared out, not owned.[14] They controlled the party's newspapers and its internal communication; UP's rules, code, records, decisions and reasons are public, so anyone can check them.[62] They were re-elected out of gratitude; in UP's agreed positions, stewards rotate, have term limits and can be replaced, and time and money earn recognition, never power.[48,52] They were indispensable because they knew more than the members; in UP, skill is shown by open, testable standards that anyone can work toward, and education is open to everyone, at every age.[14] The typographers had, by chance of their trade, the equality, the communication skills and the political competence that Lipset and his colleagues found behind their union's democracy. UP sets out to make two of those conditions general rather than lucky: communication skills and political competence, through open education at every age and a record anyone can read.[14,62] On the first, UP does not promise equal incomes or status. It sets a floor of needs for everyone, and time and money earn recognition, never power.[24,52] Whether that is enough is exactly the kind of claim the method exists to test.[49]

The second doubt comes from the movements that tried to do without leaders. Chapter 3 met Jo Freeman's warning that a group with no formal structure does not escape power but hides it, because informal elites form anyway.[95] What is easy to miss is that Freeman did not stop at the warning. She went on to set out principles for "democratic structuring", and several of them are close to what UP's agreed positions ask of stewards: give specific people specific authority for specific tasks, chosen by democratic procedures; keep those people responsible to the people who chose them; spread authority as widely as is reasonably possible; rotate tasks, so that responsibilities held too long do not come to be seen as one person's property; give tasks according to ability and interest, with a chance to learn; spread information to everyone as often as possible; and give everyone equal access to the resources the group needs, which, she added, is not always perfectly possible.[96] UP's agreed positions overlap with several of these: defined scopes, term limits, rotation of anyone who allocates, public audit, public records of who approved what, open education and the right to fork.[48,31,14] Two of Freeman's principles have no counterpart. UP's positions say nothing about how stewards are chosen, which is left to the collective, and they avoid giving anyone authority to hold: UP has no lasting authority.[59] Freeman's warning is not an objection to UP. UP has no leader; it is not meant to have no structure.

The third doubt is that experts and the admired will rule anyway, by reputation rather than by office. Merton's Matthew effect and the evidence on prestige suggest that this is a recurring pattern, and at least one large open community has built it in on purpose. On Stack Overflow, a question-and-answer site for programmers, users gain privileges by gaining reputation, which is, in the site's words, the points "you receive from your fellow users for posting helpful questions and answers". At 3,000 points a user can vote to close or reopen other people's questions; at 10,000, they gain access to moderator tools, including the power to delete questions.[97] For a question-and-answer site this is a reasonable design. Where UP differs is that skill is shown by published, testable standards that anyone can propose to change and by tracked outcomes, not by a store of points that turns into the power to delete other people's work.[45] Time and money earn recognition, never power; a record of contributions is feedback, and it never decides whether anyone's needs are met; and the people a problem affects decide its outcome, however expert the people proposing the solutions.[52,53,14] Evidence proposes; people decide.[47]

[94] Communications Workers of America, "Printing, Publishing and Media Workers": "As a result of the 1987 merger of the International Typographical Union (ITU) into CWA". https://cwa-union.org/printing-publishing-and-media-workers . Checked at source, 1 Nov 2026.

[95] See Chapter 3, "What could still go wrong", where Jo Freeman's warning is first met.

[96] Jo Freeman, "The Tyranny of Structurelessness" (talk, May 1970; first published in *The Second Wave* 2(1), 1972), section "Principles of Democratic Structuring": seven principles, from delegating specific authority to specific individuals for specific tasks by democratic procedures, through rotation of tasks and diffusion of information to everyone as frequently as possible, to equal access to the resources the group needs, of which she writes: "This is not always perfectly possible, but should be striven for." Summarised in Claude's words. https://www.jofreeman.com/joreen/tyranny.htm . Checked at source, 1 Nov 2026.

[97] Stack Overflow, Help Center, "Privileges": privileges are gained by "increasing your reputation (points you receive from your fellow users for posting helpful questions and answers)"; at 3,000 reputation, "cast close and reopen votes"; at 10,000, "access to moderator tools", described as "Access reports, delete questions, review reviews". https://stackoverflow.com/help/privileges . Checked at source, 1 Nov 2026.

The fourth doubt is the hardest to answer completely, because it needs no office, no owner and no reputation: the people who turn up decide. The electric co-operatives whose members rarely vote, and the planning meetings where older homeowners were far more likely to speak, show that open doors do not produce equal participation.[41,42] UP's core makes participation open; it does not make it equal, and it would contradict itself if it made it compulsory. Its answer comes in parts. Most decisions start with an evidence-based proposal, published with its data, so that the case is open to everyone, not only to those in the room.[60] When a decision does go to a vote, a minimum share of the people affected must take part, a random sample of those who did not take part is asked to confirm it, and every decision publishes how many took part and how typical they were, and a decision made by a narrow group reopens automatically after a set time.[45] The random sample is an old idea. It is the principle behind Athens' lot, which chose people to serve rather than confirming decisions, and Ireland has revived it, as the last section showed.[66,90] What persists is real. Input, as opposed to voting, will still come most from those with the most time and confidence, and a random sample can be asked to confirm a decision but cannot make anyone care about it. UP names this as open work, to be measured in the open: who takes part, who does not, and why.[49]

The fifth doubt is that power will simply move into the machines. If software coordinates more and more of shared life, then whoever writes, trains or runs that software will hold the power that offices used to hold, and they will hold it in a form most people cannot read. The concentration this chapter described in today's AI makes the doubt concrete.[35] UP's core answers it in the same tenet that gives AI its work. "AI and automation coordinate, propose and do work. They never govern: people can always correct, pause or switch them off. No single AI system or operator controls coordination: the AI systems UP uses are open, more than one, checked against each other, and watched for concentrated power like everything else."[57] The dangers adopted with the core include working fallbacks without the AI, so that shared life does not stop if it has to be switched off.[57,52] Openness alone is not a guarantee here either, as UP's own position on open code says.[63] Chapter 11 and Chapter 20 take up the machines in full; this chapter's contribution is the principle that machines are one more form of power, named in the fifth tenet's list and watched like the rest.[12]

The sixth doubt turns UP's own answer against it. If everyone is a watcher, will UP not become a society of informers, where people are watched by their neighbours and judged by crowds? The worry is serious, because watching can itself become a form of power. UP's core draws the line in two places. What is watched is power, not private life: the rules, code, records, decisions and reasons of UP are public, while each person controls their own information and chooses what to share.[62] And a crowd cannot restrict anyone's freedom. The floors guarantee that no one's freedom is restricted without a fair, evidence-based hearing, with the evidence open to them and a way to appeal; that a protected freedom such as movement may be restricted only to protect others or the person, through an evidence-based court process, for the shortest time needed and never below the needs floor; that the hearing comes first, except briefly to stop harm in progress, with a hearing promptly after; that leaving a group does not end a restriction set by a fair hearing; and that no one's thinking is manipulated without their knowledge or consent. The core itself calls these limits an open problem, the best that can be imagined now.[24] What UP's agreed positions leave open is whether feedback and support can do all the work that graduated sanctions did in the commons Ostrom studied; UP's own position, to be tested in the open, is that visible contributions work as feedback, not punishment, and the answer is to be measured, not assumed.[98] Athens offers the contrast. For a time, its citizens could vote a man into exile for ten years without a charge; UP's floors would not allow it.[74] Watching, in UP, means being able to see what was decided and by whom, to raise it as a problem, and to help spread power out again. It never means the power to sentence anyone.

The last doubt is the one Michels's own life raises. Even if UP has no office, people may still want a leader, and a movement that refuses to name one may find one named for it, by its members' admiration or by the attention of outsiders. As this chapter has noted, the core names no leader and no founder, and no office exists for anyone to hold.[52,65] That is a rule, and rules can be ignored. What makes it more than a rule is the rest of this chapter: when there is no office to hand anyone, no way for reputation or money to turn into a larger say, and a public record of decisions and their reasons, there is less for admiration to turn into. The tenet's own words are the most honest

[98] UP's agreed position that people are cooperative by nature and cooperation is kept visible (card 13, as amended 31 Oct 2026): "UP's own position, to be tested in the open, is that visible contributions work as feedback, not punishment, and that free-riding is treated as a sign of distress or mismatch and met with support, not punishment. The commons Ostrom studied also used graduated sanctions, so whether feedback and support can do that work is measured, not assumed." Full wording in UP's agreed positions (the Position Ledger).

answer. People tend to hand power to whoever seems accomplished, and history shows few good endings; so the threat is never declared gone. It is watched and answered.[12]

Power kept spread out, stage by stage

UP grows side by side with the current system, by people's choice rather than by overthrow. In the early stage it is a minority network inside today's world; in the middle stage it has its own productive base, and most of its members' needs are met from what UP produces; in the completed stage most people live mainly in UP. The early stage rests on today's evidence. The middle and completed stages are reasoned projections from mechanisms that can be cited, and are labelled as such.[99] The danger this chapter describes changes shape at each stage, and so does the work of answering it.

At the early stage, the power to watch for is mostly the kind every new movement meets. A small network leans on the few people who started it, who know the most, write the most and are thanked the most, and the movement's members may be glad to let them carry on. The party Michels studied took its leaders in its first years and kept them for three decades.[8] In UP, this is the stage at which, in this chapter's view, the line that time and money earn recognition, never power, will be tested hardest.[52] The evidence for this stage is the open projects of this chapter. Python shows that a project can move from one person's judgement to an elected council whose powers are written down and limited, and Debian that its leader can change hands year after year.[77,79,80] Co-operatives show that one member, one vote can be written into the ownership of a firm, with limited returns on capital.[28] The danger running the other way is that money and attention from the current system flow to whoever looks like UP's leader, and a movement with no leader is offered one by the people outside it.

The middle stage is where this chapter's question bites hardest, because it is the first stage at which UP's people decide how real things are shared: food, housing, care, energy, the use of tools and places. Whoever allocates holds power over other people's lives, and a community that meets most of its members' needs has to allocate every day. UP's agreed positions name the designs that apply here: rotation of anyone who allocates, public records of who approved what, random audits, and allocation rules that are public and versioned.[31] The precedents for this stage are older than any software. Athens rotated its council every year and audited its officials when they left office; in the long-enduring commons Elinor Ostrom studied, those who monitored the commons answered to its users, or were its users.[66,70,92] What persists is the quiet concentration the guards in this chapter are aimed at: the people with the most time and confidence turning up most often, and informal elites forming around whoever knows the systems best.

At the completed stage, if it comes, the largest concentration of power to watch for may not be a person at all. If most people live mainly in UP, the shared systems that coordinate their lives, the records, the software and the AI, become the thing that whoever controls them would control everything through. UP's core answers that in advance: no single AI system or operator controls coordination, the AI systems are open, plural and checked against each other, people can always correct, pause or switch them off, and the rules, code, records, decisions and reasons are public.[57,62] There is no precedent for this stage, and this chapter does not pretend there is. The reason to expect the checks to hold is the one this chapter has given throughout: the more people who can read the record, take part and fork the work, the harder it is for power to gather unseen. That is a reasoned projection, not a promise, and the tenet itself says the threat is never declared gone.[12]

> *Illustration: one way it could run.* This box is an illustration, not a directive, and nothing in it is evidence. Picture a town in the middle stage whose water supply is run as a UP commons. The work of keeping it running is shared out: a small team of stewards, each with a defined scope (treatment, pipes, the records), serves for a set term and then hands over, and anyone who meets the published, testable standard for the work can take a turn or train for one. Every decision the team takes, and who approved it, goes into a public record, along with the version of the allocation rules in force that day. Once a season a group of residents drawn at random reads the record and checks a sample of decisions against the rules. Nobody on the team decides how scarce water is shared in a drought; that choice belongs to the people it affects, through the decision steps, with the case for each option published first, and no choice may leave anyone below the

[99] UP's study lessons (lesson 13, 24 Oct 2026): UP grows side by side with the current system, early (a minority network inside it), middle (its own productive base, with most members' needs met from what UP produces) and completed (most people live mainly in UP); the middle and completed stages are reasoned projections from cited mechanisms, labelled as such. UP's agreed position (round 12c, position 1): the early stage rests on today's evidence; the middle and completed stages are labelled as projection. Full wording in UP's study lessons and UP's agreed positions (the Position Ledger).

needs floor. If a resident thinks the team is favouring one street over another, the complaint becomes a problem anyone can take up, with the record open to all. If the team or its rules stop working, people can propose better ones, and a group that wants to try another way can split off and show its results. And if anyone's freedom were ever to be restricted, it would happen only within the limits the core sets: a fair, evidence-based hearing with a way to appeal, except briefly to stop harm in progress.[31,48,14,47,64,24]

Table 6.2 sums up the stages.

Table 6.2. Power kept spread out, by stage, as an illustration. The early stage rests on today's evidence; the middle and completed stages are reasoned projections, labelled as such.

Stage	What could change	Real precedent	Why it is likely	What persists
Early	People take part in UP's work while living in the current system; shared tools are stewarded by people who rotate and can be replaced; contributions earn recognition, never power	Python's elected steering council; Debian's yearly elected project leader; one member, one vote in co-operatives	Open projects and co-operatives already run this way at large scale	Reliance on the people who started things; outsiders treating someone as UP's leader; the pull of money from the current system
Middle (projection)	Communities meet most needs from what UP produces; anyone who allocates rotates; who approved what is public; random audits; versioned allocation rules	Athens' yearly council and end-of-term audits; Ostrom's commons, where monitors answer to the users	These checks kept power spread out among those who took part, at community scale, for a time and in some cases for long periods	Informal elites; the most active few doing most of the deciding; capture of the shared tools
Completed (projection)	Most people live mainly in UP; coordination runs on open, plural AI that people can correct, pause or switch off	None yet	The more people who can read the record, take part and fork, the harder hidden power becomes	The pull to hand power to whoever seems accomplished; the daily work of watching, which never ends

Who says organisation

Michels closed his argument with a law, and UP's answer to it can be put in the same form. Who says organisation says the pull toward a few. Who says UP says no office to gather it in, a public record of every decision and its reasons, the people affected deciding, machines that never govern, one voice for each real person, time and money that earn recognition, never power, and everyone watching; these are the core and the lines settled with it. Its agreed positions add stewards who rotate and can be replaced, and splits within UP that test other ways. And behind them all stands the right to leave any group, taking what is theirs.[14,12,62,57,51,52,48,64,24] Most of these have precedents, and none is enough on its own. Athens had rotation and, for a time, ostracism, which sent prominent citizens away without a charge; Python and Debian have elected stewards and still depend on the few who can take part; rural electric co-operatives have one member, one vote and many still struggle to get members to use it. What UP proposes is to hold all of them together, as part of one core, and to treat the threat as permanent.

That is a demanding commitment, and it rests on the people who keep it. The fifth tenet does not say that power will stay spread out. It says that everyone in UP watches for concentrations of power and spreads them out again, and that the threat is never declared gone.[12] Michels's party kept its leaders in office for decades because, in his account, its members were grateful and its practice defeated its rules. UP's floors hold whatever happens above them: no decision may push anyone below their basic needs and protected freedoms, or cross the floors that guarantee the right to leave, a truthful shared record and a fair hearing.[24] The next chapter turns to those floors.

Chapter card: Chapter 6

- **Claim:** Power gathers in every movement, open ones included, and people tend to hand it to whoever seems accomplished. UP does not claim to abolish that pull. It removes the office that power usually gathers around, so work is shared out, not held, and skill is shown by open standards; it lets the people a problem affects decide its outcome; it gives each real person one voice; it lets time and money earn recognition, never power; it keeps the record of every decision public; and it makes everyone a watcher, with leaving, taking what is theirs, and splits within UP open. The threat is never declared gone.
- **Core lines:** *Open participation: anyone may take part; those affected decide*; *Power kept spread out*; *Technology serves; people decide* (no single AI system or operator controls coordination); *Open systems, shared knowledge, private persons*; the floors (the right to leave, taking what is theirs; a fair hearing); settled alongside the core: no roles or offices in the old sense; one voice per person; time and money earn recognition, never power; everyone is a watcher; no leader and no founder named in the core. Agreed positions: stewards who rotate, are watched and can be replaced; concentration of power in any form is the danger; one layer of authority, however large the event; the guards on any vote; splits are good. Study lesson: no central operator.
- **Rule of thumb:** Ask of any shared work: Who is doing it, within what scope and for how long? Who can see what they did? How could they be replaced? And who is affected, and so decides?
- **What this is not:** a claim that UP's people are free of the pull toward power, that leaderless means structureless, or that open records make abuse impossible. UP names the threat as standing work.
- **Check yourself:**
    1. What did Robert Michels find inside a party committed to democracy, and which half of the fifth tenet did his own later life illustrate?
    2. Why does UP have no offices, and how is skilled work done without them?
    3. Name three checks that kept power spread out somewhere in this chapter, and the line in UP's core or agreed positions closest to each.
    4. What do the guards on a vote protect against, if no one in UP holds an office?
    5. What does everyone in UP watch, and what stays private?
- **Open questions (for the wiki):** How should one voice per person be confirmed without collecting more than uniqueness and reality? How can UP keep the most active few from deciding for everyone without turning participation into a duty? What should trigger a random audit, and who chooses the auditors? (Improve this page.)

Chapter 7. The Floors No Decision May Cross

On 30 May 1942 a young man was arrested on a street corner in San Leandro, California, and taken to the county jail in San Francisco. His name was Fred Toyosaburo Korematsu. He had been born in Oakland twenty-three years earlier, the third of four sons of Japanese immigrants who ran a flower nursery.[1] Three weeks before, on 9 May, his parents and three brothers had reported, as ordered, to the Tanforan Assembly Center. Fred did not report. In the words of the institute that now carries his name, he "chose to defy the order and carry on his life as an American citizen".[2,1] In September a federal court convicted him of violating the military orders, and he was sent first to Tanforan and then, with his family, to a camp at Topaz, in the Utah desert.[1,2]

The exclusion order he defied rested on a decision of the president. On 19 February 1942, with the United States newly at war with Japan, President Franklin Roosevelt signed Executive Order 9066, which let military commanders set up "military areas" from which "any or all persons may be excluded". The order named no ethnic group, but the curfews that followed, in the National Archives' words, "included only Japanese Americans", and the commission Congress later set up found that "No mass exclusion or detention, in any part of the country, was ordered against American citizens of German or Italian descent."[3,4] A month later Congress made it a federal crime to disobey them; both committees approved the bill unanimously, both houses passed it by voice vote, and the only hint of dissent recorded in either was a remark by one senator.[5,6] In all, about 120,000 people were removed from their homes and held, by the count of the commission Congress later set up, "without individual review". The National Archives puts the number at about 122,000, nearly 70,000 of them American citizens, and adds: "The government made no charges against them, nor could they appeal their incarceration."[7,8] The commission found that Congress "was fully aware of and supported the policy", and that "there was no effective opposition".[9]

[1] Fred T. Korematsu Institute, "Fred Korematsu's Story" (biography prepared with Karen Korematsu): "Fred Toyosaburo Korematsu was born in Oakland, California, on January 30, 1919."; "He was the third of four sons to Japanese immigrant parents who ran a floral nursery business in Oakland, California."; "Fred Korematsu chose to defy the order and carry on his life as an American citizen."; "On May 30, 1942, he was arrested on a street corner in San Leandro, California, and taken to San Francisco county jail."; "On September 8, 1942, Korematsu was convicted in federal court for violating the military orders issued under Executive Order 9066."; "Korematsu and his family were transferred from Tanforan to Topaz, Utah". The Institute is an advocacy body; its dates agree with Densho and the court record. https://korematsuinstitute.org/freds-story/ . Checked at source, 1 Nov 2026.

[2] Shiho Imai, "Fred Korematsu", *Densho Encyclopedia*: "On May 9, 1942, his parents and three brothers reported to the Tanforan Assembly Center"; "His refusal to comply with the evacuation order led to his arrest on May 30, 1942."; "Although Besig paid Korematsu's $5,000 bail, Korematsu was sent to Tanforan immediately after his release." https://encyclopedia.densho.org/Fred_Korematsu/ . Checked at source, 1 Nov 2026.

[3] National Archives and Records Administration, "Executive Order 9066: Resulting in Japanese-American Incarceration (1942)", *Milestone Documents* (page last reviewed 9 Feb 2026), summary and transcript: "Issued by President Franklin Roosevelt on February 19, 1942"; "to prescribe military areas in such places and of such extent as he or the appropriate Military Commander may determine, from which any or all persons may be excluded"; "Although the language of the order did not specify any ethnic group"; "proceeded to announce curfews that included only Japanese Americans"; "Department of Justice representatives raised constitutional and ethical objections to the proposal". https://www.archives.gov/milestone-documents/executive-order-9066 . Checked at source, 1 Nov 2026.

[4] Commission on Wartime Relocation and Internment of Civilians, *Personal Justice Denied* (1983), Summary: "The Commission on Wartime Relocation and Internment of Civilians was established by act of Congress in 1980"; "the Commission held 20 days of hearings in cities across the country, particularly on the West Coast, hearing testimony from more than 750 witnesses"; "not a single documented act of espionage, sabotage or fifth column activity was committed by an American citizen of Japanese ancestry or by a resident Japanese alien on the West Coast"; "No mass exclusion or detention, in any part of the country, was ordered against American citizens of German or Italian descent."; "The promulgation of Executive Order 9066 was not justified by military necessity"; "The broad historical causes which shaped these decisions were race prejudice, war hysteria and a failure of political leadership." https://www.npshistory.com/publications/incarceration/personal-justice-denied/summary.htm . Checked at source, 1 Nov 2026.

[5] Act of 21 Mar 1942, ch. 191, Pub. L. 77-503, *United States Statutes at Large* vol. 56, p. 173: "AN ACT To provide a penalty for violation of restrictions or orders with respect to persons entering, remaining in, leaving, or committing any act in military areas or zones."; "be guilty of a misdemeanor and upon conviction shall be liable to a fine of not to exceed $5,000 or to imprisonment for not more than one year, or both, for each offense." https://www.govinfo.gov/content/pkg/STATUTE-56/pdf/STATUTE-56-Pg173.pdf . Checked at source, 1 Nov 2026.

[6] Brian Niiya, "Public Law 503", *Densho Encyclopedia* (last updated 1 Feb 2024): "Both committees approved the measure unanimously."; "Both bodies passed the measure by voice vote."; "The only hint of dissent in either body was the observation by Ohio Republican Senator Robert A. Taft"; "signed into law on March 21, 1942". https://encyclopedia.densho.org/Public%20Law%20503/ . Checked at source, 1 Nov 2026.

[7] Commission on Wartime Relocation and Internment of Civilians, *Personal Justice Denied* (delivered to Congress 24 Feb 1983), Summary, Part I: "This policy of exclusion, removal and detention was executed against 120,000 people without individual review". Online text in the National Park Service publications archive (the National Archives copy could not be opened): https://www.npshistory.com/publications/incarceration/personal-justice-denied/summary.htm . Checked at source, 1 Nov 2026.

[8] National Archives, "Executive Order 9066" (as above): "approximately 122,000 men, women, and children were forcibly moved to"; "Nearly 70,000 of the evacuees were American citizens."; "The government made no charges against them, nor could they appeal their incarceration." Other official counts differ: the National Park Service gives "Approximately 110,000 people, two-thirds of them American citizens" removed from the West Coast and "over 120,000" held by the war's end (https://www.nps.gov/subjects/worldwarii/confinement.htm). https://www.archives.gov/milestone-documents/executive-order-9066 . Checked at source, 1 Nov 2026.

[9] Commission on Wartime Relocation and Internment of Civilians, *Personal Justice Denied* (1983), Summary, Part I: "Congress was fully aware of and supported the policy of removal and detention"; "there was no effective opposition to the measures vociferously sought by numerous West Coast interest groups, politicians and journalists"; "the military position of the United States in the Pacific was perilous"; "the FBI and members of Naval Intelligence who had relevant intelligence responsibility were ignored when they stated that nothing more than careful watching of suspicious individuals or individual

Korematsu's case reached the Supreme Court, which ruled against him on 18 December 1944 by six votes to three. Justice Hugo Black, writing for the majority, said that legal restrictions on a single racial group are "immediately suspect" and must face "the most rigid scrutiny", and then upheld the exclusion as within the war powers of Congress and the President. Three justices dissented. Frank Murphy wrote that the exclusion "falls into the ugly abyss of racism". Robert Jackson warned that the principle the Court had approved now "lies about like a loaded weapon, ready for the hand of any authority that can bring forward a plausible claim of an urgent need".[10,11,12] What the justices did not know was that the government had kept from them information held by the Federal Communications Commission, the Navy and the Justice Department that "directly contradicted" the Army's case. A Justice Department lawyer, Edward Ennis, had protested inside the department that it was "highly unfair to this racial minority that these lies, put out in an official publication, go uncorrected".[13,14]

The correction took four decades. In 1983 the Commission on Wartime Relocation and Internment of Civilians reported, after hearing more than 750 witnesses, that "not a single documented act of espionage, sabotage or fifth column activity" had been committed by an American citizen of Japanese ancestry or a resident Japanese alien on the West Coast. The order, it found, "was not justified by military necessity", and its causes were "race prejudice, war hysteria and a failure of political leadership".[4] The same year Korematsu, now in his sixties, went back to court to have his conviction set aside. "As long as my record stands in Federal Court," he told the judge, "any American citizen can be held in prison or concentration camps without a trial or a hearing, that is, if they look like the enemy of our country." He asked the government to admit it was wrong "so this will never happen again to any American citizen of any race, creed, or color".[15] Judge Marilyn Hall Patel found "substantial support in the record that the government deliberately omitted relevant information and provided misleading information in papers before the court", and granted his petition. The case, she wrote, "stands as a constant caution that in times of war or declared military necessity our institutions must be vigilant in protecting constitutional guarantees". It stands as a caution, too, "that in times of distress the shield of military necessity and national security must not be used to protect governmental actions from close scrutiny and accountability".[13] In 1988 Congress apologised "on behalf of the Nation" and provided $20,000 for each eligible survivor of Japanese ancestry still living when the act was passed.[16] In 1998 President Clinton gave Korematsu the Presidential Medal of Freedom, and in his eighties Korematsu was still filing friend-of-the-court briefs, for Muslim prisoners held at Guantánamo Bay and in the case of *Rumsfeld v. Padilla*.[17,18] He kept at it although his conviction had long made it harder for him to find work.[18,19] In

reviews of loyalty were called for by existing circumstances". https://www.npshistory.com/publications/incarceration/personal-justice-denied/summary.htm . Checked at source, 1 Nov 2026.

[10] *Korematsu v. United States*, 323 U.S. 214, 215, 216, 217–18, 219, 223 (1944) (Black, J., for the Court), text at Justia (Argued Oct. 11–12, 1944; decided Dec. 18, 1944): "was convicted in a federal district court for remaining in San Leandro, California"; "No question was raised as to petitioner's loyalty to the United States."; "knowingly and admittedly violated"; "all legal restrictions which curtail the civil rights of a single racial group are immediately suspect"; "Pressing public necessity may sometimes justify the existence of such restrictions; racial antagonism never can."; "courts must subject them to the most rigid scrutiny"; "we are unable to conclude that it was beyond the war power of Congress and the Executive to exclude"; "But hardships are part of war, and war is an aggregation of hardships."; "we deem it unjustifiable to call them concentration camps"; "we are dealing specifically with nothing but an exclusion order". https://supreme.justia.com/cases/federal/us/323/214/ . Checked at source, 1 Nov 2026.

[11] "Korematsu v. United States", *Oyez* (Chicago-Kent College of Law): "6–3 DECISION FOR UNITED STATES"; "MAJORITY OPINION BY HUGO L. BLACK"; "DECIDED Dec 18, 1944". https://www.oyez.org/cases/1940-1955/323us214 . Checked at source, 1 Nov 2026.

[12] *Korematsu*, 323 U.S. at 233 (Murphy, J., dissenting): "falls into the ugly abyss of racism"; at 246 (Jackson, J., dissenting): "The principle then lies about like a loaded weapon, ready for the hand of any authority that can bring forward a plausible claim of an urgent need." Justice Roberts also dissented. https://supreme.justia.com/cases/federal/us/323/214/ . Checked at source, 1 Nov 2026.

[13] *Korematsu v. United States*, 584 F. Supp. 1406 (N.D. Cal. 19 Apr 1984) (Patel, J.), text reproduced by LSU Law: "Petitioner filed his petition for a writ of coram nobis on January 19, 1983."; "Omitted from the reports presented to the courts was information possessed by the Federal Communications Commission, the Department of the Navy, and the Justice Department which directly contradicted General DeWitt's statements."; "there is substantial support in the record that the government deliberately omitted relevant information and provided misleading information in papers before the court"; "it cannot now be said what result would have obtained had the information been disclosed"; "As historical precedent it stands as a constant caution that in times of war or declared military necessity our institutions must be vigilant in protecting constitutional guarantees."; "It stands as a caution that in times of distress the shield of military necessity and national security must not be used to protect governmental actions from close scrutiny and accountability."; "the petition for a writ of coram nobis is granted". The hearing was held on 10 November 1983. https://biotech.law.lsu.edu/cases/pp/korematsu_II.htm . Checked at source, 1 Nov 2026.

[14] Edward J. Ennis, memorandum for Herbert Wechsler, Department of Justice, 30 Sept 1944, reproduced as an appendix to *Korematsu v. United States*, 584 F. Supp. 1406 (N.D. Cal. 1984): "it is highly unfair to this racial minority that these lies, put out in an official publication, go uncorrected". https://biotech.law.lsu.edu/cases/pp/korematsu_II.htm . Checked at source, 1 Nov 2026.

[15] Fred Korematsu, "Fred Korematsu's Address to Judge Marilyn Hall Patel", Northern California District Court, 1983, as published by the Korematsu Institute: "As long as my record stands in Federal Court, any American citizen can be held in prison or concentration camps without a trial or a hearing, that is, if they look like the enemy of our country."; "Therefore, I would like to see the Government admit they were wrong and to do something about it so this will never happen again to any American citizen of any race, creed, or color." https://korematsuinstitute.org/fred-korematsus-address-to-judge-marilyn-hall-patel/ . Checked at source, 1 Nov 2026.

[16] Civil Liberties Act of 1988, Pub. L. 100-383, 102 Stat. 903 (approved 10 Aug 1988): "acknowledge the fundamental injustice of the evacuation"; "the Congress apologizes on behalf of the Nation"; "pay out of the Fund to each eligible individual the sum of $20,000"; "means any individual of Japanese ancestry who is living on the date of the enactment of this Act"; payment was "subject to the availability of funds appropriated to the Fund for such purpose". https://www.govinfo.gov/content/pkg/STATUTE-102/pdf/STATUTE-102-Pg903.pdf . Checked at source, 1 Nov 2026.

2018 the Chief Justice of the United States wrote that the decision in his case "was gravely wrong the day it was decided".[20]

The pattern was not one country's. In the same war, by the account of the Canadian Museum for Human Rights, Canada used its War Measures Act to force some 23,000 Japanese Canadians from their homes, over 75 per cent of them Canadian-born or naturalised citizens. Yet, the museum adds, the country's own military officials and police "felt that the Japanese Canadian population posed no threat". Canada apologised in September 1988, six weeks after the United States.[21]

In UP's terms, the story shows several protections failing at once, and the order in which they failed. People were made to leave their homes and lost what was theirs, and the National Archives estimates the losses at $1.3 billion in property and $2.7 billion in income, in the dollars of 1983.[22] Their freedom of movement was taken without individual review. The court that reviewed it was not shown the full record. And all of this was done by the ordinary institutions of a democracy, an elected president, a Congress with no recorded opposition and a Supreme Court, at a moment when, in the commission's words, the military position of the United States in the Pacific "was perilous".[9] The current system did correct itself in the end, and the people who made it do so deserve the credit this chapter gives them. But the correction came forty years late, and it took a commission's inquiry and Korematsu's own return to court. This chapter is about UP's answer to the question the story raises, and that every reader of any proposal for a new way of living is entitled to ask: what protects me, and people unlike me, when the majority, the emergency or the experts turn against us? UP's answer is a set of floors that no decision may cross, and this chapter takes them one at a time.[23]

How the current system protects people, and where the protection gives way

Much of the protection the current system gives ordinary people was built in living memory. In December 1948, three years after the end of the war in which Korematsu's case was decided, the United Nations General Assembly proclaimed the Universal Declaration of Human Rights. It gave everyone "the right to life, liberty and security of person", freedom of thought, conscience and religion, and freedom of opinion and expression. In Article 25 it set out what is in effect a needs floor: a standard of living adequate for health and well-being, "including food, clothing, housing and medical care and necessary social services".[24] The International Covenant on Economic,

[17] William J. Clinton, "Remarks on Presenting the Presidential Medal of Freedom", 15 Jan 1998, *The American Presidency Project* (University of California, Santa Barbara): "In 1942 an ordinary American took an extraordinary stand."; "To that distinguished list, today we add the name of Fred Korematsu." (The Densho Encyclopedia gives the year as 1999; the President's remarks are dated 15 January 1998.) https://www.presidency.ucsb.edu/documents/remarks-presenting-the-presidential-medal-freedom-2 . Checked at source, 1 Nov 2026.

[18] Fred T. Korematsu Institute, "Fred Korematsu's Story", later sections: "In 2003, he filed a"; "on behalf of Muslim inmates being held at Guantánamo Bay"; "in his second amicus brief, written in April 2004"; "Korematsu responded to Donald Rumsfeld v. Jose Padilla"; "his U.S. Supreme Court conviction had a lasting impact on his basic rights, affecting his ability to obtain employment". https://korematsuinstitute.org/freds-story/ . Checked at source, 1 Nov 2026.

[19] Shiho Imai, "Fred Korematsu", *Densho Encyclopedia*: "his felony conviction prevented him from working in a larger firm or government agency". https://encyclopedia.densho.org/Fred_Korematsu/ . Checked at source, 1 Nov 2026.

[20] *Trump v. Hawaii*, No. 17-965 (U.S. 26 June 2018), slip op. at 38 (Roberts, C.J., for the Court): "Korematsu was gravely wrong the day it was decided, has been overruled in the court of history"; "The forcible relocation of U. S. citizens to concentration camps, solely and explicitly on the basis of race, is objectively unlawful and outside the scope of Presidential authority." Justice Sotomayor, dissenting, read the passage as "finally overruling Korematsu". https://www.law.cornell.edu/supremecourt/text/17-965 . Checked at source, 1 Nov 2026.

[21] Canadian Museum for Human Rights, "Japanese Canadian internment and the struggle for redress": "Canadian military officials and the RCMP felt that the Japanese Canadian population posed no threat and opposed taking any punitive action against them."; "In total, some 23,000 men, women and children were forced from their homes, despite the fact that over 75 percent of them were Canadian-born or naturalized citizens."; "the federal government used a piece of legislation called the War Measures Act"; "On September 22, 1988, then-Prime Minister Brian Mulroney formally apologized in the House of Commons to all Japanese Canadians." The figure of 23,000 is the Museum's. https://humanrights.ca/blog/japanese-canadian-internment-and-struggle-redress . Checked at source, 1 Nov 2026.

[22] National Archives, "Executive Order 9066" (as above): "total property loss is estimated at $1.3 billion, and net income loss at $2.7 billion (calculated in 1983 dollars based on a congressional commission investigation)". https://www.archives.gov/milestone-documents/executive-order-9066 . Checked at source, 1 Nov 2026.

[23] Core tenet: *Floors that are never crossed*, in full (as amended on 28 October 2026): "UP keeps a set of floors that no decision may cross: everyone's basic needs and protected freedoms, which no gain for others can buy; the living world's capacity to recover, so damage that cannot be undone is never traded for a short-term need; the right to leave any group or community at any time, taking what is theirs; a truthful shared record, so facts, measures and decisions are never falsified; freedom of the mind, so no one's thinking is manipulated without their knowledge or consent; and a fair hearing, so no one's freedom is restricted without a fair, evidence-based hearing, with the evidence open to them and a way to appeal. UP guarantees needs, not every want. The collective defines and refines the floors through UP's method; it may clarify or raise them, but no decision may lower them or push anyone below them. As a starting example for the collective to refine: needs such as food, water, shelter, health care, education and connection; freedoms such as thought, belief, speech, movement and privacy." And: "A protected freedom such as movement may be restricted only to protect others or the person, only through an evidence-based court process, for the shortest time needed, and never below the needs floor. The hearing comes first, except briefly, to stop harm in progress, with a hearing promptly after. Leaving a group or community does not end a restriction set by a fair hearing. These limits are an open problem: they are the best that can be imagined now, and UP is built to find better and better solutions. Above the floors, everything is open to the method." Also in "The core of UP".

[24] United Nations General Assembly, "Universal Declaration of Human Rights", *un.org* (United Nations, General Assembly resolution 217 A), Articles 3, 18, 19, 25: "the Declaration was proclaimed by the United Nations General Assembly in Paris on 10 December 1948"; "as a common standard of achievements for all peoples and all nations"; "Everyone has the right to life, liberty and security of person."; "Everyone has the right to freedom of thought, conscience and

Social and Cultural Rights turned the needs half of that promise into a treaty, recognising “the fundamental right of everyone to be free from hunger”.[25] In 2012 the International Labour Conference even adopted the word this chapter uses, recommending that every country establish “social protection floors”, defined as “nationally defined sets of basic social security guarantees”, so that “all in need have access to essential health care and to basic income security”.[26]

Some countries have written such floors into law. Finland’s constitution says that “Those who cannot obtain the means necessary for a life of dignity have the right to receive indispensable subsistence and care”, and directs public authorities to promote the right of everyone to housing.[27] In 1987 Finland counted 17,110 homeless people living alone; by November 2023 it counted 3,429, a fall of about 80 per cent, though the count shows the fall, not its cause, and part of it reflects a change in 2018 in how Helsinki counted.[28] Germany went further in one respect. The first article of its Basic Law of 1949 declares that “Human dignity shall be inviolable”, and Article 79(3) makes any amendment that affects the principles of its first and twentieth articles “inadmissible”.[29] In 2012 Germany’s Federal Constitutional Court derived from those two articles a right to a dignified minimum existence and used it against Parliament itself. The cash benefits for asylum seekers, unchanged since 1993 while prices rose by more than 30 per cent, were, it ruled, “evidently insufficient” for a dignified minimum existence. “Human dignity,” the Court said, “may not be relativised by migration-policy considerations.”[30] And the world’s treaty on civil and political rights now says that even in a public emergency a state may suspend rights only “to the extent strictly required by the exigencies of the situation”. It may never do so in a way that discriminates “solely on the ground of race, colour, sex, language, religion or social origin”, and never for a short list of rights that may not be suspended

religion”; “Everyone has the right to freedom of opinion and expression”; “Everyone has the right to a standard of living adequate for the health and well-being of himself and of his family, including food, clothing, housing and medical care and necessary social services, and the right to security in the event of unemployment, sickness, disability, widowhood, old age or other lack of livelihood in circumstances beyond his control.” https://www.un.org/en/about-us/universal-declaration-of-human-rights . Checked at source, 1 Nov 2026.

[25] United Nations General Assembly, *International Covenant on Economic, Social and Cultural Rights* (OHCHR text), Articles 2(1), 11(1), 11(2): “ADOPTED 16 December 1966 BY General Assembly resolution 2200A (XXI)”; “Entry into force: 3 January 1976, in accordance with article 27”; “undertakes to take steps, individually and through international assistance and co-operation, especially economic and technical, to the maximum of its available resources, with a view to achieving progressively the full realization of the rights recognized in the present Covenant by all appropriate means”; “recognize the right of everyone to an adequate standard of living for himself and his family, including adequate food, clothing and housing, and to the continuous improvement of living conditions”; “recognizing the fundamental right of everyone to be free from hunger”. https://www.ohchr.org/en/instruments-mechanisms/instruments/international-covenant-economic-social-and-cultural-rights . Checked at source, 1 Nov 2026.

[26] International Labour Conference, *Social Protection Floors Recommendation, 2012 (No. 202)*, NORMLEX (International Labour Organization), preamble and paras 2, 4, 8: “adopts this fourteenth day of June of the year two thousand and twelve the following Recommendation”; “social protection floors are nationally defined sets of basic social security guarantees which secure protection aimed at preventing or alleviating poverty, vulnerability and social exclusion”; “Members should, in accordance with national circumstances, establish as quickly as possible and maintain their social protection floors comprising basic social security guarantees”; “The guarantees should ensure at a minimum that, over the life cycle, all in need have access to essential health care and to basic income security which together secure effective access to goods and services defined as necessary at the national level”; “basic income security should allow life in dignity”. https://normlex.ilo.org/dyn/nrmlx_en/f?p=NORMLEXPUB:12100:0::NO::P12100_INSTRUMENT_ID:3065524 . Checked at source, 1 Nov 2026.

[27] Finland, *Constitution of Finland* (English translation, “Finland 1999 (rev. 2011)”), *Constitute Project*, Section 19: “Section 19. The right to social security”; “Those who cannot obtain the means necessary for a life of dignity have the right to receive indispensable subsistence and care.”; “Everyone shall be guaranteed by an Act the right to basic subsistence in the event of unemployment, illness, and disability and during old age as well as at the birth of a child or the loss of a provider.”; “The public authorities shall promote the right of everyone to housing and the opportunity to arrange their own housing.” The housing clause uses the weaker verb “promote”. https://www.constituteproject.org/constitution/Finland_2011 . Checked at source, 1 Nov 2026.

[28] Housing Finance and Development Centre of Finland (Ara), *Homeless people 2023* (Report 2/2024, Ara), summary, Figure 1 and Appendix 2 “Homelessness 1986–2023”: “Published: 13 February 2024”; “there were a total of 3,429 alone-living homeless people in Finland (situation on 15 November 2023)”; “There were 123 homeless families”; “Homelessness in Finland has decreased by about 80% since 1986, when the first survey on homelessness was conducted”; “Helsinki specified its statistical method in 2018, which is why the figures are not fully comparable to previous years”; “Temporarily with friends and relatives Total homeless people who live alone Homeless families”; “1987 4,700 4,760 7,650 17,110 1,370”; “2018∗ 512 378 3,165 4,882 264”; “2023 878 412 2,139 3,429 123”. “In 2018, the City of Helsinki specified its methods of collecting homelessness statistics, which reduced homelessness in Helsinki. Due to this change, the numbers are not comparable to previous years.” Appendix 2 gives the count for every year from 1986 to 2023, the series drawn in Figure 7.1. The count is a municipal survey (in 2023, of the situation on 15 November) and includes people staying temporarily with friends or relatives; the figures show the fall, not its cause. https://www.varke.fi/en/media/101 . Checked at source, 1 Nov 2026.

[29] Federal Republic of Germany, *Basic Law for the Federal Republic of Germany* (English translation by Christian Tomuschat, David P. Currie, Donald P. Kommers and Raymond Kerr, with the Language Service of the German Bundestag), *gesetze-im-internet.de*, Articles 1, 20, 79(3), 146: “which was adopted by the Parliamentary Council on 8 May 1949”; “Human dignity shall be inviolable. To respect and protect it shall be the duty of all state authority.”; “The following basic rights shall bind the legislature, the executive and the judiciary as directly applicable law”; “The Federal Republic of Germany is a democratic and social federal state”; “the principles laid down in Articles 1 and 20 shall be inadmissible”; “shall cease to apply on the day on which a constitution freely adopted by the German people takes effect”. Article 79(3) names the principles of Articles 1 and 20; the sources read do not say whether the Court’s right to a minimum existence is itself inside it. https://www.gesetze-im-internet.de/englisch_gg/englisch_gg.html . Checked at source, 1 Nov 2026.

[30] Federal Constitutional Court of Germany (Bundesverfassungsgericht), “Provisions governing basic cash benefits provided for in the Asylum Seekers Benefits Act held unconstitutional”, Press Release No. 56/2012, *bundesverfassungsgericht.de* (judgment of 18 July 2012, 1 BvL 10/10, 1 BvL 2/11): “to keep the cost of hosting and providing general care to refugees low as well as primarily via benefits in kind”; “Article 1 sec. 1 GG in conjunction with the principle of the social welfare state in Article 20 sec. 1 GG establishes a fundamental right to the guarantee a dignified minimum existence”; “The benefits are evidently insufficient because they have not been changed since 1993 despite considerable price increases in Germany”; “the price level in Germany has increased by more than 30 % since then”; “The legislature is obliged to immediately enact new provisions in the area of application of the Asylum Seekers Benefits Act which serve to secure a dignified minimum existence”; “the Federal Constitutional Court has ordered a transitional arrangement that will apply until new provisions enter into force”; “Human dignity may not be relativised by migration-policy considerations”; “Substantive review is limited to examine whether benefits are evidently insufficient”. https://bundesverfassungsgericht.de/SharedDocs/Pressemitteilungen/EN/2012/bvg12-056.html . Checked at source, 1 Nov 2026.

at all; the committee that interprets it adds that emergency measures "must be of an exceptional and temporary nature".[31,32] None of these rules existed in 1942: the Covenant was adopted in 1966 and came into force ten years later.

The gaps are just as real, and they are measured. The International Labour Organization reports that for the first time more than half of the world's people, 52.4 per cent, are covered by at least one social protection benefit, and that "3.8 billion people are still entirely unprotected".[33] About 673 million people, 8.2 per cent of the world, may have faced hunger in 2024.[34] Some 2.1 billion people still lack safely managed drinking water, on a strict definition that requires water on the premises, free from contamination and available when needed, and 3.4 billion lack safely managed sanitation.[35] Protected freedoms are losing ground too. Freedom House, which assesses political rights and civil liberties around the world, reports that global freedom declined in 2025 for the twentieth year in a row. Only 21 per cent of the world's people now live in countries it rates as free, down from 46 per cent two decades ago.[36] Emergencies are a recurring way in. Egypt lived under a continuous state of emergency from 1981 until its last renewal expired in May 2012, and under it, as the Atlantic Council's analysts put it, civilians could be tried "without due process in emergency security courts".[37,38] A 2020 working paper covering sixty democracies between 1974 and 2016 reports that "democracies are 75 percent more likely to erode under a state of emergency"; the authors write that their evidence "strongly suggests" that emergencies are used to get around democratic processes.[39]

For the needs floors, part of the reason the protection gives way is written into the protections themselves: many are conditional by design. The economic covenant asks each state to act "to the maximum of its available

[31] International Covenant on Civil and Political Rights, article 4 (adopted 16 Dec 1966; in force 23 Mar 1976): "In time of public emergency which threatens the life of the nation and the existence of which is officially proclaimed"; "to the extent strictly required by the exigencies of the situation"; "do not involve discrimination solely on the ground of race, colour, sex, language, religion or social origin"; "No derogation from articles 6, 7, 8"; "11, 15, 16 and 18 may be made under this provision." https://www.ohchr.org/en/instruments-mechanisms/instruments/international-covenant-civil-and-political-rights . Checked at source, 1 Nov 2026.

[32] UN Human Rights Committee, *General Comment No. 29: States of Emergency (Article 4)*, CCPR/C/21/Rev.1/Add.11 (2001): "Measures derogating from the provisions of the Covenant must be of an exceptional and temporary nature."; "the category of peremptory norms extends beyond the list of non-derogable provisions as given in article 4, paragraph 2"; "through arbitrary deprivations of liberty". Copy read in the University of Minnesota Human Rights Library: https://hrlibrary.umn.edu/gencomm/hrc29.html . Checked at source, 1 Nov 2026.

[33] International Labour Office, *World Social Protection Report 2024–26: Universal social protection for climate action and a just transition*, Executive summary (ILO, 2024), opening paragraph, key-findings text and Figure ES.1: "the unvarnished reality is that 3.8 billion people are still entirely unprotected"; "For the first time, more than half of the world's population (52.4 per cent) are covered by at least one social protection benefit (SDG indicator 1.3.1), increasing from 42.8 per cent in 2015"; "it would take another 49 years – until 2073 – for everyone to be covered by at least one social protection benefit"; "Effective social protection coverage, global, regional and income-level estimates, by population group, 2015 and 2023 (percentage)"; "Estimates are not strictly comparable to the previous World Social Protection Report due to methodological enhancements, extended data availability and country revisions". Coverage by at least one benefit measures coverage, not whether a benefit is adequate. https://www.ilo.org/sites/default/files/2024-09/SOCPRO_WSPR_2024_Executive_Summary_EN_Web.pdf . Checked at source, 1 Nov 2026.

[34] FAO, IFAD, UNICEF, WFP and WHO, *The State of Food Security and Nutrition in the World 2025: Addressing high food price inflation for food security and nutrition* (FAO, Rome, 2025), section 2.1, key messages: "An estimated 8.2 percent of the global population may have faced hunger in 2024, down from 8.5 percent in 2023 and 8.7 percent in 2022"; "It is estimated that between 638 and 720 million people, corresponding to 7.8 and 8.8 percent of the global population, respectively, faced hunger in 2024"; "Considering the point estimate (673 million in 2024), this indicates a decrease of 15 million people compared to 2023 and 22 million compared to 2022"; "which reflects new data from India". https://www.fao.org/3/cd6008en/online/state-food-security-and-nutrition-2025/ending-hunger-food-security.html . Checked at source, 1 Nov 2026.

[35] WHO and UNICEF, "1 in 4 people globally still lack access to safe drinking water – WHO, UNICEF", joint news release on *Progress on Household Drinking Water and Sanitation 2000–2024: special focus on inequalities* (WHO/UNICEF Joint Monitoring Programme, August 2025), *who.int*: "launched by WHO and UNICEF during World Water Week 2025"; "1 in 4 – or 2.1 billion people globally – still lack access to safely managed drinking water"; "including 106 million who drink directly from untreated surface sources"; "3.4 billion people still lack safely managed sanitation, including 354 million who practice open defecation"; "Drinking water from sources located on premises, free from contamination and available when needed, and using hygienic toilets from which wastes are treated and disposed of safely"; "provides new national, regional and global estimates for water, sanitation and hygiene services in households from 2000 until 2024". "Safely managed" is a strict standard: most of the 2.1 billion have some water service, but not one that meets it. https://www.who.int/news/item/26-08-2025-1-in-4-people-globally-still-lack-access-to-safe-drinking-water—who–unicef . Checked at source, 1 Nov 2026.

[36] Freedom House, "NEW REPORT: Global Freedom Declined for 20th Consecutive Year in 2025", press release on *Freedom in the World 2026: The Growing Shadow of Autocracy*, *freedomhouse.org* (19 March 2026): "Press release March 19, 2026"; "Global freedom declined for the 20th consecutive year in 2025. A total of 54 countries experienced deterioration in their political rights and civil liberties during the year, while only 35 countries registered improvements."; "Today just 21 percent of the world's people live in countries rated Free, down from 46 percent two decades ago". The index assesses political rights and civil liberties, not needs such as food or housing. https://freedomhouse.org/article/new-report-global-freedom-declined-20th-consecutive-year-2025 . Checked at source, 1 Nov 2026.

[37] Human Rights Watch, "Egypt: Parliament's Chance to End State of Emergency" (30 May 2012): "Egypt has been under a continuous state of emergency since 1981."; "was last renewed by Mubarak, for two years, in May 2010". https://hrw.org/news/2012/05/30/egypt-parliaments-chance-end-state-emergency . Checked at source, 1 Nov 2026.

[38] Salem Mostafa Kamel, "Egypt's 30-Year-Old Emergency Law Expires, but Civilians Remain Vulnerable to Military Justice System", *MENASource* (Atlantic Council, 31 May 2012): "30-year-old state of emergency came to an end on May 31 as its last renewal expired"; "allowing civilians to be tried without due process in emergency security courts". https://www.atlanticcouncil.org/blogs/menasource/egypts-30yearold-emergency-law-expires-but-civilians-remain-vulnerable-to-military-justice-system/ . Checked at source, 1 Nov 2026.

[39] Anna Lührmann and Bryan Rooney, "Autocratization by Decree: States of Emergency and Democratic Decline", Working Paper 85, 2nd ed. (Department of Political Science, University of Gothenburg, 2020), abstract: "This paper tests this relationship using data on sixty democracies for 1974 to 2016."; "We find that democracies are 75 percent more likely to erode under a state of emergency."; "This evidence strongly suggests that states of emergency circumvent democratic processes in ways that might inspire democratic decline." https://gupea.ub.gu.se/items/482ee773-e15a-4ceb-a352-32cbc7f5c3ec . Checked at source, 1 Nov 2026.

resources, with a view to achieving progressively" the rights it lists. Even the committee that insists on a "minimum core" of essential food, health care, shelter and education adds that any judgment of a state "must also take account of resource constraints", although a state must then show "that every effort has been made to use all resources that are at its disposition" to meet that minimum first.[25,40] The ILO's floors are "nationally defined", and its recommendations are "non-binding guidelines".[26,41] The Universal Declaration was proclaimed as "a common standard of achievements", not as a treaty.[24] Constitutions promise more than governments deliver. A study of three decades of constitutional rights found compliance ranging from 12 per cent for bans on torture to 100 per cent for bans on the death penalty. Neither courts with the power of judicial review nor the ratification of human-rights treaties was "statistically associated with increased respect for constitutional rights", although relatively few countries fail egregiously.[42] And the constitutions themselves do not last: by one published estimate, only half live more than nineteen years.[43] Even the strongest floors can bend. Germany's asylum benefits eroded for nineteen years before the court acted, and Germany's own Basic Law provides that it will cease to apply when the people adopt a new constitution.[30,29] Finland's long fall in homelessness turned into a rise in 2024 and 2025, and the municipalities that answered Finland's voluntary survey named changes in social security among the main reasons.[44,45] Figure 7.1 shows the Finnish count in full, from the first survey in 1986 to the rises of 2024 and 2025.

[40] Committee on Economic, Social and Cultural Rights, *General Comment 3, The nature of States parties' obligations (Fifth session, 1990)*, U.N. Doc. E/1991/23, annex III at 86 (1991), University of Minnesota Human Rights Library copy, paras 9-10: "any deliberately retrogressive measures in that regard would require the most careful consideration and would need to be fully justified by reference to the totality of the rights provided for in the Covenant and in the context of the full use of the maximum available resources"; "the Committee is of the view that a minimum core obligation to ensure the satisfaction of, at the very least, minimum essential levels of each of the rights is incumbent upon every State party"; "is deprived of essential foodstuffs, of essential primary health care, of basic shelter and housing, or of the most basic forms of education is, prima facie, failing to discharge its obligations under the Covenant"; "any assessment as to whether a State has discharged its minimum core obligation must also take account of resource constraints applying within the country concerned"; "it must demonstrate that every effort has been made to use all resources that are at its disposition in an effort to satisfy, as a matter of priority, those minimum obligations". A General Comment is the Committee's interpretation, not treaty text. https://hrlibrary.law.umn.edu/gencomm/epcomm3.htm . Checked at source, 1 Nov 2026.

[41] International Labour Organization, "Conventions, Protocols and Recommendations", *ilo.org*: "which serve as non-binding guidelines". https://www.ilo.org/global/standards/introduction-to-international-labour-standards/conventions-and-recommendations/lang–en/index.htm . Checked at source, 1 Nov 2026.

[42] David S. Law and Mila Versteeg, "Sham Constitutions", *California Law Review* 101:863–947 (California Law Review, 2013), abstract (University of Virginia School of Law faculty page): "This Article documents empirically the global prevalence and severity of constitutional noncompliance over the last three decades"; "Relatively few countries fail egregiously to uphold either the positive or the negative rights found in their constitutions"; "ranging from 12% compliance with torture prohibitions to 100% compliance with death penalty prohibitions"; "On average, socioeconomic and group rights are somewhat less likely to be upheld than the other two varieties of rights, but the performance gap among the categories is narrowing over time"; "In past decades, the mere inclusion of socioeconomic rights in a constitution was associated with underperformance, but no longer"; "neither the existence of judicial review nor the ratification of human rights treaties is statistically associated with increased respect for constitutional rights". Abstract only; the full article was not read. https://www.law.virginia.edu/node/98156 . Checked at source, 1 Nov 2026.

[43] Comparative Constitutions Project, *Books* page (entry for Zachary Elkins, Tom Ginsburg and James Melton, *The Endurance of National Constitutions*, Cambridge University Press, 2009), *comparativeconstitutionsproject.org*: "Constitutions are supposed to provide an enduring structure for politics. Yet only half live more than nineteen years." The figure depends on method and sample, and the authors' own earlier working estimates differ. https://comparativeconstitutionsproject.org/books/ . Checked at source, 1 Nov 2026.

[44] Housing Finance and Development Centre of Finland (Ara), "Homeless people 2024", *varke.fi* (page "Updated 26.2.2025"): "In 2024, there were in total 3,806 homeless people living alone in Finland, which is 377 more than in 2023"; "The number of homeless people living alone increased for the first time since 2012"; "Municipalities gave the following factors as the most important reasons for homelessness: Lack of small and affordable homes Impairments in social security and income support policies"; "Responding to the Ara survey is voluntary. 81 per cent of the municipalities responded to the 2024 survey. The results are indicative". https://www.varke.fi/en/statistics/homelessness/homeless-people-2024 . Checked at source, 1 Nov 2026.

[45] Centre for State-Subsidised Housing Construction (Varke), "Homeless people 2025", *varke.fi* (page "Updated 12.5.2026"): "In 2025 in Finland there were 4,579 homeless people living alone, which is 773 more than in the year before"; "Also long-term homelessness rose for the first time in five years"; "The municipalities that responded to the survey reported the following reasons for the growing number of homeless people in their area: changes in social security rise in living expenses increase in housing costs". The reasons are what responding municipalities reported, not a causal finding. https://www.varke.fi/en/statistics/homelessness/homeless-people-2025 . Checked at source, 1 Nov 2026.

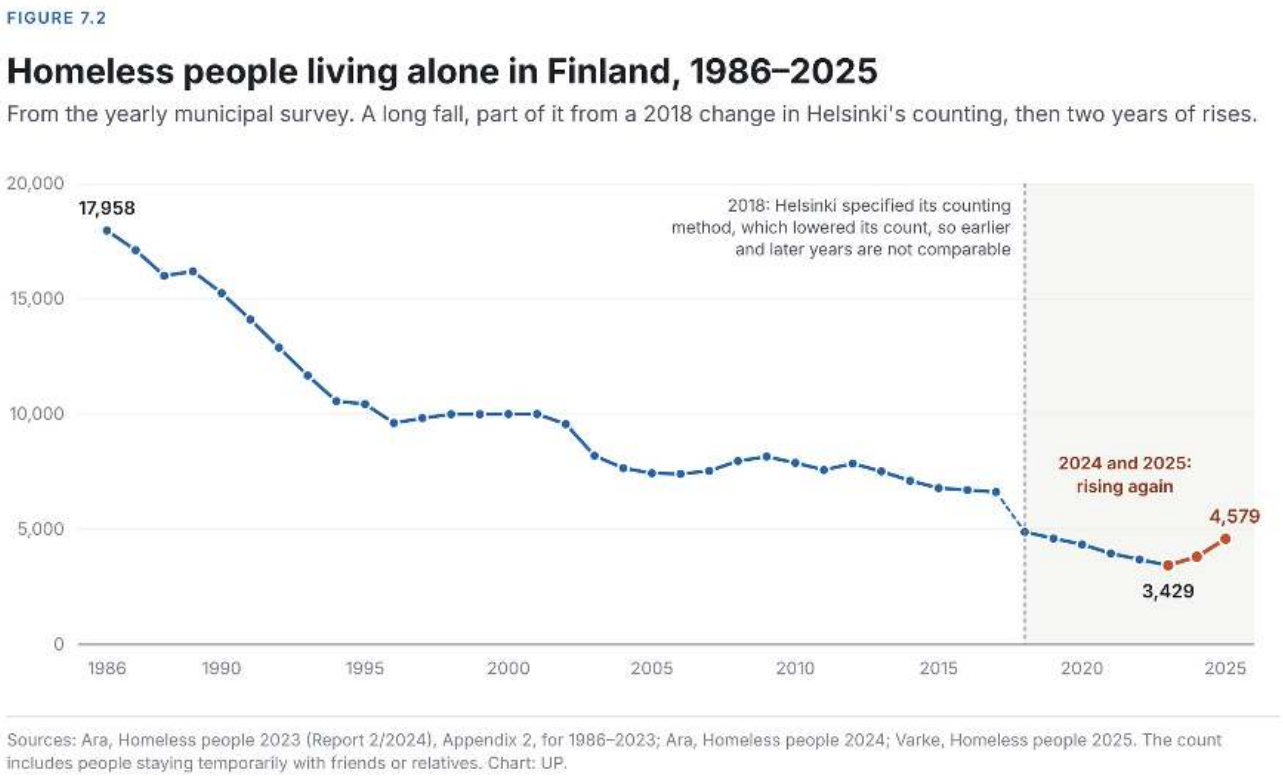


Figure 7.1. Homeless people living alone in Finland, 1986–2025, from the yearly municipal survey. In 2018 Helsinki specified its counting method, which lowered its count, so earlier and later years are not comparable. Sources: Ara and Varke.[28,44,45]

Table 7.1. UP's floors beside the nearest protection in the current system, and where that protection most often gives way.

UP's floor	Today's nearest protection	Where it most often gives way
Basic needs and protected freedoms, which no gain for others can buy	Universal Declaration, Articles 3, 18, 19 and 25; the economic covenant; social protection floors; Finland's constitution	Conditional on "available resources"; nationally defined; 3.8 billion people without any social protection
The living world's capacity to recover	The Rio principle of precaution; the Montreal Protocol	Applied "according to their capabilities" and to "cost-effective" measures; aquifers, soils and species still lost
The right to leave, taking what is theirs	Universal Declaration, Article 13; the civil covenant, Article 12	Covers countries, not every group; says nothing about what a person may take
A truthful shared record	Public registries and logs in some fields (clinical trials, web certificates); audits	Records kept by the party they would expose, as in Flint
Freedom of the mind	The Nuremberg Code; the EU's ban on manipulative AI	Applies in one field or region, and the EU ban only where harm is significant
A fair hearing, with the evidence open and a way to appeal	Magna Carta; habeas corpus; the civil covenant, Articles 9 and 14	Evidence withheld; hearings skipped in emergencies

Sources: see the notes to this section and to the sections on each floor.

In UP's terms, the current system has already discovered most of what a floor needs to say. What it has not done is put its floors where no decision may reach them. Each protection in Table 7.1 is real. But each sits in a different document, binds a different authority, and can give way to a budget, an emergency, a new government or a new constitution. Alone, none of them can stop a determined majority, and Korematsu's story shows that a determined majority can include the president, the Congress and the courts at once. UP's contribution is to connect what already exists, to invent together what is still missing, and to change the standing of the whole. It puts all six floors

under every decision at once, with every decision and its reasons public, and it allows the floors to rise but never to fall.[23,46,47]

What UP holds: a floor under every decision

UP's answer to the question this chapter opened with is one of the ten tenets of its core, *Floors that are never crossed*. It begins with a plain sentence: UP keeps a set of floors that no decision may cross. It then names them, six in all. The first is everyone's basic needs and protected freedoms, which no gain for others can buy. The second is the living world's capacity to recover, so that damage that cannot be undone is never traded for a short-term need. The third is the right to leave any group or community at any time, taking what is theirs. The fourth is a truthful shared record, so that facts, measures and decisions are never falsified. The fifth is freedom of the mind, so that no one's thinking is manipulated without their knowledge or consent. The sixth is a fair hearing, so that no one's freedom is restricted without a fair, evidence-based hearing, with the evidence open to them and a way to appeal.[23] Figure 7.2 shows where the floors sit: under everything else UP does.

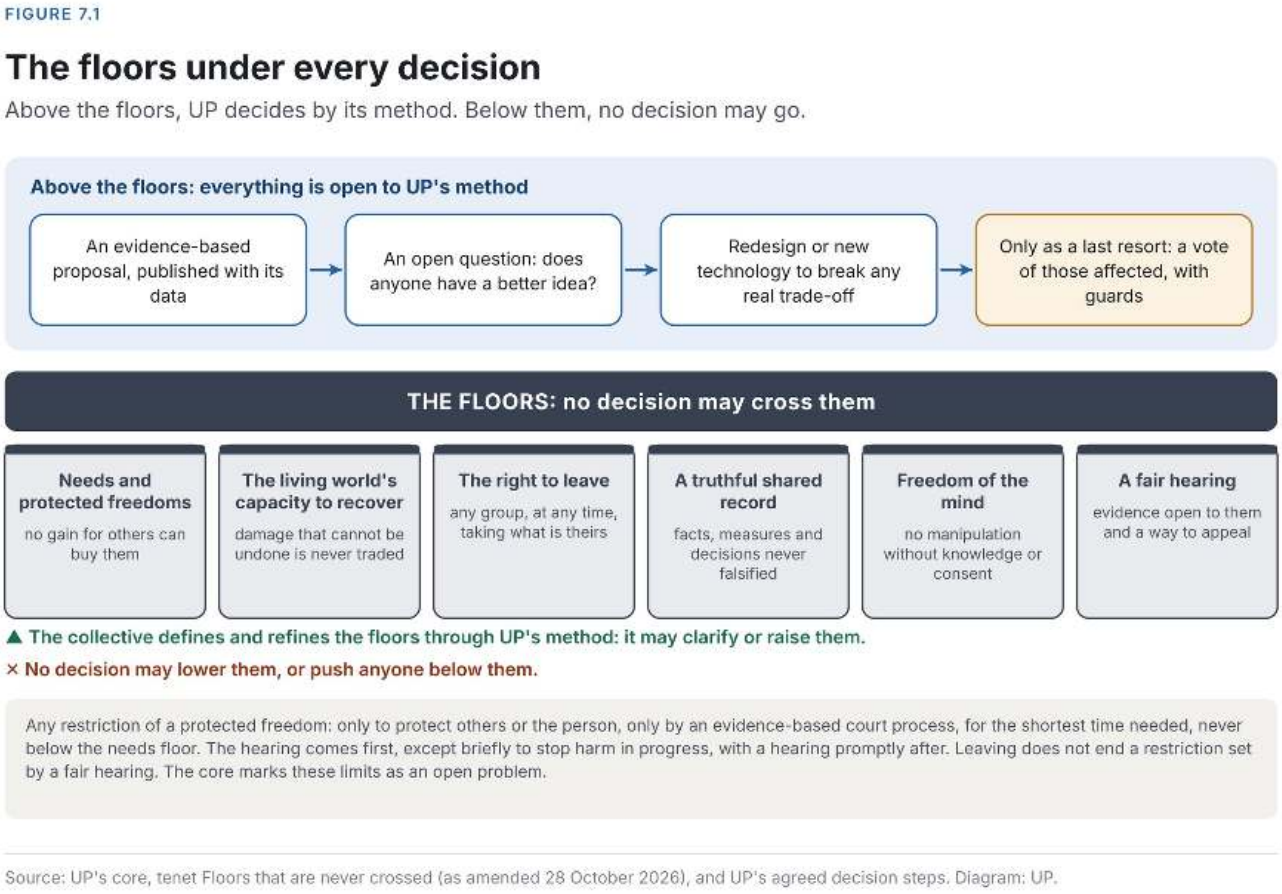


Figure 7.2. The floors under every decision. Above them, UP decides by its method; below them, no decision may go. Source: UP's core and its agreed decision steps.

Three features separate these floors from a list of good intentions, and each answers something that went wrong in the opening story. The first is that they bind every decision, whoever makes it. Under UP's agreed position on how decisions are made, most decisions are not made by voting at all. A decision starts with an evidence-based

[46] Core tenet: *Open systems, shared knowledge, private persons*: "The rules, code, records, decisions and reasons of UP are public, so anyone can check them."; UP's technology stays only in UP, where everyone taking part may use, study and improve it and no one may enclose it; "Each person controls their own information and chooses what to share."; openness will not find every problem, so UP also names the risks openness alone cannot catch. Full wording in "The core of UP".

[47] Core tenet: *The method: shared problem solving with evidence*: problems are named, measured and offered as work to anyone; the people a problem affects decide its outcome; no problem, solution or method belongs to the person who raised it; solutions are proposed with their evidence, tested and compared; facts are checked, unknowns become shared work, and matters of taste are never made rules for others. Its last words are "Evidence proposes; people decide." Full wording in "The core of UP".

proposal, published with its data, and an open question, whether anyone has a better idea. A real trade-off is first attacked with redesign or new technology, and only when none of that works do the people affected vote, as a last resort and with guards on the vote. Even then, no vote may override the protected freedoms.[48] A majority, a crisis or a confident expert can change a great deal in UP, but none of them may reach below the floors. The second feature is in the phrase "which no gain for others can buy". UP's aim is the health, happiness and wellbeing of all living things, and for people it is measured person by person, not as a total, so that no one's wellbeing is traded away to raise an average.[49] UP's agreed position "Never below the floor" puts the same idea in plainer terms: everyone's basic needs and protected freedoms form a floor that no gain for others can buy. Above that floor, UP seeks the greatest wellbeing for all, and the search for solutions in which everyone gains comes first. Above the floor, too, no one is made worse off without being asked first: those who would lose out are consulted and helped, though no single person can block a change that meets everyone's needs.[50] The argument that the many will be safer if the few give up their homes, their liberty or their day in court is exactly the argument the floors are built to refuse. The third feature is the direction in which the floors may move. The collective defines and refines them through UP's method; it may clarify or raise them, but no decision may lower them or push anyone below them.[23]

The floors are also limited in what they claim, and the limits matter as much as the promises. UP guarantees needs, not every want.[23] The needs and freedoms the core names are a starting example for the collective to refine, not a finished list: needs such as food, water, shelter, health care, education and connection, and freedoms such as thought, belief, speech, movement and privacy.[23] What counts as harm is itself measured by its effect on health, happiness and wellbeing, and defined, graded and refined continually by the collective from information, input and research.[51] Above the floors, everything is open to UP's method: evidence proposes, and the people affected decide.[23,47] And UP does not pretend that a floor makes abuse impossible. Its agreed position says plainly that UP does not make oppression impossible; it puts floors in its way that cannot be crossed.[52] Keeping them in place is ongoing work for everyone: in UP everyone is a watcher, and UP's rules, records, decisions and reasons are public, so anyone can check them.[53,46]

The floors grew to their present shape through UP's own method, which is part of what they mean. The idea that the floors bind every decision and may be raised but never lowered was agreed first. The right to leave, the truthful record and the freedom of the mind were added in the next round, and the fair hearing, with the limits on any restriction, was added later still, in a round held alongside the debate on justice and enforcement.[54] That last change is a small example of the rule it obeys. A protection was found missing, and it was added. None was taken away, and under the core none may be. The same rule governs clarifications: in November 2026 the fair hearing was clarified, as described later in this chapter, without a word of the floor being lowered.[55]

[48] UP's agreed position on how UP decides when people disagree (round 2): every decision starts with an evidence-based proposal, published with its data, and an open question, "does anyone have a better idea?"; real trade-offs are first attacked with new design or technology; only when none of that works do the stakeholders vote, with guards, and "no vote may override the protected freedoms"; every vote records the losing side's case, and the decision reopens when new evidence or technology changes the options. The stakeholders include everyone materially affected, including people downstream and future residents. Full wording in UP's agreed positions (the Position Ledger).

[49] Core tenet: *The aim: the health, happiness and wellbeing of all living things*. The aim is a chosen direction, not a scientific discovery and not a promise, never fully reached; "For people it is measured person by person, not as a total, so no one's wellbeing is traded away to raise an average." Full wording in "The core of UP".

[50] UP's agreed position "Never below the floor" (round 3, 22 October 2026): "UP's goal is the health, happiness and wellbeing of every person, not a total. Science measures wellbeing and finds the best ways to raise it; the goal itself is a choice people make together, not a scientific discovery. Everyone's basic needs and protected freedoms form a floor that no gain for others can buy. Above that floor, UP seeks the greatest wellbeing for all, and the search for win-win solutions in [the decision steps] comes first. Above the floor, no one is made worse off without being asked first: those who would lose out are consulted and helped, though no single person can block a change that meets everyone's needs." Full wording in UP's agreed positions (the Position Ledger).

[51] UP's agreed position on harm (round 7): "Harm is measured by its effect on health, happiness and wellbeing, and it is defined, graded and refined continually from information, input and research by the collective." Full wording in UP's agreed positions (the Position Ledger).

[52] UP's agreed position "Two floors in the way of oppression" (round 6): "UP does not make oppression impossible; it puts two floors in its way that cannot be crossed. Everyone's basic needs and protected freedoms form a floor that no gain for others can buy, and irreversible damage is never traded. Above the floors, decisions follow the decision steps: evidence proposes and people decide, with a vote only as the last resort and three guards on it (a minimum share of the affected taking part, a random sample confirming, and automatic reopening). Those who would lose out are asked first and helped; no single person can block a change that meets everyone's needs." Full wording in UP's agreed positions (the Position Ledger).

[53] Settled alongside the core, dangers adopted in round 10: among them "everyone is a watcher"; "time and money earn recognition, never power"; "no forced adoption, no leader, no founder named in the core; anyone acting outside the core stops being UP and bears the consequences". Full wording in "The core of UP".

[54] UP's settlement record (the Position Ledger): in round 9 (23 October 2026) it was agreed that the floors bind every decision and that the collective may clarify or raise them, never lower them; round 10 (24 October) added the right to leave, a truthful shared record and freedom of the mind; round 11 settled the tenet; and round 13b (28 October 2026) added the fair hearing and the limits on any restriction, which the UP Moderator confirmed and promoted to the core. The earlier text is kept unchanged in the record.

[55] UP's settlement record (the Position Ledger), "Clarification · T6 fair-hearing floor", agreed on 1 November 2026, checked as faithful and recorded by the UP Moderator, without altering the text of T6 or any earlier entry: "The words of T6 are unchanged. The substance of the evidence is always open to the person. Where a witness's safety is at risk, a court may protect the witness's identity, and that decision can be appealed. Other hard cases are left to UP's

Needs, not wants

The first floor is the one most people picture when they hear the word: everyone's basic needs, met. UP's core gives a starting example of what those needs are, food, water, shelter, health care, education and connection, and then adds a sentence that is easy to skim past and important to keep: UP guarantees needs, not every want.[23] A floor is a minimum under everyone, not a promise of everything to anyone. UP's agreed position on abundance spells out what follows. What counts as enough is set together and rises as capacity grows, and today's luxury is not the target. Every community that runs this way publishes its energy, materials and needs met, so that enough for everyone is a measured target shown in practice rather than a promise made in advance.[56]

The line between needs and wants sounds as if it ought to be hopelessly vague, and economic theories built on preferences, as the need theorist Ian Gough points out, assume "the limitlessness of wants".[57] The research on human needs has found a sharper line than that. The Chilean economist Manfred Max-Neef and his colleagues argued in 1989 that the common belief that needs are infinite and always changing comes from confusing needs with the things that satisfy them. In their account the fundamental needs are "finite, few, and classifiable", and the same in all cultures and periods; what varies is the way and the means by which each culture meets them. Food and shelter, in their scheme, are not needs at all but "satisfiers" of the deeper need for subsistence, and education is a satisfier of the need for understanding.[58] Len Doyal and Ian Gough built a related theory: human beings have universal and objective needs for health and autonomy, and needs, unlike wants, are satiable.[59,57] Gough's list of the "intermediate needs" that serve health and autonomy reads much like UP's starting example: nutritional food and clean water, protective housing, appropriate health care, appropriate education, and "significant primary relationships".[60] In the language of this research, UP's list is a list of what satisfies needs rather than of needs themselves, which fits the core's calling it a starting example for the collective to refine.[23]

Researchers have gone further and put numbers on "enough". Narasimha Rao and Jihoon Min defined a set of decent living standards in 2018: the material conditions that basic human wellbeing requires, covering both living conditions and the means to take part in society, with thresholds to be adapted to each society's customs.[61] They were careful to call the standards "a function of our times", set by current technologies and norms, which fits UP's rule that enough rises as capacity grows.[62] Their colleagues then asked how much energy it would take to give every person on Earth that standard. Joel Millward-Hopkins and co-authors found that decent living for the whole population of 2050 could be provided with about 149 exajoules of final energy a year, over 60 per cent less than the world uses now, even though the 2050 population will be about 30 per cent larger. The result is a scenario, and it assumes both advanced technology everywhere and much lower consumption by those who now consume

method."

[56] UP's agreed position "Abundance means enough for everyone, shown in the open" (round 6): "UP guarantees needs (food, shelter, health care, education, connection), not every want. What counts as enough is set together and rises as capacity grows. Today's luxury is not the target"; every community that runs this way "publishes its energy, materials and needs met, so abundance is a measured target shown in practice, not a promise." Full wording in UP's agreed positions (the Position Ledger).

[57] Ian Gough, "Climate change and sustainable welfare: the centrality of human needs", *Cambridge Journal of Economics* 39(5):1191–1214 (Oxford University Press, 2015), abstract (LSE Research Online record): "the limitlessness of wants"; "Human needs are necessary pre-conditions to avoid serious harm and are universalisable, objective, empirically grounded, non-substitutable and satiable."; "Whilst needs are universal, need satisfiers are most often contextual and relative to institutions and cultures." https://researchonline.lse.ac.uk/id/eprint/62525 . Checked at source, 1 Nov 2026.

[58] Manfred Max-Neef, Antonio Elizalde and Martin Hopenhayn, "Human Scale Development: An Option for the Future", *Development Dialogue* 1989:1 (Dag Hammarskjöld Foundation, 1989), Part Two: "It is traditionally believed that human needs tend to be infinite, that they change all the time"; "It is suggested here that such assumptions are inaccurate"; "Fundamental human needs are finite, few, and classifiable."; "Fundamental human needs (such as those contained in the system proposed) are the same in all cultures and in all historical periods."; "is the way or the means by which the needs are satisfied"; food and shelter "must not be seen as needs, but as satisfiers of the fundamental need for Subsistence". https://www.daghammarskjold.se/wp-content/uploads/1989/05/89_1.pdf . Checked at source, 1 Nov 2026.

[59] Len Doyal and Ian Gough, *A Theory of Human Need* (Palgrave Macmillan, 1991), abstract in the LSE Research Online record: "Rejecting fashionable subjectivist and cultural relativist approaches, this important book argues that human beings have universal and objective needs for health and autonomy and a right to their optimal satisfaction." https://researchonline.lse.ac.uk/id/eprint/36627 . Checked at source, 1 Nov 2026.

[60] Gough, CASE paper 182 (2014), the list of intermediate needs: "in the following eleven categories: nutritional food and clean water, protective housing"; "appropriate health care; significant primary relationships, security in childhood, physical and economic security, and appropriate education". https://www.csog.econ.cam.ac.uk/system/files/documents/Gough_Needs.pdf . Checked at source, 1 Nov 2026.

[61] Narasimha D. Rao and Jihoon Min, "Decent Living Standards: Material Prerequisites for Human Wellbeing", *Social Indicators Research* 138:225–244 (Springer, 2018; published online 23 May 2017), abstract: "We define a set of universal, irreducible and essential set of material conditions for achieving basic human wellbeing, along with indicators and quantitative thresholds, which can be operationalized for societies based on local customs and preferences."; "The DLS goes beyond existing multidimensional poverty indicators by comprehensively addressing living conditions and the means of social participation." https://link.springer.com/article/10.1007/s11205-017-1650-0 . Checked at source, 1 Nov 2026.

[62] Rao and Min, "Decent Living Standards" (2018), section 3.2: "This project seeks to first define global universal satisfiers that transcend contextual dependence, then define context-specific thresholds or guidelines for such thresholds."; section 6: "specified locally, based on participatory methods, and further analysis"; "These DLS are also a function of our times"; "they have been specified based on current technologies and norms". https://link.springer.com/article/10.1007/s11205-017-1650-0 . Checked at source, 1 Nov 2026.

most.[63] A related study by Jarmo Kikstra and colleagues, which shares an author with the first, reached a similar figure of 156 exajoules. It also found that more people lack decent living standards than are counted as income-poor: across sub-Saharan Africa, on average over 60 per cent of people fall short on more than half of the indicators.[64,65]

Separate research on emissions shows where most greenhouse-gas emissions come from, and it is not from meeting basic needs. Lucas Chancel's estimates for 2019 put the share of global greenhouse-gas emissions from the bottom half of the world's population at 12 per cent, and the share from the top tenth of emitters at 48 per cent.[66] The World Inequality Lab, using the same approach, estimates that the carbon needed to lift everyone above a poverty line of US$5.50 a day equals roughly a third of the emissions of the top tenth.[67] Figures like these are estimates built on models, and the people they describe live in every country. But they explain why UP draws the line where it does. Together with the energy scenarios above, these estimates suggest that a decent floor under everyone would need far less energy, and cause far fewer emissions, than the world now uses; the heavier load comes from consumption at the top, and UP's agreed position says today's luxury is not the target.[56]

Connection may look out of place on a list of needs. The evidence for putting it there is strong. A review of 148 studies, covering more than 300,000 people, found that people with stronger social relationships had a 50 per cent greater likelihood of survival over the periods studied, an effect the authors compared with quitting smoking. The studies are observational, and the authors note that causality is hard to establish.[68,69] In June 2025 the World Health Organization's Commission on Social Connection reported that about one person in six worldwide is affected by loneliness, and that loneliness is linked to an estimated 871,000 deaths a year. The Commission called social health "a vital but often overlooked pillar of health".[70,71] A needs floor that fed and housed people while leaving them alone would leave out something the evidence treats as part of health.

[63] Joel Millward-Hopkins, Julia K. Steinberger, Narasimha D. Rao and Yannick Oswald, "Providing decent living with minimum energy: A global scenario", *Global Environmental Change* 65:102168 (Elsevier, 2020), abstract: "the basic material needs of billions of people across the planet remain unmet"; "such a world requires a massive rollout of advanced technologies across all sectors, as well as radical demand-side changes to reduce consumption"; "Sufficiency is, however, far more materially generous in our model than what those opposed to strong reductions in consumption often assume."; section 4.1: "global final energy consumption at 149 EJ in 2050"; "This is over 60% lower than current consumption (despite the 2050 population being ~30% larger than the present day)"; "Where GDP/cap>$15,000, current energy consumption is ~2 to ~15 times larger than DLE." Open-access copy of the published article: https://pure.iiasa.ac.at/id/eprint/16764/1/1-s2.0-S0959378020307512-main.pdf . Checked at source, 1 Nov 2026.

[64] Jarmo S. Kikstra, Alessio Mastrucci, Jihoon Min, Keywan Riahi and Narasimha D. Rao, "Decent living gaps and energy needs around the world", *Environmental Research Letters* 16(9): 095006 (2 Sep 2021), abstract: "We assess the gaps in providing decent health, shelter, nutrition, socialization, and mobility within countries, across the world."; "Our results show that more people are deprived of DLS than are income-poor, even when numbers are measured against medium income poverty thresholds."; "the required rate of increase in energy to provide decent living for all in the coming two decades would be unprecedented for many countries". https://pure.iiasa.ac.at/id/eprint/17402/ . Checked at source, 1 Nov 2026.

[65] Kikstra et al., "Decent living gaps and energy needs around the world" (2021), section 3.1: "found in sub-Saharan African countries, where, on average, over 60% of the population does not meet DLS thresholds for more than half of the decent living indicators"; section 3.2.2: "final energy for decent living in 2050 in our reference case is 156 EJ"; "This total is close to the total calculated in a previous study". The two studies share an author (Narasimha Rao). https://pure.iiasa.ac.at/id/eprint/17402/1/Kikstra_2021_Environ._Res._Lett._16_095006.pdf . Checked at source, 1 Nov 2026.

[66] Lucas Chancel, "Global carbon inequality over 1990–2019", *Nature Sustainability* 5:931–938 (29 Sep 2022), abstract: "In my benchmark estimates, I find that the bottom 50% of the world population emitted 12% of global emissions in 2019, whereas the top 10% emitted 48% of the total."; "63% of the global inequality in individual emissions is now due to a gap between low and high emitters within countries rather than between countries"; "stress the need for governments to develop better data on individual emissions". The groups are ranked by emissions estimated from income and wealth. https://www.nature.com/articles/s41893-022-00955-z . Checked at source, 1 Nov 2026.

[67] Lucas Chancel, Philipp Bothe and Tancrède Voituriez, *Climate Inequality Report 2023*, World Inequality Lab Study 2023/1 (World Inequality Lab, 2023), Executive summary, "Key facts", p. 8: "The global top 10% are responsible for almost half of global carbon emissions"; "The carbon budgets needed to eradicate poverty below the US$ 5.50/day poverty line are equal to roughly one third of the … emissions attributable to the top 10% of global emitters" (the omitted word is "current", broken across a line in the PDF). https://wid.world/www-site/uploads/2023/01/CBV2023-ClimateInequalityReport-3.pdf . Checked at source, 1 Nov 2026.

[68] Julianne Holt-Lunstad, Timothy B. Smith and J. Bradley Layton, "Social Relationships and Mortality Risk: A Meta-analytic Review", *PLOS Medicine* 7(7): e1000316 (27 Jul 2010), abstract: "Across 148 studies (308,849 participants), the random effects weighted average effect size was OR = 1.50 (95% CI 1.42 to 1.59), indicating a 50% increased likelihood of survival for participants with stronger social relationships."; "The influence of social relationships on risk for mortality is comparable with well-established risk factors for mortality." https://journals.plos.org/plosmedicine/article?id=10.1371/journal.pmed.1000316 . Checked at source, 1 Nov 2026.

[69] Holt-Lunstad, Smith and Layton (2010), Discussion: "The magnitude of this effect is comparable with quitting smoking and it exceeds many well-known risk factors for mortality (e.g., obesity, physical inactivity)."; "However, causality is not easily established. One cannot randomly assign human participants to be socially isolated, married, or in a poor-quality relationship." Results: "Odds ratios ranged from 0.77 to 6.50, with substantial heterogeneity across studies". https://journals.plos.org/plosmedicine/article?id=10.1371/journal.pmed.1000316 . Checked at source, 1 Nov 2026.

[70] World Health Organization, "Social connection linked to improved health and reduced risk of early death", news release (30 Jun 2025): "1 in 6 people worldwide is affected by loneliness"; "Loneliness is linked to an estimated 100 deaths every hour"; "more than 871 000 deaths annually". https://www.who.int/news/item/30-06-2025-social-connection-linked-to-improved-heath-and-reduced-risk-of-early-death . Checked at source, 1 Nov 2026.

[71] World Health Organization, *From loneliness to social connection: charting a path to healthier societies: report of the WHO Commission on Social Connection* (WHO, 2025), Executive summary, p. xv: "Social health is a vital but often overlooked pillar of health: It is just as essential as physical and mental health."; "Loneliness affects nearly one in six people globally (2014–2023) and causes about 871 000 deaths annually (2014–2019)."; section 4.1: "significant links between social disconnection and an increased risk of mortality, which are probably causal". The figures are modelled estimates. https://iris.who.int/server/api/core/bitstreams/f5f60bc8-344b-4216-aa1a-fb22d57ad6e8/content . Checked at source, 1 Nov 2026.

Two further lines in UP's agreed positions keep the needs floor from becoming a lever of control, and they set UP apart from many systems that have promised to meet needs. Needs are never made conditional on work, skill or contribution. Merit decides who does skilled work, but it never decides whose needs are met. UP's records of contribution are feedback, and they never decide whether anyone's needs are met either. And the small share of necessary work every able member is expected to take, through a published, fair rota given as one possible way, is an expectation, not a law, and never affects whether anyone's needs are met.[72,73,74] The protected freedoms that share this floor work the same way. UP's starting example lists thought, belief, speech, movement and privacy, and UP's agreed position on useful fictions names freedom as one of the shared stories it keeps, because the alternatives would harm health, happiness and wellbeing.[23,75] In UP's terms, then, the first floor answers the question every reader asks of any system that promises to meet needs: what do I have to do, or give up, to be fed? In UP the answer is nothing. UP invites everyone to help solve the problem of meeting everyone's needs, and it expects every able member to take a small share of necessary work, but neither the invitation nor the expectation ever decides whether anyone's needs are met.

The living world's capacity to recover

Until the 1960s the Aral Sea, on the border of what are now Kazakhstan and Uzbekistan, was the fourth-largest lake in the world. In that decade the Soviet Union began a vast irrigation scheme that took the water of the two rivers feeding the sea, the Amu Darya and the Syr Darya, to turn desert into fields of cotton and other crops. The desert bloomed, and the sea was devastated. Between 1960 and 2004 its surface shrank by almost 70 per cent and its level fell by almost 20 metres; its fisheries, and the towns that lived from them, collapsed; and in 2014 the eastern lobe of the southern sea disappeared altogether.[76,77] Part of it has come back. In 2005 a 13-kilometre dike, built with World Bank support, separated the small northern sea from the southern sea. By the World Bank's account in 2008, the northern sea's surface had grown by half from its lowest point, and its fish catch had risen from 50 tons in 2004 to about 2,000 tons in 2007. The same dam limited the flow into the southern sea.[76,77]

The Aral Sea is a vivid case of a wider pattern: damage done in a few decades that will take far longer than a human life to repair, if it can be repaired at all. Beneath the American Great Plains, the High Plains aquifer, of which the Ogallala is part, had lost about 286 million acre-feet of recoverable water in storage by 2019, compared with before development; the declines began soon after large-scale groundwater irrigation started, about 1950. That is about 9 per cent of what was there before development, and in places the water table has fallen by as much as 265 feet. In western Kansas the aquifer is recharged at less than an inch a year, and for the Ogallala portion in Kansas the consensus estimate is less than 0.3 inch.[78,79] Soil is slower still. In the words of the Food and Agriculture

[72] UP's agreed position on merit and work (round 7): "Merit decides who does skilled work; it never decides whose needs are met."; "Labour is never forced: support and health care are offered, never imposed, and choosing not to work is not an illness." Full wording in UP's agreed positions (the Position Ledger).

[73] UP's agreed position on rewards and motivation (round 6): "UP's contribution records are feedback: they inform, and they never decide whether anyone's needs are met." Full wording in UP's agreed positions (the Position Ledger).

[74] UP's agreed position on sharing necessary work (round 7): every able member is expected to take a small share of a published, fair rota, "but it is an expectation, not a law, and it never affects whether anyone's needs are met." The position calls the rota "one possible way". Full wording in UP's agreed positions (the Position Ledger).

[75] UP's agreed position on useful fictions (round 5): some fictions persist because the alternatives would harm health, happiness and wellbeing; "Freedom is one, and UP keeps it, along with the protected freedoms and the commons, visible and open to change through the decision steps". Money, government and corporations are reduced slowly. Full wording in UP's agreed positions (the Position Ledger).

[76] World Bank, "Innovative Approaches to Ecosystem Restoration: Kazakhstan's Syr Darya Control and Northern Aral Sea Phase I Project", *Feature Stories* issue 23 (October 2008): "Until the 1960s, the Aral Sea was the world's fourth-largest lake"; "Between 1960 and 2004, the Aral Sea's surface area shrank almost 70 percent and its level dropped almost 20 meters"; "the 13 km Kok-Aral Dike was constructed to separate the Northern Aral Sea from the South Aral Sea. Completion was in August 2005"; "The water surface area is now 50 percent greater than it was at its lowest level"; "Between 2004 and 2007 there was a forty-fold increase in … harvest from 50 tons to about 2,000 tons" (the omitted word is "fish"). https://documents1.worldbank.org/curated/en/888771468089960580/pdf/462360BRI0Box31e0no0FS231Kazakhstan.pdf . Checked at source, 1 Nov 2026.

[77] NASA Earth Observatory, "World of Change: Shrinking Aral Sea": "In the 1960s, the Soviet Union undertook a major water diversion project on the arid plains of Kazakhstan, Uzbekistan, and Turkmenistan"; "were used to transform the desert into farms for cotton and other crops"; "Although irrigation made the desert bloom, it devastated the Aral Sea"; "As the Aral Sea has dried up, fisheries and the communities that depended on them collapsed"; "In 2014, the eastern lobe of the South Aral Sea completely disappeared"; "The dam has led fisheries in the North Aral to rebound, even as it has limited flow into the South Aral". https://earthobservatory.nasa.gov/world-of-change/AralSea . Checked at source, 1 Nov 2026.

[78] Virginia L. McGuire and Kellan R. Strauch, *Water-level and recoverable water in storage changes, High Plains aquifer, predevelopment to 2019 and 2017 to 2019*, Scientific Investigations Report 2023-5143 (U.S. Geological Survey, 2024), abstract: "Water-level declines began in parts of the High Plains aquifer soon after the beginning of substantial groundwater irrigation (about 1950)"; "ranged from a rise of 86 feet to a decline of 265 feet"; "Recoverable water in storage in the aquifer in 2019 was about 2.91 billion acre-feet, which was a decline of about 286.4 million acre-feet since predevelopment and a rise of 1.6 million acre-feet from 2017 to 2019". The decline is about 9 per cent of the predevelopment storage (286.4 ÷ (2,910 + 286.4) = 0.090). https://pubs.usgs.gov/publication/sir20235143 . Checked at source, 1 Nov 2026.

[79] Marios Sophocleous and Rex C. Buchanan, *Groundwater Recharge in Kansas*, Public Information Circular 22 (Kansas Geological Survey, August 2003): "the consensus is that estimated average annual recharge to the area underlain by the Ogallala portion of the High Plains aquifer is on the order of less than 0.3 inch per year"; "less than an inch per year over about the western third of the state"; "recharge is generally considerably higher in eastern Kansas than in western Kansas". https://kgs.ku.edu/groundwater-recharge-kansas . Checked at source, 1 Nov 2026.

Organization of the United Nations, “It takes over 1000 years to make 1 cm of soil”, and a third of the world’s land is now moderately to highly degraded. On farmed and heavily grazed land, erosion is estimated to run 100 to 1,000 times faster than the natural rate, so that, in the FAO’s phrase, “we are essentially mining the soil”.[80,81] And extinction cannot be undone at all. More than 49,500 species on the IUCN Red List, 28 per cent of all those assessed, are threatened with extinction. The global assessment by the science panel IPBES estimated in 2019 that around a million animal and plant species are threatened, a figure that one of the assessment’s lead authors says cannot be given “any more precisely than 1 million”.[82,83,84] Scientists who track the planet’s life-support systems as a whole now judge that seven of nine “planetary boundaries” have been crossed. The framework has its critics, who argue that a single safe limit for biodiversity is too vague to guide policy, and its authors reply that the critique rests on “a fundamental misrepresentation of the framework”.[85,86,87,88]

The current system has not ignored the danger, and it deserves credit for the rules it has already written. At Rio de Janeiro in 1992 the world’s governments agreed that “Where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation.”[89] Economists had proposed something similar forty years earlier: the “safe minimum standard” of S. V. Ciriacy-Wantrup, which Richard Bishop later applied to endangered species, calls for avoiding extinction “unless the social costs are unacceptably large”, because “Species extinction irreversibly narrows the reservoir of potential resources”.[90,91] And the Montreal Protocol on the ozone layer shows what a floor can do when the world keeps it. Nearly 99 per cent of the banned ozone-depleting substances have been phased out, and if

[80] Food and Agriculture Organization of the United Nations, “Cherishing the ground we walk on”, FAO feature story (5 Dec 2017): “It takes over 1000 years to make 1 cm of soil”; “This means that in our lifetime, all the soil we see is all there is”. https://www.fao.org/newsroom/story/Cherishing-the-ground-we-walk-on/en . Checked at source, 1 Nov 2026.

[81] FAO and Intergovernmental Technical Panel on Soils, *Status of the World’s Soil Resources: Main Report* (Rome, 2015), Foreword and section 6.1.3: “Today, 33 percent of land is moderately to highly degraded due to the erosion, salinization, compaction, acidification and chemical pollution of soils”; “Estimated rates of soil erosion of arable or intensively grazed lands have been found to be 100 -1000 times higher than natural background erosion rates”; “we are essentially mining the soil and that we should consider the resource as non-renewable”. https://www.fao.org/3/i5199e/i5199e.pdf . Checked at source, 1 Nov 2026.

[82] IUCN, “The IUCN Red List of Threatened Species”, Version 2026-1, home page: “More than 49,500 species”; “That is still 28% of all assessed species”; “more than 175,900 species have been assessed for The IUCN Red List”; “We need to substantially increase the number of wild species assessed, particularly plants, invertebrates and fungi”. https://www.iucnredlist.org/ . Checked at source, 1 Nov 2026.

[83] IPBES, “Media Release: Nature’s Dangerous Decline ‘Unprecedented’; Species Extinction Rates ‘Accelerating’” (6 May 2019): “The Report finds that around 1 million animal and plant species are now threatened with extinction, many within decades, more than ever before in human history”; “The picture is less clear for insect species, but available evidence supports a tentative estimate of 10% being threatened”. https://www.ipbes.net/news/Media-Release-Global-Assessment . Checked at source, 1 Nov 2026.

[84] Andy Purvis (Coordinating Lead Author, IPBES Global Assessment), “A million threatened species? Thirteen questions and answers” (IPBES, 30 May 2019): “So 10% of the 5.5 million insects is 550,000, and 25% of 2.6 million is 625,000”; “Because of the imprecision in the estimates, there is no point in giving the total any more precisely than 1 million threatened animal and plant species”. https://ipbes.net/node/35313 . Checked at source, 1 Nov 2026.

[85] Planetary Health Check (Planetary Boundaries Science Lab, Potsdam Institute for Climate Impact Research), “2026 Planetary Health Check launched at New York Climate Week!” (21 Sep 2026): “Seven of the nine Planetary Boundaries are now transgressed, with ocean acidification the latest to breach its boundary in 2025”; “All seven are now at their highest recorded levels of transgression”; “the risk of large-scale, persistent and potentially irreversible change is increasing”. The 2023 count (six of nine) and the later counts treat aerosols differently and are not directly comparable. https://www.planetaryhealthcheck.org/2026-planetary-health-check-launched-at-new-york-climate-week/ . Checked at source, 1 Nov 2026.

[86] Katherine Richardson et al., “Earth beyond six of nine planetary boundaries”, *Science Advances* 9(37):eadh2458 (13 Sep 2023): “This planetary boundaries framework update finds that six of the nine boundaries are transgressed, suggesting that Earth is now well outside of the safe operating space for humanity”; “Transgression of these boundaries reflects unprecedented human disruption of Earth system but is associated with large scientific uncertainties”. https://www.science.org/doi/10.1126/sciadv.adh2458 . Checked at source, 1 Nov 2026.

[87] José M. Montoya, Ian Donohue and Stuart L. Pimm, “Planetary Boundaries for Biodiversity: Implausible Science, Pernicious Policies”, *Trends in Ecology & Evolution* 33(2):71-73 (February 2018): “The notion of a ‘safe operating space for biodiversity’ is vague and encourages harmful policies”. https://sciences.ucf.edu/biology/d4lab/wp-content/uploads/sites/23/2024/08/Montoya-et-al-TREE-2018.pdf . Checked at source, 1 Nov 2026.

[88] Johan Rockström, Katherine Richardson, Will Steffen and Georgina Mace, “Planetary Boundaries: Separating Fact from Fiction. A Response to Montoya et al.”, *Trends in Ecology & Evolution* 33(4):233-234 (April 2018): the critique rests on “a fundamental misrepresentation of the framework”. https://discovery.ucl.ac.uk/id/eprint/10044125/ . Checked at source, 1 Nov 2026.

[89] United Nations, *Report of the United Nations Conference on Environment and Development, Rio de Janeiro, 3-14 June 1992, Volume I: Resolutions Adopted by the Conference*, A/CONF.151/26/Rev.1 (Vol. I) (1993), Annex I, Rio Declaration on Environment and Development, Principle 15: “the precautionary approach shall be widely applied by States according to their capabilities”; “Where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation”. https://documents.un.org/doc/undoc/gen/n92/836/55/pdf/n9283655.pdf . Checked at source, 1 Nov 2026.

[90] Siegfried V. Ciriacy-Wantrup, *Resource Conservation: Economics and Policies* (University of California Press, 1952), publisher’s description of the reissue: “which have since become foundational in resource economics”; “This title was originally published in 1952”. The book introduced the “safe minimum standard”. https://www.ucpress.edu/flyer/books/resource-conservation/hardcover . Checked at source, 1 Nov 2026.

[91] Richard C. Bishop, “Endangered Species and Uncertainty: The Economics of a Safe Minimum Standard”, *American Journal of Agricultural Economics* 60(1):10-18 (1978), abstract: “Species extinction irreversibly narrows the reservoir of potential resources”; “The SMS approach is based on game theory and calls for avoidance of extinction unless the social costs are unacceptably large”; “The level at which costs become excessive is a matter of intergenerational distribution”. https://ideas.repec.org/a/oup/ajagec/v60y1978i1p10-18..html . Checked at source, 1 Nov 2026.

current policies hold, the ozone layer is projected to return to its 1980 state by about 2066 over Antarctica, 2045 over the Arctic and 2040 elsewhere.[92,93]

The weakness of these rules is in their qualifiers. Rio's principle applies "according to their capabilities" and only to "cost-effective" measures; the safe minimum standard gives way when the costs are judged "unacceptably large".[89,91] Each leaves a door through which a short-term need can walk, and the losses above show what happens when nothing stops the need. UP's floor closes that door. Its core protects the living world's capacity to recover, so that damage that cannot be undone is never traded for a short-term need.[23] UP's agreed position on what happens when meeting people's needs and protecting the living world seem to collide sets out the steps. Both are floors. A clash between them is treated as a failure to solve: the problem goes to the widest crowd and gets top priority. If a decision cannot wait, people come first, in the smallest way and for the shortest time, while restoration continues. There is one exception: damage that cannot be undone, such as a drained aquifer, a lost species or lost topsoil, is never traded for a short-term need, and the need is met another way.[94] The limits themselves are set by physical accounting of energy, carbon, water and materials, and the choices made inside them are weighed openly by the people affected, never by an efficiency score.[95] The AI that helps coordinate this may propose but never assign, and it may never trade away human life, freedom or wellbeing for ecological scores.[94,96]

Living inside a hard limit is not a fantasy, and one city has shown what it can look like under pressure. In 2017 and 2018 Cape Town in South Africa faced "Day Zero", the day its taps would be turned off and people would queue for water at collection points. From 1 February 2018 residents were limited by law to 50 litres each a day. Within weeks the city's daily use had fallen to 523 million litres, against 1,130 million in 2014, and the city said it had more than halved its water use in two years; by July, Day Zero had been called off.[97,98,99,100] The case has limits as evidence. In February the city's daily use was still 73 million litres above its own target of 450 million, and in July the city said the main reason for its improved water-use figure was weather-related. In the words of the Stockholm International Water Institute, "When the winter rains finally arrived and the dams started to fill up, Day Zero could be called off." The city's plans also relied on new groundwater projects, the Groenland water transfer and the end

[92] United Nations Environment Programme, "Ozone layer recovery is on track, helping avoid global warming by 0.5°C", press release (9 Jan 2023): "confirms the phase out of nearly 99% of banned ozone-depleting substances"; "The Montreal Protocol has thus succeeded in safeguarding the ozone layer"; "If current policies remain in place, the ozone layer is expected to recover to 1980 values (before the appearance of the ozone hole) by around 2066 over the Antarctic, by 2045 over the Arctic and by 2040 for the rest of the world". https://www.unep.org/news-and-stories/press-release/ozone-layer-recovery-track-helping-avoid-global-warming-05degc . Checked at source, 1 Nov 2026.

[93] World Meteorological Organization, *Scientific Assessment of Ozone Depletion: 2022*, Executive Summary (GAW Report No. 278), as hosted by NOAA: "TCO is expected to return to 1980 values around 2066 in the Antarctic, around 2045 in the Arctic, and around 2040 for the near-global average (60°N-60°S)". These are projections; a new assessment is due at the end of 2026. https://csl.noaa.gov/assessments/ozone/2022/executivesummary/ . Checked at source, 1 Nov 2026.

[94] UP's agreed position "People first; irreversible damage is never traded" (round 3): "The AI's job is to meet everyone's needs and protect the biosphere; both are floors. When they clash, it is a failure to solve: the problem goes to the widest crowd and gets top priority. If a decision cannot wait, people come first, in the smallest way and for the shortest time, while restoration continues — with one exception: damage that cannot be undone, such as a drained aquifer, a lost species or lost topsoil, is never traded for a short-term need; the need is met another way. That kind of damage is UP's motivation as well as its threat: choices made in a few decades have already destroyed what people could otherwise have enjoyed for thousands of years. The AI proposes and does not assign; people choose their work, and any plan can be overridden through the decision steps". Full wording in UP's agreed positions (the Position Ledger).

[95] UP's agreed position that physical accounting sets the limits and people weigh the choices (round 6): "Physical accounting (energy budgets, carbon caps, water footprints, materials and life-cycle assessment) sets the planet's hard limits. Inside them, several measures are used together, and choices between different needs, such as a clinic or a cultural centre, are made openly by the people affected, through the decision steps (#1), never by an efficiency score." Full wording in UP's agreed positions (the Position Ledger).

[96] UP's agreed position on aiming the AI at the health of living things (round 6): planetary limits and people's basic rights are hard limits on it; it "may never trade away human life, freedom or wellbeing for ecological scores; everything it does is auditable; and people can always override it." Full wording in UP's agreed positions (the Position Ledger).

[97] SAnews, "Cape residents limited to 50 litres of water" (19 Jan 2018): "Cape Town residents will from February be limited to using 50 litres of water per person per day for the next 150 days"; "The new restrictions will come into effect on 1 February 2018"; "Day Zero is the day when taps will be closed and residents will be required to get water from various designated water collection points". https://www.sanews.gov.za/node/37579 . Checked at source, 1 Nov 2026.

[98] City of Cape Town, "Defeating Day Zero is in sight if we sustain our water-saving efforts", *City of Cape Town media release* (City of Cape Town, 20 February 2018): "Level 6B restrictions make it compulsory for residents to use no more than 50 litres per person per day"; "Day Zero, the day we may have to start queueing for water, has now moved to 9 July"; "a further reduction in Cape Town's weekly average demand to 523 megalitres per day (MLD) compared to 1 130 MLD in 2014"; "523 million litres per day (73 million litres above the target of 450 million litres per day)". https://www.capetown.gov.za/media-and-news/defeating-day-zero-is-in-sight-if-we-sustain-our-water-saving-efforts/ . Checked at source, 1 Nov 2026.

[99] City of Cape Town, "World notes Cape Town's efforts to beat the drought", media release (13 March 2018): "We have more than halved our water usage in the past two years". https://www.capetown.gov.za/media-and-news/world-notes-cape-towns-efforts-to-beat-the-drought/ . Checked at source, 1 Nov 2026.

[100] City of Cape Town, "Record water-savings helping to buffer Cape Town for summer ahead", media release (2 July 2018): "the announcement that Day Zero will not happen this year or the next"; "We believe that the main reason for the improved collective water usage figure is weather-related". https://www.capetown.gov.za/media-and-news/record-water-savings-helping-to-buffer-cape-town-for-summer-ahead/ . Checked at source, 1 Nov 2026.

of that year's releases of water to agriculture, and its dams fill from rain, so the stock at stake could recover.[98,100,101,102] What it shows is a large city more than halving its water use in two years under a legal cap and a publicly announced Day Zero, helped by rain and by added supply.

The strongest objection to a floor like this comes from the legal scholar Cass Sunstein, who argues that the precautionary principle is "incoherent and potentially paralyzing", because "risks exist on all sides of social situations" and precautions create dangers of their own. Sunstein himself accepts that for risks that are "potentially irreversible or catastrophic" it is "sensible to take extra precautions", but he warns that "irreversible harms are sometimes on all sides of social problems, and that such harms may be caused by regulation itself".[103,104] UP's floor is narrower than the principle he criticises: it does not forbid every risk, only the trade of damage that cannot be undone for a short-term need. But his second point stands, and UP should face it. Where every option would cause some lasting harm, to a species, to a community's water or to people's health, the floor alone does not say what to do. That is where UP's method takes over: the clash is treated as a failure to solve and sent to the widest crowd. The collective has tools for finding solutions that avoid every cost that can be avoided, such as priority by the capacity to suffer and to flourish (with every human counting equally), the health of the whole living system and legal standing for nature; how they are weighed is left to the collective.[94,105] One illustration of how the voiceless could be heard in such choices is to represent future people, young children and other living things by several independent simulations, with their assumptions published, which give input but never a vote.[106]

In UP's terms, this floor turns what the current system treats as a cost to be weighed into a line not to be crossed. Its own agreed position says why: damage of this kind is UP's motivation as well as its threat, because choices made in a few decades have already destroyed what people could otherwise have enjoyed for thousands of years.[94] Rio's principle and the Montreal Protocol are rules governments have adopted, and the safe minimum standard is an economists' rule that points the same way; each protects one part of the living world, when it is applied. Connected, measured in the open and placed under every decision, they would be much harder to trade away.

The right to leave, taking what is theirs

The third floor marks the line between a free society and a trap, and the current system has written it down for a long time without always honouring it. The same charter of 1215 that promised a lawful judgment also declared that "it shall be lawful for any man to leave and return to our kingdom unharmed and without fear", except for those imprisoned or outlawed under the law, people from an enemy country, and merchants. It was one of the clauses dropped from every later reissue.[107] More than seven centuries later the Universal Declaration of Human Rights restored the principle for everyone: "Everyone has the right to leave any country, including his own", and "No one

[101] SAnews, "Cape Town interventions see drop in water consumption" (1 Mar 2018): "the Groenland water transfer, and the discontinuation of the agricultural releases for this hydrological year"; "the three ground water abstraction projects will at their peak supply almost 150 million litres of water a day to the city". https://www.sanews.gov.za/node/38214 . Checked at source, 1 Nov 2026.

[102] Stockholm International Water Institute, "How Cape Town saved itself from Day Zero" (9 Apr 2020): "In an unprecedented effort by all sectors of society, water consumption was more than halved and Day Zero was called off"; "When the winter rains finally arrived and the dams started to fill up, Day Zero could be called off". https://siwi.org/latest/how-cape-town-saved-itself-from-day-zero . Checked at source, 1 Nov 2026.

[103] Cass R. Sunstein, *Laws of Fear: Beyond the Precautionary Principle* (Cambridge University Press, 2005), abstract in the Harvard Law School faculty bibliography: "Cass Sunstein argues that the precautionary principle is incoherent and potentially paralyzing, as risks exist on all sides of social situations". The publisher's description adds: "Risks exist on all sides of social situations, and precautionary steps create dangers of their own" (https://www.cambridge.org/core/product/identifier/9780511790850/type/book). https://hls.harvard.edu/bibliography/laws-of-fear-beyond-the-precautionary-principle . Checked at source, 1 Nov 2026.

[104] Cass R. Sunstein, "Irreversible and Catastrophic", *Cornell Law Review* 91(4):841 (2006), abstract in the Harvard Law School faculty bibliography: "some risks are distinctive in the sense that they are potentially irreversible or catastrophic; for such risks, it is sensible to take extra precautions"; "irreversible harms are sometimes on all sides of social problems, and that such harms may be caused by regulation itself". https://hls.harvard.edu/bibliography/irreversible-and-catastrophic . Checked at source, 1 Nov 2026.

[105] UP's agreed position on all living things (round 7): "UP's aim reaches all living things, as a direction rather than a promise. When interests conflict, solutions are sought that avoid every cost that can be avoided."; priority by the capacity to suffer and to flourish (with every human counting equally), the health of the whole living system, and legal standing for nature are tools the collective can use, and how they are weighed is left to the collective. Full wording in UP's agreed positions (the Position Ledger).

[106] UP's agreed position on voiceless stakeholders (round 12S; an illustration of one way UP could run, never a directive): future people, young children and other living things are represented by simulations, several independent ones with their assumptions published, which give input but never a vote. Full wording in UP's agreed positions (the Position Ledger).

[107] British Library, "English translation of Magna Carta", clause 42: "In future it shall be lawful for any man to leave and return to our kingdom unharmed and without fear"; the clause excepted "People that have been imprisoned or outlawed in accordance with the law of the land, people from a country that is at war with us, and merchants"; "Clauses marked (*) were omitted in all later reissues of the charter." https://www.bl.uk/magna-carta/articles/magna-carta-english-translation (archived copy: https://web.archive.org/web/2020/https://www.bl.uk/magna-carta/articles/magna-carta-english-translation) . Checked at source, 1 Nov 2026.

may be compelled to belong to an association."[108] The Covenant made the right to leave binding on the states that ratified it, while allowing restrictions that the law provides and that are necessary for national security, public order, public health or the rights of others.[109]

The twentieth century also showed what a society looks like when it forbids leaving. East Germany's criminal code punished anyone who crossed its border illegally with up to two years in prison, and from one to eight years in serious cases.[110] Between 1961 and 1989, according to the research project run by the Centre for Contemporary History in Potsdam and the Berlin Wall Foundation, at least 140 people were killed at the Berlin Wall or died in circumstances directly connected with the border regime, 101 of them people trying to escape. Earlier official and private counts had ranged from 78 to more than 200.[111] Chapter 3 told related stories, from the passports that kept Soviet villagers in place in 1933 to the communes that made leaving so costly that members stayed.[112] In each of these cases, the cost of leaving was doing work that the system itself was not doing: holding people who might otherwise have gone.

UP's floor goes further than the treaties in two ways. The treaties speak of leaving countries; UP's core speaks of the right to leave "any group or community at any time", which covers every group inside UP as well as UP itself. And the treaty articles on leaving say nothing about what a person may take; UP's floor says leaving is done "taking what is theirs".[23] Its tenth tenet adds that UP is never imposed, and that no one is forced to join, to work or to give up what is theirs.[113] Exit is a protection that does not depend on the others: a group that knows its members can walk away, with their own, has to keep earning their trust.

The floor has one written limit, and it matters for the fair hearing that comes next. Leaving a group or community does not end a restriction set by a fair hearing.[23] Today's legal systems have a similar rule. Within the European Union, a court's custodial sentence can be carried out in another member state through the European arrest warrant, and the decision that created it says expressly that it does not change the obligation to respect fundamental rights.[114] In both, leaving protects people from being trapped, but not from a restriction set by a fair hearing.

What counts as "theirs" is still open. Chapter 3 asked it about the kibbutz, where members who left took little of what they had helped to build.[112] UP's core says only that leaving is done "taking what is theirs". Two settled lines bear on the question without answering it. UP's technology, the knowledge, code, data and designs it produces, stays only in UP. And, in a line settled alongside the core as an illustration rather than a tenet, physical goods such as food, water and durable goods are shared within the communities that make them.[23,46,115] Where a person's own

[108] Universal Declaration of Human Rights (1948), articles 13 and 20: "Everyone has the right to leave any country, including his own, and to return to his country."; "No one may be compelled to belong to an association." https://www.un.org/en/about-us/universal-declaration-of-human-rights . Checked at source, 1 Nov 2026.

[109] International Covenant on Civil and Political Rights, article 12(2)–(3): "Everyone shall be free to leave any country, including his own."; restrictions are allowed only if "provided by law", "necessary to protect national security, public order (ordre public), public health or morals or the rights and freedoms of others, and are consistent with the other rights recognized in the present Covenant." https://www.ohchr.org/en/instruments-mechanisms/instruments/international-covenant-civil-and-political-rights . Checked at source, 1 Nov 2026.

[110] European Court of Human Rights (Grand Chamber), *Streletz, Kessler and Krenz v. Germany*, judgment of 22 March 2001, para. 34, quoting Article 213 of the East German Criminal Code (1979 version): "Any person who illegally crosses the border of the German Democratic Republic or contravenes provisions regulating temporary authorisation to reside in the German Democratic Republic and transit through the German Democratic Republic shall be punished by a custodial sentence of up to two years"; "In serious cases the offender shall be sentenced to one to eight years". https://hudoc.echr.coe.int/eng?i=001-59353 . Checked at source, 1 Nov 2026.

[111] Centre for Contemporary History Potsdam (ZZF) and Berlin Wall Foundation, "The Victims at the Berlin Wall, 1961-1989" (research project 2005–2011): "Between 1961 and 1989, at least 140 people were killed at the Berlin Wall or died under circumstances directly connected with the East German border regime."; "This number includes 101 escapees who were shot dead, suffered fatal accidents or committed suicide during an attempt to cross the border". Earlier counts by other bodies ranged from 78 to more than 200. https://zzf-potsdam.de/en/research/projects/victims-at-the-berlin-wall . Checked at source, 1 Nov 2026.

[112] See Chapter 3, "Needs met by command" (the internal passports and closed borders of 1932 and 1933) and "Starting over somewhere else" (the kibbutz, and what members took with them when they left), and the notes to those sections.

[113] Core tenet: *Freely joined, ethically grown*, in full: "UP is never imposed. No one is forced to join, to work or to give up what is theirs. It grows by being useful, building on what people already do, and it acts only by ethical means. A means is ethical when it serves the health, happiness and wellbeing of all and crosses none of the floors; UP never starts harm against anyone. What counts as ethical is defined and refined by the collective through UP's method." Also in "The core of UP".

[114] Council Framework Decision 2002/584/JHA of 13 June 2002 on the European arrest warrant, article 1: "The European arrest warrant is a judicial decision issued by a Member State with a view to the arrest and surrender by another Member State of a requested person, for the purposes of conducting a criminal prosecution or executing a custodial sentence or detention order."; "This Framework Decision shall not have the effect of modifying the obligation to respect fundamental rights and fundamental legal principles as enshrined in Article 6 of the Treaty on European Union." https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:32002F0584 . Checked at source, 1 Nov 2026.

[115] Settled alongside the core (round 11, amended round 13b), "What UP makes": "software, AI and tools, which stay in UP (T8). Physical goods such as food, water and durable goods are shared within the communities that make them." The first is tenet T8; the core marks its examples as illustrations, not tenets. Full wording in "The core of UP".

things end and a community's shared things begin is a range of cases the collective will work through in the open, case by case, through UP's method.[47]

A truthful shared record

On 25 April 2014 the city of Flint, Michigan, then under emergency managers appointed by the state, switched its drinking water to the Flint River. The new water was highly corrosive, and it was sent through the system without corrosion control.[116,117] The state's environmental agency, the governor's own task force later found, had misread the federal rule on lead and copper, so that lead levels were under-reported. It had told the Environmental Protection Agency that Flint had an optimised corrosion-control programme when it had none, and it had "conveniently, and without adequate investigation, excluded LeeAnne Walters's water quality test results" from the figures that decided whether Flint had a problem at all.[118] The task force's verdict was blunt: "The Flint water crisis is a story of government failure, intransigence, unpreparedness, delay, inaction, and environmental injustice."[119]

The record was put right by a resident, a team of university volunteers and a hospital paediatrician, with help from an official at the Environmental Protection Agency and, the task force adds, a free press. LeeAnne Walters, a mother of four, had her tap water tested by the city in February 2015, and it showed 104 parts per billion of lead. She called the Environmental Protection Agency, worked with one of its regional managers, Miguel Del Toral, and went on to help collect more than 800 water samples.[120,121] A team of twenty-five volunteers from Virginia Tech set up what it called "a long distance scientific relief effort" in August 2015. Its survey of 252 water samples put the city's 90th-percentile lead level at 25 parts per billion, above the federal action level of 15. The team later reported that $147,174 of its costs had been covered from Professor Marc Edwards's discretionary research funds and personal funds, alongside a rapid-response research grant.[120,122,123] In September 2015 a hospital paediatrician, Dr Mona Hanna-Attisha, showed that the share of children under five in the Flint area with raised blood lead had risen from 2.4 to 4.9 per cent after the switch, with no significant change outside the city.[124,120] The state health

[116] Flint Water Advisory Task Force, *Final Report* (commissioned by the Office of Governor Rick Snyder, State of Michigan, 21 March 2016), chronology: "April 25, 2014 City of Flint officially switches its water source to the Flint River, using Flint WTP for treatment"; "drawing water from a highly corrosive source without the use of corrosion control"; "October 16, 2015: Flint switches back to DWSD as source of drinking water for the city". https://www.michigan.gov/documents/snyder/FWATF_FINAL_REPORT_21March2016_517805_7.pdf . Checked at source, 1 Nov 2026.

[117] Flint Water Advisory Task Force, *Final Report* (Office of Governor Rick Snyder, State of Michigan, 21 March 2016), title page, Executive Summary and Findings: "Commissioned by the Office of Governor Rick Snyder"; "the United States Environmental Protection Agency (EPA) delayed enforcement of the Safe Drinking Water Act (SDWA) and Lead and Copper Rule (LCR), thereby prolonging the calamity"; "Neither the Governor nor the Governor's office took steps to reverse poor decisions by MDEQ and state-appointed emergency managers until October 2015". https://www.michigan.gov/documents/snyder/FWATF_FINAL_REPORT_21March2016_517805_7.pdf . Checked at source, 1 Nov 2026.

[118] Flint Water Advisory Task Force, *Final Report* (21 March 2016), Finding F-3: "MDEQ misinterpreted the LCR and misapplied its requirements. As a result, lead-in-water levels were under-reported and many residents' exposure to high lead levels was prolonged for months"; "MDEQ inaccurately reported information about Flint's corrosion control to EPA, stating that Flint had an optimized corrosion control program when, in fact, it was not employing corrosion control treatment"; "MDEQ conveniently, and without adequate investigation, excluded LeeAnne Walters's water quality test results for purposes of determining whether Flint sampling results exceeded EPA's action level". https://www.michigan.gov/documents/snyder/FWATF_FINAL_REPORT_21March2016_517805_7.pdf . Checked at source, 1 Nov 2026.

[119] Flint Water Advisory Task Force, *Final Report* (21 March 2016), Executive Summary: "The Flint water crisis is a story of government failure, intransigence, unpreparedness, delay, inaction, and environmental injustice"; "The Michigan Department of Environmental Quality (MDEQ) failed in its fundamental responsibility to effectively enforce drinking water regulations". The Task Force also faulted the governor's office, the state health department and the federal Environmental Protection Agency: "the United States Environmental Protection Agency (EPA) delayed enforcement of the Safe Drinking Water Act (SDWA) and Lead and Copper Rule (LCR), thereby prolonging the calamity". These are the Task Force's findings, not a court's. https://www.michigan.gov/documents/snyder/FWATF_FINAL_REPORT_21March2016_517805_7.pdf . Checked at source, 1 Nov 2026.

[120] Flint Water Advisory Task Force, *Final Report* (Office of Governor Rick Snyder, State of Michigan, 21 March 2016), numbered chronology (entries 27, 54, 58 and 61), Appendix V (Detailed Timeline) and the EPA section: "Mike Glasgow/Flint DPW tests water in LeeAnne Walters's home and finds high lead levels (104 ppb)"; "EPA Region V was first notified of a potential problem in Flint by resident LeeAnne Walters, who called to inform them of the high lead level (104 ppb) found in her drinking water"; "are below the EPA action level of 15 ppb"; "Of the 252 water samples, 101 have lead in excess of 5 ppb"; "Flint's 90th percentile in Edwards' survey was 25 ppb"; "58. September 24, 2015: Dr. Hanna-Attisha presents her findings about children tested for lead in a press conference at Hurley Medical Center, reporting that the proportion of children with elevated blood lead levels has increased since the switch to the Flint River water source in April 2014"; "61. October 1, 2015: MDHHS issues a statement confirming Dr. Hanna-Attisha's analysis." Appendix V dates the test at the Walters home 25 February 2015. https://www.michigan.gov/documents/snyder/FWATF_FINAL_REPORT_21March2016_517805_7.pdf . Checked at source, 1 Nov 2026.

[121] Goldman Environmental Prize, "LeeAnne Walters", 2018 prize recipient profile: "LeeAnne Walters is a stay-at-home mother of four children"; "In March 2015, frustrated by the city's inaction, Walters sought help from the EPA's Miguel del Toral, a regional manager who helped her document the crisis, even as the EPA officially refused to get involved"; "collected over 800 water samples". https://www.goldmanprize.org/recipient/leeanne-walters/ . Checked at source, 1 Nov 2026.

[122] Virginia Tech Research Team, "The FlintWaterStudy Research Support Fundraiser", *Flint Water Study Updates* (January 2016): "Flintwaterstudy was launched as a long distance scientific relief effort on August 4, 2015"; "We called for volunteers and a team of 25 (4 undergraduates, 11 graduate students, 7 post-docs and 3 faculty) answered the bell"; "The deficit of $147,174 in out of pocket expenses has been covered by Professor Edwards' discretionary research and personal funds". The figure is the team's own accounting. https://flintwaterstudy.org/tag/gofundme/ . Checked at source, 1 Nov 2026.

[123] Virginia Tech Research Team, "The Virginia Tech Research Team", *Flint Water Study Updates*: "We are an independent research team from Virginia Tech (VT) volunteering our time, resources and expertise to help resolve scientific uncertainties associated with drinking water issues being reported"; "RAPID Response (CBET-1556258) grant". https://www.flintwaterstudy.org/about-us/ . Checked at source, 1 Nov 2026.

[124] Mona Hanna-Attisha, Jenny LaChance, Richard Casey Sadler and Allison Champney Schnepp, "Elevated Blood Lead Levels in Children Associated With the Flint Drinking Water Crisis: A Spatial Analysis of Risk and Public Health Response", *American Journal of Public Health* 106(2):283-290 (American Public Health Association, February 2016; online 21 December 2015), abstract: "We reviewed blood lead levels for children younger than 5 years before (2013) and

department, which had been reluctant to share its own data with her, confirmed her analysis a week later.[125,120] The task force wrote that without "the critical role played by engaged Flint citizens", the people inside and outside government who challenged its leaders, and a free press, "this crisis likely never would have been brought to light".[125]

Flint is one case of a pattern that runs through the current system: when the party that keeps a record is also the party the record would expose, the record bends. In 2015 the Environmental Protection Agency, in a notice of violation, said that Volkswagen had built into its diesel cars "a sophisticated software algorithm" that detected when the car was being tested and switched on full emissions controls only then. On the road the cars emitted nitrogen oxides at up to 40 times the standard. The company later counted about eleven million affected vehicles worldwide, pleaded guilty in the United States, and agreed to pay $4.3 billion in criminal and civil penalties. The cheat came to light after independent researchers at West Virginia University, working with a non-governmental organisation, questioned the cars' emissions.[126,127,128,129] Nearly eight decades earlier the Soviet census of 1937 counted 162 million people, too few to match the government's claims; the results were suppressed and kept secret until the glasnost era, and the officials who organised the count were arrested and executed.[130,131]

The current system has also built tools that make a record much harder to bend, and they show what a truthful record can look like. An experimental protocol published in 2013, Certificate Transparency, writes the web's security certificates into public logs so that "anyone" can audit the authorities that issue them, and in February 2018 the Chrome team announced that certificates issued after April 2018 that do not comply would not be trusted. The logs do not prevent a false certificate, but they make sure the people it would harm can see it.[132,133] Since 2005

after (2015) water source change in Greater Flint, Michigan"; "Incidence of elevated blood lead levels increased from 2.4% to 4.9% (P < .05) after water source change, and neighborhoods with the highest water lead levels experienced a 6.6% increase"; "No significant change was seen outside the city". https://pubmed.ncbi.nlm.nih.gov/26691115/ . Checked at source, 1 Nov 2026.

[125] Flint Water Advisory Task Force, *Final Report* (21 March 2016), Executive Summary and Finding F-6: "The Flint water crisis is also a story, however, of something that did work: the critical role played by engaged Flint citizens, by individuals both inside and outside of government who had the expertise and willingness to question and challenge government leadership, and by members of a free press who used the tools that enable investigative journalism"; "Without their courage and persistence, this crisis likely never would have been brought to light and mitigation efforts never begun"; "reluctance to share state data with Dr. Mona Hanna-Attisha and Professor Marc Edwards, prolonged the Flint water crisis". https://www.michigan.gov/documents/snyder/FWATF_FINAL_REPORT_21March2016_517805_7.pdf . Checked at source, 1 Nov 2026.

[126] U.S. Environmental Protection Agency, "EPA, California Notify Volkswagen of Clean Air Act Violations / Carmaker allegedly used software that circumvents emissions testing for certain air pollutants", *U.S. EPA News Releases* (EPA, 18 September 2015): "Today, EPA is issuing a notice of violation (NOV) of the Clean Air Act (CAA) to Volkswagen AG, Audi AG, and Volkswagen Group of America, Inc"; "a sophisticated software algorithm on certain Volkswagen vehicles detects when the car is undergoing official emissions testing, and turns full emissions controls on only during the test"; "but during normal operation, emit nitrogen oxides, or NOx, at up to 40 times the standard"; "EPA and CARB uncovered the defeat device software after independent analysis by researchers at West Virginia University, working with the International Council on Clean Transportation, a non-governmental organization, raised questions about emissions levels". https://www.epa.gov/archive/epa/newsreleases/epa-california-notify-volkswagen-clean-air-act-violations-carmaker-allegedly-used.html . Checked at source, 1 Nov 2026.

[127] Volkswagen AG, "Diesel Issue", *Annual Report 2016*: "In its ad hoc release dated September 22, 2015, the Volkswagen Group announced that noticeable discrepancies between the figures achieved in testing and in actual road use had been identified in around eleven million vehicles worldwide with certain diesel engines"; "a group of persons at levels below the Group's Board of Management in the powertrain development division decided to modify the engine management software". https://annualreport2016.volkswagenag.com/group-management-report/diesel-issue.html . Checked at source, 1 Nov 2026.

[128] U.S. Department of Justice, "Volkswagen AG Agrees to Plead Guilty and Pay $4.3 Billion in Criminal and Civil Penalties; Six Volkswagen Executives and Employees are Indicted in Connection with Conspiracy to Cheat U.S. Emissions Tests" (11 January 2017): "has agreed to plead guilty to three criminal felony counts and pay a $2.8 billion criminal penalty as a result of the company's long-running scheme to sell approximately 590,000 diesel vehicles in the U.S. by using a defeat device to cheat on emissions tests"; "In separate civil resolutions of environmental, customs and financial claims, VW has agreed to pay $1.5 billion". https://www.justice.gov/opa/pr/volkswagen-ag-agrees-plead-guilty-and-pay-43-billion-criminal-and-civil-penalties-six . Checked at source, 1 Nov 2026.

[129] U.S. Department of Justice, Office of Public Affairs, "Volkswagen AG Sentenced in Connection with Conspiracy to Cheat U.S. Emissions Tests", *Justice News* (Department of Justice, 21 April 2017): "Volkswagen AG (VW) was sentenced in federal court in Detroit today after pleading guilty on March 10, 2017, to three felony counts"; "the court accepted the parties' plea agreement, which requires VW to pay a $2.8 billion penalty stemming from the company's decade-long scheme to sell diesel vehicles containing software designed to cheat on U.S. emissions tests". https://www.justice.gov/opa/pr/volkswagen-ag-sentenced-connection-conspiracy-cheat-us-emissions-tests . Checked at source, 1 Nov 2026.

[130] Mark Tolts, "The Failure of Demographic Statistics: A Soviet Response to Population Troubles", paper presented at the IUSSP XXIVth General Population Conference (Salvador-Bahia, Brazil, August 2001): "Since the results of the 1937 census were a population of only 162 million, they would have exposed the falsehood of both Stalin's claims and Soviet propaganda, and were thus denied by the authorities and kept secret till the glasnost era". https://iussp.org/sites/default/files/Brazil2001/s00/S07_02_tolts.pdf . Checked at source, 1 Nov 2026.

[131] Catherine Merridale, "The 1937 census and the limits of Stalinist rule", *The Historical Journal* 39(1):225-240 (March 1996), abstract: "In January 1937 the government of the USSR conducted its first population census in eleven years"; "Crucially, however, the census was entirely suppressed, and the officials responsible for organizing it promptly arrested and executed". https://resolve.cambridge.org/core/journals/historical-journal/article/1937-census-and-the-limits-of-stalinist-rule/EA2018DAD588327DE868929E99DE206F . Checked at source, 1 Nov 2026.

[132] Ben Laurie, Adam Langley and Emilia Kasper, *Certificate Transparency*, RFC 6962 (Internet Engineering Task Force, June 2013): "This document describes an experimental protocol for publicly logging the existence of Transport Layer Security (TLS) certificates as they are issued or observed, in a manner that allows anyone to audit certificate authority (CA) activity and notice the issuance of suspect certificates as well as to audit the certificate logs themselves"; "The logs do not themselves prevent misissue, but they ensure that interested parties (particularly those named in certificates) can detect such misissuance". The RFC has since been superseded by RFC 9162. https://www.rfc-editor.org/rfc/rfc6962 . Checked at source, 1 Nov 2026.

[133] Devon O'Brien, "Certificate Transparency Enforcement in Google Chrome", Chromium CT policy group (6 February 2018): "Chrome will start enforcing that all TLS certificates issued after April 2018 comply with the Chromium CT Policy"; "certificates failing to comply with this policy will not be recognized as trusted when evaluated by Chrome". https://groups.google.com/a/chromium.org/g/ct-policy/c/wHILiYf31DE/m/iMFmpMEkAQAJ . Checked at source, 1 Nov 2026.

the journals of the International Committee of Medical Journal Editors have refused to consider a clinical trial for publication unless it was registered in a public registry before it began, because "selective reporting of trials does occur, and it distorts the body of evidence". United States law has required registration since 2007.[134,135] Registration has not ended the problem: a 2015 study found that only 13.4 per cent of the trials it examined had reported their results within a year of finishing.[136] And edits to Wikipedia pages are kept in a public history that anyone can read and any editor can undo, with exceptions: administrators can remove revisions, for example defamatory text, and many revisions from Wikipedia's earliest years are missing.[137]

UP's floor is a truthful shared record, so that facts, measures and decisions are never falsified.[23] Its eighth tenet makes the same record public: the rules, code, records, decisions and reasons of UP are public, so anyone can check them.[46] UP's agreed positions add the habits that go with it. Every line of code and every allocation is public, and the safeguards include tamper-evident records such as blockchains; claims that can be checked are checked, with their sources and confidence shown, and what cannot yet be settled is marked as unknown and becomes shared work. One agreed illustration of a further habit is to measure problems with definitions kept fixed over time and to give every headline measure an independent check.[138,139,140] UP also says plainly what openness cannot catch: a patient, skilled bad actor can earn trust and hide for years.[138] The record this floor protects is a record of shared things, the facts, measures and decisions that guide shared action. It is not a record of people's private lives: the same tenet that makes UP's records public says that each person controls their own information and chooses what to share.[46]

In UP's terms, Flint shows why the record is a floor and not a feature. The test result that was excluded belonged to a resident; the rule that was misapplied was the regulator's; and the people who found the truth had to spend their own time, and in one case their own money, to prove it against the official account. Certificate Transparency and trial registration show that the current system can build records that are hard to bend when it decides to, one field at a time. UP's approach is to connect tools like these, and to invent together the ones still missing; one way it could apply them is to every shared measure. In a community that ran this way, one way it could work is that a test result like LeeAnne Walters's, shared with her agreement, would enter the public record when it was taken, beside the rule that judged it, where anyone could see it. Leaving it out quietly would be much harder and much easier to contest.[46,138,47] The people who did the checking in Flint took the problem on themselves. In UP that kind of checking is part of ordinary shared work, because everyone is a watcher.[53]

Freedom of the mind

In 1932 the United States Public Health Service began what the Centers for Disease Control and Prevention now calls the Untreated Syphilis Study at Tuskegee. It enrolled 600 Black men, 399 of whom already had the disease. By the CDC's own account, the men's informed consent was not collected; they were told they were being treated

[134] Catherine De Angelis et al., "Clinical Trial Registration: A Statement from the International Committee of Medical Journal Editors", *New England Journal of Medicine* 351(12):1250-1251 (16 September 2004): "The ICMJE member journals will require, as a condition of consideration for publication, registration in a public trials registry"; "Trials must register at or before the onset of patient enrollment"; "This policy applies to any clinical trial starting enrollment after July 1, 2005"; "selective reporting of trials does occur, and it distorts the body of evidence available for clinical decision-making". https://www.nejm.org/doi/full/10.1056/NEJMe048225 . Checked at source, 1 Nov 2026.

[135] U.S. National Library of Medicine, "Frequently Asked Questions", ClinicalTrials.gov: "Section 801 of the Food and Drug Administration Amendments Act (FDAAA 801) requires Applicable Clinical Trials to be registered within 21 days of enrollment of the first participant"; "the Food and Drug Administration Amendments Act of 2007 (FDAAA) became law on September 27, 2007". https://clinicaltrials.gov/policy/faq . Checked at source, 1 Nov 2026.

[136] Monique L. Anderson et al., "Compliance with results reporting at ClinicalTrials.gov", *New England Journal of Medicine* 372(11):1031-1039 (12 March 2015), abstract: "we identified 13,327 HLACTs that were terminated or completed from January 1, 2008, through August 31, 2012"; "Only 13.4% of trials reported summary results within 12 months after trial completion, whereas 38.3% reported results at any time up to September 27, 2013". https://pubmed.ncbi.nlm.nih.gov/25760355/ . Checked at source, 1 Nov 2026.

[137] Wikipedia contributors, "Help:Page history", *Wikipedia, The Free Encyclopedia* (Wikimedia Foundation, current help page): "A page history shows the sequence of edits made to any editable Wikipedia page, the difference between any two revisions, and a menu of special external tools"; "To undo (revert) your own or someone else's edit"; "Administrators can also remove selected revisions from a page history, for example if they contain defamatory text"; "Many revisions from early in Wikipedia's history, almost always from 2001, are missing". https://en.wikipedia.org/wiki/Help:Page_history . Checked at source, 1 Nov 2026.

[138] UP's agreed position "Open code: a tool, not a guarantee" (round 6): every line of code and every allocation is public, so anyone can read, check, fork and simulate it; the safeguards include "tamper-evident records such as blockchains"; "UP says plainly what openness cannot catch: a patient, skilled bad actor can earn trust and hide for years." Full wording in UP's agreed positions (the Position Ledger).

[139] UP's agreed position on the standard of public discourse (round 3): "Where a claim can be checked, it is checked, with its sources and confidence shown. Where a claim cannot yet be settled, it is marked as unknown, and the unknown becomes work for people and AI together"; matters of taste are marked as such and "can never be made a rule for others"; the categories are a starting guide, open to improvement, "including tamper-evident records such as blockchains." Full wording in UP's agreed positions (the Position Ledger).

[140] UP's agreed position on measures (round 12S, and lesson 18 of UP's study lessons; an illustration of one way UP could run, never a directive): problems are measured with fixed definitions kept over time and ranked by measured harm, not by how loud they feel, and every headline measure has an independent check, because as a problem becomes rarer people widen their idea of it. Full wording in UP's agreed positions (the Position Ledger).

for “bad blood”, a local term for several ailments; and although by 1943 penicillin was the treatment of choice for syphilis, they were not offered it. The study ran for forty years, until an advisory panel recommended ending it in 1972.[141,142] For twenty-five of those years a clear principle against what was being done had been on record. In August 1947 the judges of a tribunal at Nuremberg set out, in their verdict, the first principle of permissible medical experiments: “The voluntary consent of the human subject is absolutely essential”. It must be given freely and “without the intervention of any element of force, fraud, deceit, duress, over-reaching, or other ulterior form of constraint or coercion”. The museum that now presents the code notes that its legal force “was not well established”.[143]

A modern case raised the same question on a far larger scale. In one week in January 2012, researchers working with Facebook changed what 689,003 people saw in their news feeds, holding back some posts with positive or negative emotional content, to test whether emotions spread through social networks. They argued that the site’s data use policy, which every user accepts on joining, was “informed consent for this research”. The effect they found was very small, and the posts held back stayed visible on friends’ own pages. But the journal that published the study issued an expression of concern, saying the data collection “may have involved practices that were not fully consistent with the principles of obtaining informed consent and allowing participants to opt out”. It noted that as a private company Facebook was not bound by the rules that govern federally funded research.[144,145]

The current system has begun to draw a line here, and the line is moving in the direction of UP’s floor. Since 2 February 2025 the European Union’s Artificial Intelligence Act has banned AI systems that use “subliminal techniques beyond a person’s consciousness or purposefully manipulative or deceptive techniques” to distort people’s behaviour in ways that cause, or are likely to cause, significant harm.[146,147] In 2021 the United Nations’ special rapporteur on freedom of religion or belief reported that the freedom of thought has “absolute protection, even during public emergencies”, and that “A growing body of legal scholarship supports the claim that freedom of thought includes freedom from manipulation”.[148] The same year Chile amended its constitution to require that scientific and technological development respect physical and psychological integrity, and that the law regulate its

[141] Centers for Disease Control and Prevention, “The Untreated Syphilis Study at Tuskegee Timeline”: “The study initially involved 600 Black men – 399 with syphilis, 201 who did not have the disease”; “Participants’ informed consent was not collected”; “bad blood”; “a local term used to describe several ailments, including syphilis, anemia, and fatigue”; “By 1943, penicillin was the treatment of choice for syphilis and becoming widely available, but the participants in the study were not offered treatment”; “In October 1972, the panel advised stopping the study”. https://www.cdc.gov/tuskegee/about/timeline.html . Checked at source, 1 Nov 2026.

[142] Centers for Disease Control and Prevention, “About the Untreated Syphilis Study at Tuskegee”: “The U.S. Public Health Service (USPHS) Untreated Syphilis Study at Tuskegee was a study conducted between 1932 and 1972”; “They also did not offer treatment, even after it was easily available”; “the 399 men in the syphilitic group were initially recruited because they already had late-latent syphilis”. https://www.cdc.gov/tuskegee/about/index.html . Checked at source, 1 Nov 2026.

[143] United States Holocaust Memorial Museum, “The Nuremberg Code”, *Holocaust Encyclopedia*, quoting “Permissible Medical Experiments” from *Trials of War Criminals before the Nuremberg Military Tribunals under Control Council Law No. 10* (1949-1953), principle 1, with the museum’s commentary: “The voluntary consent of the human subject is absolutely essential”; “without the intervention of any element of force, fraud, deceit, duress, over-reaching, or other ulterior form of constraint or coercion”; “On August 19, 1947, the judges of the tribunal delivered their verdict”; “Its legal force, however, was not well established”. https://encyclopedia.ushmm.org/content/en/article/the-nuremberg-code . Checked at source, 1 Nov 2026.

[144] Adam D. I. Kramer, Jamie E. Guillory and Jeffrey T. Hancock, “Experimental evidence of massive-scale emotional contagion through social networks”, *Proceedings of the National Academy of Sciences* 111(24):8788-8790 (2014): “The experiment manipulated the extent to which people (N = 689,003) were exposed to emotional expressions in their News Feed”; “each emotional post had between a 10% and 90% chance (based on their User ID) of being omitted from their News Feed for that specific viewing”; “The experiments took place for 1 wk (January 11–18, 2012)”; “consistent with Facebook’s Data Use Policy, to which all users agree prior to creating an account on Facebook, constituting informed consent for this research”; “Cohen’s d = 0.02”. The authors note that omitted posts remained visible on friends’ own pages. https://pmc.ncbi.nlm.nih.gov/articles/PMC4066473/ . Checked at source, 1 Nov 2026.

[145] Inder M. Verma, “Editorial Expression of Concern”, *Proceedings of the National Academy of Sciences* 111(29):10779 (3 July 2014): “Questions have been raised about the principles of informed consent and opportunity to opt out in connection with the research in this paper”; “as a private company Facebook was under no obligation to conform to the provisions of the Common Rule when it collected the data used by the authors”; “It is nevertheless a matter of concern that the collection of the data by Facebook may have involved practices that were not fully consistent with the principles of obtaining informed consent and allowing participants to opt out”. https://pmc.ncbi.nlm.nih.gov/articles/PMC4115552 . Checked at source, 1 Nov 2026.

[146] Regulation (EU) 2024/1689 (Artificial Intelligence Act) of 13 June 2024, Article 5(1)(a) and Article 113(a): it prohibits “the placing on the market, the putting into service or the use of an AI system that deploys subliminal techniques beyond a person’s consciousness or purposefully manipulative or deceptive techniques, with the objective, or the effect of materially distorting the behaviour of a person or a group of persons by appreciably impairing their ability to make an informed decision”; “thereby causing them to take a decision that they would not have otherwise taken in a manner that causes or is reasonably likely to cause that person, another person or group of persons significant harm”; “Chapters I and II shall apply from 2 February 2025”. https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=OJ:L_202401689 . Checked at source, 1 Nov 2026.

[147] Regulation (EU) 2024/1689, consolidated version of 27 July 2026 (EUR-Lex): the Act was amended by “REGULATION (EU) 2026/1744 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 8 July 2026”; Article 5(1)(a) is unchanged: “deploys subliminal techniques beyond a person’s consciousness or purposefully manipulative or deceptive techniques”. https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:02024R1689-20260727 . Checked at source, 1 Nov 2026.

[148] Ahmed Shaheed, Special Rapporteur on freedom of religion or belief, *Freedom of thought: interim report*, UN document A/76/380 (5 October 2021): “Articles 4 and 18 of the International Covenant on Civil and Political Rights confirm the right’s significance, ascribing it absolute protection, even during public emergencies”; “A growing body of legal scholarship supports the claim that freedom of thought includes freedom from manipulation”; “Was that consent free and informed?” The report is a thematic report, not a binding decision. https://documents.un.org/doc/undoc/gen/n21/274/90/pdf/n2127490.pdf . Checked at source, 1 Nov 2026.

use “with particular emphasis on safeguarding brain activity and the information derived from it”. Scholars have since debated how the amendment should be read and how far it reaches.[149,150]

UP’s floor is freedom of the mind, so that no one’s thinking is manipulated without their knowledge or consent.[23] It goes further than the European ban in one important way: it does not wait for harm. The European rule applies only where the distortion causes or is likely to cause significant harm; UP’s floor is crossed by the manipulation itself, done without the person’s knowledge or consent.[146,23] Other parts of UP’s core bear on that floor. AI and automation coordinate, propose and do work, but they never govern, and people can always correct, pause or switch them off. No single AI system or operator controls coordination, and the systems UP uses are open, more than one, checked against each other, and watched for concentrated power like everything else.[151] Everything the AI does is auditable, and it may not assign work or compel anyone.[96,152] UP’s agreed position on public discourse has its AI check facts and show their sources, flag true statements combined in a misleading way, and mark matters of taste as such, never making them a rule for others.[139] And each person controls their own information and chooses what to share; one illustration of how that could work is that a question goes to where the data is kept and only the result comes back.[46,153]

The line between persuasion and manipulation is not always obvious, and UP does not pretend it is. Arguing for a proposal with evidence, in the open, is how UP’s method works; a design that hides what it is doing, or that works on people below their awareness, is the kind of thing the floor is aimed at. Between the two lie hard cases, such as default settings, the order in which options are shown, or the emotional framing of a public message. UP’s core leaves the refining of its floors, and the measuring of harm, to the collective and its method, and one of the factors the special rapporteur proposes is a reasonable place to begin: was there consent, and “Was that consent free and informed?”[23,51,148]

In UP’s terms, Tuskegee and the Facebook study raise the same question at two scales: whether people may be used for someone else’s purpose without their informed consent. At Tuskegee, by the CDC’s account, consent was not collected and treatment was not offered; in the Facebook study, the journal that published it questioned whether informed consent had been obtained.[141,145] The Nuremberg principle, the European ban, the rapporteur’s report and Chile’s amendment each protect a part of the mind, in one field, one region or one country. UP places the protection under every decision it makes, and under the proposals and work of the AI systems it uses, which people can always correct, pause or switch off; and it adds the open record and the many watchers that make hidden manipulation much harder to keep hidden.[23,151,53]

A fair hearing, and the limits on any restriction

The fair hearing is among the oldest of these protections, and one of the current system’s great achievements. In 1215 King John of England promised that no free man would be seized or imprisoned, stripped of his rights or possessions, outlawed or exiled, “except by the lawful judgment of his equals or by the law of the land”, and that “To no one will we sell, to no one deny or delay right or justice.” The same charter barred an official from putting a man on trial on his own unsupported word, without credible witnesses.[154] The promise covered only free men, but it

[149] Chile, Ley 21.383 (promulgated 14 October 2021, published 25 October 2021), amending article 19, no. 1 of the Constitution: “El desarrollo científico y tecnológico estará al servicio de las personas y se llevará a cabo con respeto a la vida y a la integridad física y psíquica. La ley regulará los requisitos, condiciones y restricciones para su utilización en las personas, debiendo resguardar especialmente la actividad cerebral, así como la información proveniente de ella”. https://www.bcn.cl/leychile/navegar?idNorma=1166983 . Checked at source, 1 Nov 2026.

[150] María Isabel Cornejo-Plaza, Roberto Cippitani and Vincenzo Pasquino, “Chilean Supreme Court ruling on the protection of brain activity: neurorights, personal data protection, and neurodata”, *Frontiers in Psychology* 15:1330439 (27 February 2024), English rendering of the amendment: “Scientific and technological development will be in service to individuals and carried out with respect for life and physical and psychological integrity. The law will regulate the requirements, conditions, and limitations for its use in individuals, with particular emphasis on safeguarding brain activity and the information derived from it”; on its reception: “has raised problems of interpretation of the law and ethical concerns”. https://pmc.ncbi.nlm.nih.gov/articles/PMC10929545 . Checked at source, 1 Nov 2026.

[151] Core tenet: *Technology serves; people decide*: “AI and automation coordinate, propose and do work. They never govern: people can always correct, pause or switch them off. No single AI system or operator controls coordination”. The AI systems UP uses are open, more than one, checked against each other, and watched for concentrated power like everything else. Full wording in “The core of UP”.

[152] UP’s agreed position on what the AI is, the coordinator that proposes (round 6): “People choose their work; the AI may not assign work or compel anyone, and any plan can be overridden through the decision steps.” Full wording in UP’s agreed positions (the Position Ledger).

[153] UP’s agreed position on the trust layer and data (round 12S; an illustration of one way UP could run, never a directive): tamper-evident records such as blockchains for the integrity of records, encryption for secrecy, and data held by the person; data used only with permission, with a question going to where the data is kept and only the result coming back, and nothing individual passed on or kept. Full wording in UP’s agreed positions (the Position Ledger).

[154] British Library, “English translation of Magna Carta” (British Library, published 28 Jul 2014), opening and clauses 38–40: “JOHN, by the grace of God King of England”; “Clauses marked (+) are still valid under the charter of 1225, but with a few minor amendments.” (clauses 39 and 40 are marked (+)); “In future no official shall place a man on trial upon his own unsupported statement, without producing credible witnesses to the truth of it.”; “No free man shall be seized or imprisoned, or stripped of his rights or possessions, or outlawed or exiled, or deprived of his standing in any way, nor will we proceed with force

lasted: the promises of lawful judgment and of justice survived, with minor amendments, in the reissued charter of 1225. The Habeas Corpus Act of 1679 gave it teeth: a jailer served with the writ had three days, or ten or twenty if the prison was farther away, to bring the prisoner to court and state the true cause of the imprisonment.[155] In 1948 the Universal Declaration of Human Rights made the principle universal, declaring that no one shall be subjected to arbitrary arrest and that everyone is entitled to a fair and public hearing by an independent tribunal.[156] The International Covenant on Civil and Political Rights turned that into treaty law. Anyone arrested on a criminal charge must be brought "promptly before a judge", may challenge the detention in court and must have time to prepare a defence; if convicted, they have the right to have the conviction reviewed by a higher tribunal.[157] And in 1963 the United States Supreme Court added a rule that goes to the heart of a fair hearing: prosecutors who suppress evidence favourable to the accused, when it has been asked for and is material to guilt or punishment, violate due process, "irrespective of the good faith or bad faith of the prosecution". In the Court's words, "Society wins not only when the guilty are convicted but when criminal trials are fair."[158]

The failures come when these rules are bent in practice, often when evidence is hidden. The opening story is one example: there was no individual review at all, and when Fred Korematsu's case reached the Supreme Court, the government did not put before it information held by the Federal Communications Commission, the Navy and the Justice Department that contradicted the Army's account.[13] The pattern is wider than one war. The National Registry of Exonerations in the United States had recorded, by 1 November 2026, 3,870 people convicted and later officially cleared on new evidence of innocence since 1989, who together lost more than 36,000 years.[159] In a study of the first 2,400 of those cases, official misconduct contributed to the false conviction of 54 per cent of the people later exonerated, and the most common kind of misconduct, found in 44 per cent of the cases, was concealing evidence that pointed to innocence. The same study found that officials who did these things were rarely disciplined.[160] A hearing in which one side cannot see the evidence is a hearing in name only.

UP's floor takes these lessons and states them as a line no decision may cross: no one's freedom is restricted without a fair, evidence-based hearing, with the evidence open to them and a way to appeal.[23] Each part of that sentence answers a known way of failing. "Evidence-based" answers the court that rules on fear or on public opinion; UP's agreed positions on justice hold that courts rest on evidence, not public opinion.[161] "The evidence

against him, or send others to do so, except by the lawful judgment of his equals or by the law of the land."; "To no one will we sell, to no one deny or delay right or justice." The translation conveys the sense rather than the precise wording of the Latin, and the clause protected free men only. https://www.bl.uk/magna-carta/articles/magna-carta-english-translation (archived copy, read because the page has moved: https://web.archive.org/web/2020/https://www.bl.uk/magna-carta/articles/magna-carta-english-translation) . Checked at source, 1 Nov 2026.

[155] Parliament of England, Habeas Corpus Act 1679 (31 Cha. 2 c. 2), revised text on legislation.gov.uk: "An Act for the better secureing the Liberty of the Subject and for Prevention of Imprisonments beyond the Seas"; the officer served with the writ "shall within Three dayes after the Service thereof" bring the prisoner and "certifie the true causes of his Detainer or Imprisonment", "then within the space of Ten dayes" or "then within the space of Twenty dayes" for prisons further away. https://www.legislation.gov.uk/aep/Cha2/31/2 . Checked at source, 1 Nov 2026.

[156] Universal Declaration of Human Rights (General Assembly resolution 217 A, 10 December 1948), articles 9 and 10: "No one shall be subjected to arbitrary arrest, detention or exile."; "Everyone is entitled in full equality to a fair and public hearing by an independent and impartial tribunal, in the determination of his rights and obligations and of any criminal charge against him." https://www.un.org/en/about-us/universal-declaration-of-human-rights . Checked at source, 1 Nov 2026.

[157] International Covenant on Civil and Political Rights (adopted 16 December 1966, in force 23 March 1976), articles 9 and 14: "No one shall be subjected to arbitrary arrest or detention. No one shall be deprived of his liberty except on such grounds and in accordance with such procedure as are established by law."; "Anyone arrested or detained on a criminal charge shall be brought promptly before a judge or other officer authorized by law to exercise judicial power and shall be entitled to trial within a reasonable time or to release."; "everyone shall be entitled to a fair and public hearing by a competent, independent and impartial tribunal established by law"; "To have adequate time and facilities for the preparation of his defence and to communicate with counsel of his own choosing"; "Everyone convicted of a crime shall have the right to his conviction and sentence being reviewed by a higher tribunal according to law." https://www.ohchr.org/en/instruments-mechanisms/instruments/international-covenant-civil-and-political-rights . Checked at source, 1 Nov 2026.

[158] U.S. Supreme Court, *Brady v. Maryland*, 373 U.S. 83 (decided 13 May 1963), at 86–87: "We now hold that the suppression by the prosecution of evidence favorable to an accused upon request violates due process where the evidence is material either to guilt or to punishment, irrespective of the good faith or bad faith of the prosecution."; "Society wins not only when the guilty are convicted but when criminal trials are fair; our system of the administration of justice suffers when any accused is treated unfairly." https://www.govinfo.gov/content/pkg/USREPORTS-373/pdf/USREPORTS-373-83.pdf . Checked at source, 1 Nov 2026.

[159] National Registry of Exonerations, home page (read 1 Nov 2026): "3,870 exonerations and more than 36,226 years lost since 1989". The Registry counts only people officially and completely cleared on new evidence of innocence, so its total is a count of proven cases, not an estimate of all wrongful convictions. https://exonerationregistry.org/ . Checked at source, 1 Nov 2026.

[160] Samuel R. Gross, Maurice Possley, Kaitlin Roll and Klara Stephens, *Government Misconduct and Convicting the Innocent: The Role of Prosecutors, Police and Other Law Enforcement* (National Registry of Exonerations; University of Michigan Law School working paper 776), abstract: "It is based on first 2,400 exonerations listed in the National Registry of Exonerations"; "Official misconduct contributed to the false convictions of 54% of defendants who were later exonerated."; "Concealing exculpatory evidence—the most common type of misconduct—occurred in 44% of exonerations."; "Disciplinary actions against officials who committed misconduct were uncommon". https://repository.law.umich.edu/pub_law_archive/776 . Checked at source, 1 Nov 2026.

[161] UP's agreed positions on justice and enforcement (round 13, 28 October 2026), in summary: most crime is expected to be removed or greatly reduced; laws remain as universal norms of right and wrong, as objective as possible though perhaps not completely, with health, happiness and wellbeing a good way to measure them; there is one layer of trained, professional law enforcement, whose work is open to everyone except in the most sensitive cases, which become public on short timelines, and the people and the process hold authority over it, watching it constantly; courts rest on evidence, not public opinion; confinement is allowed only to protect the person and others; and, as an illustration of one way to run it, the best-performing justice systems of today, with rights respected, high clearance rates and consequences focused on rehabilitation and on the wellbeing of the accused and of victims, are the

open to them" answers the hidden file. "A way to appeal" answers the single judge who gets it wrong. Today's standards differ on how open the evidence must be. The Human Rights Committee, which interprets the Covenant, asks that a person held as a security threat be shown "at least, the essence of the evidence". The United Nations principles on mental-health care allow documents to be withheld where disclosing them would cause serious harm, provided the person or their counsel is told and a court can review the decision.[162,163] There are real reasons for such exceptions: the mental-health principles name serious harm, and a witness in danger is an obvious further case. UP's floor was clarified in November 2026 for exactly this case, without lowering it. The substance of the evidence is always open to the person; where a witness's safety is at risk, a court may protect the witness's identity, and that decision can be appealed; and other hard cases are left to UP's method.[23,55] What may be protected is a witness's identity, never the substance of the case against the person.

UP's core then does something that most charters of rights leave to ordinary law: it writes the limits on any restriction into the floor itself. A protected freedom such as movement may be restricted only to protect others or the person, only through an evidence-based court process, for the shortest time needed, and never below the needs floor. The hearing comes first, except briefly, to stop harm in progress, with a hearing promptly after. And leaving a group or community does not end a restriction set by a fair hearing.[23] Most of these limits are not invented from nothing, as Table 7.2 shows. They already exist somewhere in the current system, in treaties, recommendations, court decisions or the practice of one country, though rarely all together; the last, marking the limits as an open problem, has no equivalent.

Table 7.2. The limits on any restriction in UP's core, and where each already exists today.

The limit in UP's core	Where it already exists	How far it reaches today
Only to protect others or the person	The UN Human Rights Committee: deprivation of liberty only "for the purpose of protecting the individual in question from serious harm or preventing injury to others"; UN principles on mental-health care: the "least restrictive" treatment and setting; the European Court of Human Rights: detention only where less severe measures have been considered and found insufficient	Interpretation, principles and case law
Only through an evidence-based court process, with the evidence open and a way to appeal	Magna Carta; habeas corpus; the Covenant's fair hearing and right of review; the rule against suppressing evidence in *Brady v. Maryland*	Widely written into law; evidence is still hidden in many wrongful convictions
Hearing first, except briefly to stop harm in progress, with a hearing promptly after	The Covenant's "promptly before a judge"; the Human Rights Committee: 48 hours is ordinarily enough	Treaty law and its interpretation
For the shortest time needed	The Mandela Rules: solitary confinement only as a last resort, "for as short a time as possible", and never for more than 15 days in a row	A UN standard, not a treaty

models. The same round names the dangers of abuse of power and false evidence as work that needs close attention. Full wording in UP's agreed positions (the Position Ledger).

[162] United Nations Human Rights Committee, *General comment No. 35: Article 9 (Liberty and security of person)*, CCPR/C/GC/35 (United Nations, 16 December 2014; adopted at the Committee's 112th session, 7–31 October 2014; copy hosted by the University of Minnesota Human Rights Library), paras. 15, 19, 33: "48 hours is ordinarily sufficient to transport the individual and to prepare for the judicial hearing"; "any delay longer than 48 hours must remain absolutely exceptional and be justified under the circumstances"; "the burden of proof lies on States parties to show that the individual poses such a threat and that it cannot be addressed by alternative measures"; "disclosure to the detainee of, at least, the essence of the evidence on which the decision is taken"; "any deprivation of liberty must be necessary and proportionate, for the purpose of protecting the individual in question from serious harm or preventing injury to others"; "last resort and for the shortest appropriate period of time, and must be accompanied by adequate procedural and substantive safeguards established by law". Paragraph 15 concerns detention of a person said to pose a security threat; paragraph 19 concerns persons with disabilities. https://hrlibrary.umn.edu/crc/gencom35.pdf . Checked at source, 1 Nov 2026.

[163] United Nations, *Principles for the Protection of Persons with Mental Illness and the Improvement of Mental Health Care*, General Assembly resolution 46/119 (17 December 1991), principles 9, 17 and 18: "the right to be treated in the least restrictive environment and with the least restrictive or intrusive treatment"; "The review body shall be a judicial or other independent and impartial body established by domestic law"; "shall have the right to appeal to a higher court against a decision that the patient be admitted to, or be retained in, a mental health facility"; documents may be withheld "except in special cases where it is determined that a specific disclosure to the patient would cause serious harm", and then "the patient or the patient's counsel, if any, shall receive notice of the withholding and the reasons for it and shall be subject to judicial review". https://www.un.org/esa/socdev/enable/rights/wgrefa12.htm . Checked at source, 1 Nov 2026.

The limit in UP's core	Where it already exists	How far it reaches today
Never below the needs floor	The Mandela Rules: basic living conditions, including food, water and health care, apply to all prisoners without exception; Norway: the punishment is the restriction of liberty, and the sentencing court removes no other rights	A UN standard; national practice (Norway)
Leaving does not end a restriction set by a fair hearing	The European arrest warrant: a court's sentence can be carried out in another member state, with fundamental rights kept	Within the European Union
Marked as an open problem, to be improved	(no equivalent in today's charters of rights)	UP's own method[164]

Sources: see the notes to this section.[162,163,165,157,158,166,167,114]

What happens inside a restriction matters as much as how it begins, and here the current system's best examples point in the direction of UP's floor. Norway's Correctional Service works on a "principle of normality": the punishment is the restriction of liberty, and the sentencing court removes no other rights. Any departure from the principle has to be argued for, "No-one shall serve their sentence under stricter circumstances than necessary for the security in the community", and life inside is meant to resemble life outside as far as possible.[167] Among people released from Norwegian prisons in 2016, 22 per cent had a new prison or community sentence within two years; for those released in 2020 the figure was 16 per cent. These figures use a Nordic definition and cannot be set beside the rearrest rates other countries publish; the release counts were adjusted, and the report notes that the pandemic may have affected the 2020 rate.[168] A careful study compared defendants assigned at random to stricter or more lenient judges. It found that, in Norway, imprisonment lowered the chance of reoffending over five years by 29 percentage points for defendants whose outcome depended on the judge they drew, although people who had jobs beforehand suffered lasting harm to their employment; the authors suggest that time in prison with a focus on rehabilitation may be why. The study compares prison with no prison and does not test the principle of normality itself.[169] The same method applied to young offenders in one large American county found the opposite:

[164] Core tenet: *Self-correction: nothing is final, including this*: every failure of UP is fed back into it as a new problem to solve; every part of UP, the tenets included, can be improved through its own method; UP is judged against both the current system and the ideal it aims at; downsides, risks and fringe problems are named openly and treated as work. Full wording in "The core of UP".

[165] European Court of Human Rights, *Witold Litwa v. Poland*, application no. 26629/95, judgment of 4 April 2000, para. 78: "The detention of an individual is such a serious measure that it is only justified where other, less severe measures have been considered and found to be insufficient to safeguard the individual or public interest which might require that the person concerned be detained." https://hudoc.echr.coe.int/eng?i=001-58537 . Checked at source, 1 Nov 2026.

[166] United Nations General Assembly, *United Nations Standard Minimum Rules for the Treatment of Prisoners (the Nelson Mandela Rules)*, resolution 70/175, annex (United Nations Office on Drugs and Crime edition; adopted 17 December 2015), Rules 41–45: "shall be given adequate time and facilities for the preparation of their defence"; "Prisoners shall have an opportunity to seek judicial review of disciplinary sanctions imposed against them."; "General living conditions addressed in these rules, including those related to light, ventilation, temperature, sanitation, nutrition, drinking water, access to open air and physical exercise, personal hygiene, health care and adequate personal space, shall apply to all prisoners without exception"; "In no circumstances may restrictions or disciplinary sanctions amount to torture or other cruel, inhuman or degrading treatment or punishment."; "(a) Indefinite solitary confinement; (b) Prolonged solitary confinement"; "solitary confinement shall refer to the confinement of prisoners for 22 hours or more a day without meaningful human contact. Prolonged solitary confinement shall refer to solitary confinement for a time period in excess of 15 consecutive days."; "Solitary confinement shall be used only in exceptional cases as a last resort, for as short a time as possible and subject to independent review"; "It will always be justifiable for the central prison administration to authorize departures from the rules in this spirit." The rules are a General Assembly text, not a treaty. https://www.unodc.org/documents/justice-and-prison-reform/Nelson_Mandela_Rules-E-ebook.pdf . Checked at source, 1 Nov 2026.

[167] Norwegian Correctional Service (Kriminalomsorgen), "About the Norwegian Correctional Service", *kriminalomsorgen.no* (page undated, read 1 Nov 2026), "Principle of normality in the Correctional Service": "The punishment is the restriction of liberty; no other rights have been removed by the sentencing court."; "No-one shall serve their sentence under stricter circumstances than necessary for the security in the community."; "During the serving of a sentence, life inside will resemble life outside as much as possible."; "Yet the basic principle is there, and deviation from it will need to be based on argumentation."; "attempts to prevent recidivism by enabling the offenders, through their own initiatives, to change their criminal behaviour". https://www.kriminalomsorgen.no/informasjon-paa-engelsk.536003.no.html . Checked at source, 1 Nov 2026.

[168] Ragnar Kristoffersen (ed.), *Correctional Statistics of Denmark, Finland, Iceland, Norway and Sweden 2018 - 2022* (University College of Norwegian Correctional Service, 2024), definitions and table 2.11.4: "Refer to the numbers of new unconditional prison or community sentences/services within two years after year of release from a prison sentence"; Norway, releases of 2016 to 2020: "Reconviction rate in percent 22 19 19 18 16"; "Number of releases have been adjusted and do not reflect the total number of released prisoners"; "The COVID-19 pandemic led to reduced number of registered crimes and less activity in prosecutions and courts, which may have affected the reconviction rate in 2020." (a note to Norway's 2020 column). Rates measured this way should not be compared with other countries' rearrest figures. https://www.fangelsi.is/media/skjol/Nordic-Statistics-2018_2022_final.pdf . Checked at source, 1 Nov 2026.

[169] Manudeep Bhuller, Gordon B. Dahl, Katrine V. Løken and Magne Mogstad, "Incarceration, Recidivism, and Employment", *Journal of Political Economy* 128(4):1269–1324 (2020), abstract: "Using a random judge design and panel data from Norway, we estimate that imprisonment discourages further criminal behavior, with reoffense probabilities falling by 29 percentage points and criminal charges dropping by 11 over a 5-year period."; "Previously employed individuals experience lasting negative employment effects."; "time spent in prison with a focus on rehabilitation can be preventive for a large segment of the criminal population". https://www.journals.uchicago.edu/doi/10.1086/705330 . Checked at source, 1 Nov 2026.

juvenile incarceration sharply lowered the chance of finishing high school and raised the chance of being imprisoned as an adult.[170] The two studies differ in country, age group and system, but together they suggest that what a restriction does to a person may depend on how it is carried out. Where both victims and offenders agree to it, a face-to-face restorative meeting has been found in randomised trials to cut repeat offending modestly and to leave victims more satisfied with how their case was handled.[171]

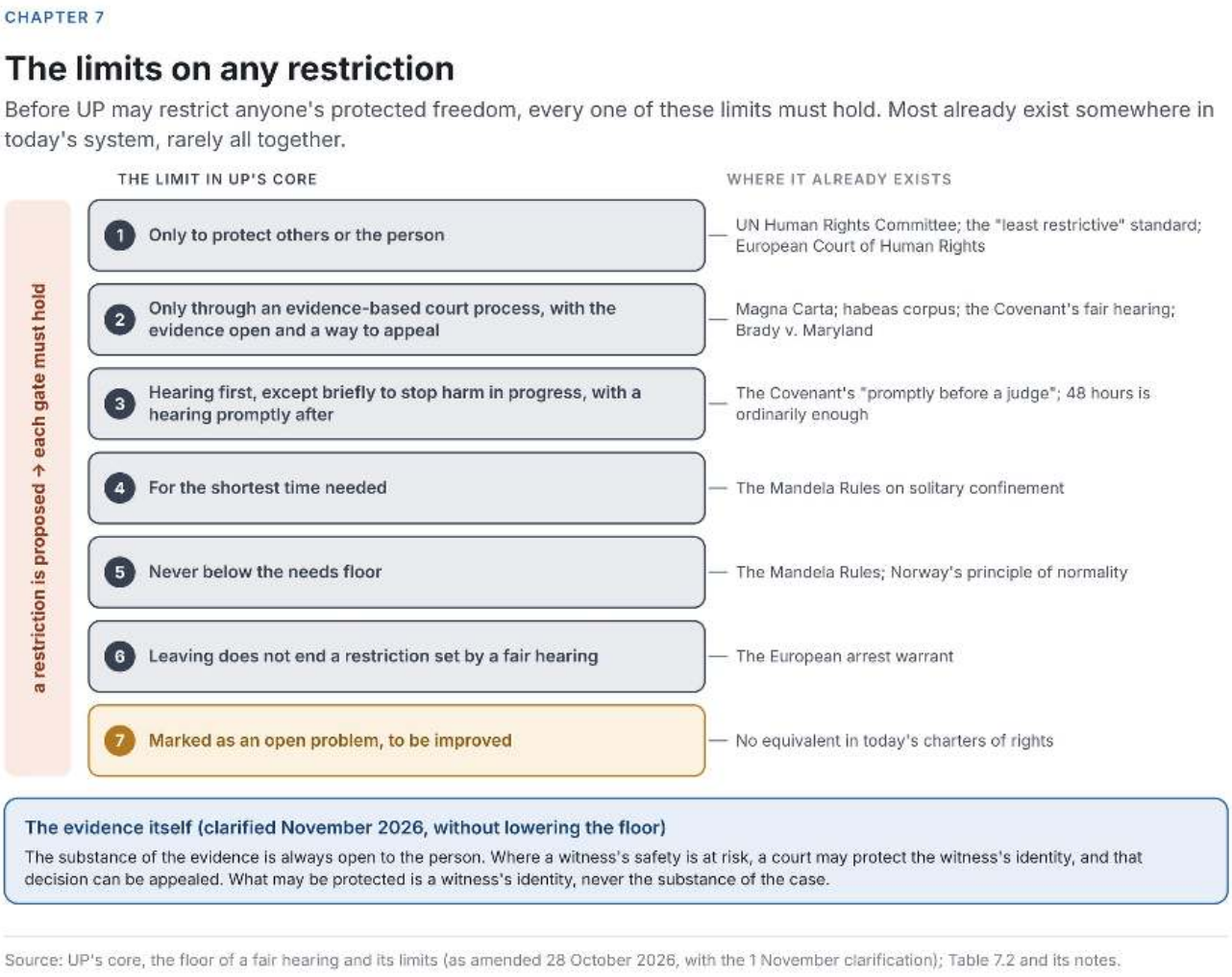
UP's agreed positions on justice, as an illustration of one way to run it, take the best-performing justice systems of today as their models: systems with rights respected, high rates of solving crimes, and consequences focused on rehabilitation and on the wellbeing of both the accused and their victims. The examples above are this chapter's evidence for what that can look like. The positions allow confinement only to protect the person and others. They provide for one layer of trained, professional law enforcement whose work is open to everyone except in the most sensitive cases, which become public on short timelines; it is watched by many and answerable to the people and the process.[161] There are no emergency powers in UP to suspend any of this: authority in an emergency belongs to the event, is one layer deep, and ends when the event ends.[172] The agreed positions also name the dangers plainly, abuse of power and false evidence among them, as work that needs close attention.[161]

In UP's terms, the fair-hearing floor and its limits connect pieces that the current system already has but keeps in separate places. The hearing is in constitutions and treaties, and the rule against hidden evidence is in court decisions. The least restrictive standard is in UN principles on mental-health care, the limits on solitary confinement are in a UN standard adopted by the General Assembly, and the principle of normality is in one country's prison service. Alone, each depends on whoever holds power at the time choosing to honour it, and the hearing and the rule against hidden evidence have been set aside before, when a majority or an emergency demanded it, as Korematsu's case shows. UP puts them under every decision at once, so that no decision, whether by vote, in an emergency or by a community, may lower them, and it adds the public record and the habit of watching that would make a hidden file or a quiet extension much harder to hide.[23,46,53] The core is honest that this is unfinished. Its own words call these limits the best that can be imagined now, an open problem that UP is built to keep improving.[23]

[170] Anna Aizer and Joseph J. Doyle, "Juvenile Incarceration, Human Capital, and Future Crime: Evidence from Randomly Assigned Judges", NBER Working Paper 19102 (published in *Quarterly Journal of Economics* 130(2):759–803, 2015), abstract: "Estimates based on over 35,000 juvenile offenders over a ten-year period from a large urban county in the US suggest that juvenile incarceration results in large decreases in the likelihood of high school completion and large increases in the likelihood of adult incarceration." https://www.nber.org/papers/w19102 . Checked at source, 1 Nov 2026.

[171] Heather Strang, Lawrence W. Sherman, Evan Mayo-Wilson, Daniel Woods and Barak Ariel, "Restorative Justice Conferencing (RJC) Using Face-to-Face Meetings of Offenders and Victims: Effects on Offender Recidivism and Victim Satisfaction. A Systematic Review", *Campbell Systematic Reviews* (2013), abstract and synopsis: "Ten eligible studies on three continents were identified, with a total of 1,879 offenders and 734 interviewed victims"; "RJCs cause a modest but highly cost-effective reduction in repeat offending, with substantial benefits for victims"; victims "express higher levels of satisfaction with the handling of their cases"; "The review considers only randomized controlled trials in which victim and offenders consented to meet prior to random assignment". https://onlinelibrary.wiley.com/doi/full/10.4073/csr.2013.12 . Checked at source, 1 Nov 2026.

[172] UP's agreed position "One layer of authority, however large the event" (round 4): "UP has no lasting authority and no emergency powers."; "Authority belongs to the event, is one layer deep, like a parent's, and ends when the event ends."; "The public, acting on evidence and measured outcomes, is the authority over everyone who acts. The best answer to emergencies is to prevent them, and that work comes first." Full wording in UP's agreed positions (the Position Ledger).



The limits on any restriction: seven gates, and where each already exists today.

Who sets the floors, and why they may rise but never fall

A floor is only as good as two answers: who decides where it is, and what stops the next decision from lowering it. UP's core gives both in a single sentence. The collective defines and refines the floors through UP's method; it may clarify them or raise them, but no decision may lower them or push anyone below them.[23] The rest of this section is about what that sentence borrows from the current system and what it changes.

The current system has already invented the ratchet, a rule that lets a standard move one way only. On 28 July 2010 the United Nations General Assembly declared that "safe and clean drinking water and sanitation is a human right essential to the full enjoyment of life and all other human rights", by 122 votes to none, with 41 abstentions.[173,174] Twelve years later, to the day, it recognised "the right to a clean, healthy and sustainable

[173] United Nations, "General Assembly declares access to clean water and sanitation is a human right", *UN News* (United Nations, 28 July 2010): "Safe and clean drinking water and sanitation is a human right essential to the full enjoyment of life and all other human rights, the General Assembly declared today"; "The Assembly resolution received 122 votes in favour and zero votes against, while 41 countries abstained from voting"; "an estimated 884 million people lack access to safe drinking water and a total of more than 2.6 billion people do not have access to basic sanitation". https://news.un.org/en/story/2010/07/346122 . Checked at source, 1 Nov 2026.

[174] United Nations Dag Hammarskjöld Library, "64th Session (2009-2010)", *UN General Assembly Resolutions Tables* (Research Guides), row for A/RES/64/292: "A/RES/64/292 Plen. 48 A/64/PV.108 28 July 2010 GA/10967 122-0-41 A/64/L.63/Rev.1 + Add.1 (orally revised) The human right to water and sanitation". https://research.un.org/en/docs/ga/quick/regular/64 . Checked at source, 1 Nov 2026.

environment as a human right", by 161 votes to none, with 8 abstentions.[175,176] The committee that interprets the economic covenant holds that "any deliberately retrogressive measures" would "require the most careful consideration" and "need to be fully justified".[40] Under the Paris Agreement, each country's next climate pledge "will represent a progression beyond" its current one and "reflect its highest possible ambition".[177] In 2016 the IUCN World Congress on Environmental Law, meeting in Rio de Janeiro, declared a principle of non-regression: states "shall not allow or pursue actions that have the net effect of diminishing the legal protection of the environment".[178] And Germany's Article 79(3), described earlier, puts the principles of human dignity beyond the reach of any amendment.[29]

Each of these ratchets has a release, and the texts, and the governments that adopted them, say so plainly. When the 2022 resolution was adopted, the United Kingdom's delegate noted that "General Assembly resolutions are not legally binding", and Norway's said that "Political recognition does not have any legal effect".[175] The committee's rule against going backwards allows it when a state can fully justify it.[40] The Paris ratchet binds the pledge, not the result; its compliance committee is "non-adversarial and non-punitive", and any party "may withdraw" on a year's notice.[177] The non-regression principle is soft law, which says of itself that it "does not represent a formally negotiated outcome", and it forbids only a net loss, so a cut in one place can be set against a gain in another.[178] Germany's clause is the hardest of all, and it, too, gives way to "a constitution freely adopted by the German people".[29] None of these releases is an oversight; each is written into the text or stated plainly by the governments that adopted it. But the pattern is clear: in the current system, a floor that may never be lowered is either a promise without force or a law that one country can still replace.

UP keeps the ratchet as a rule of its core: no decision may lower a floor. Who sets the floors is the collective, through the same method it uses for everything else: evidence proposes, and the people affected decide, with matters of taste never made rules for others.[47] UP's agreed position on harm shows the same open pattern: harm is measured by its effect on health, happiness and wellbeing, and is "defined, graded and refined continually from information, input and research by the collective".[51] What counts as enough is "set together and rises as capacity grows".[56] The current system shows why that wording matters. When the World Bank moved its international poverty line from $2.15 to $3.00 a day in June 2025, mostly because of new price data and revised national lines, the count of people in extreme poverty in 2022 rose by about 125 million in a single step. The Bank says its higher lines for middle-income countries "in part reflect rising standards of what it means to be living in poverty".[179] The standard of enough can rise as societies grow richer, and a change in how a line is measured can move a count by

[175] United Nations, "With 161 Votes in Favour, 8 Abstentions, General Assembly Adopts Landmark Resolution Recognizing Clean, Healthy, Sustainable Environment as Human Right" (meeting record GA/12437), *UN Meetings Coverage and Press Releases* (United Nations, 28 July 2022): "With 161 votes in favour and 8 abstentions, the General Assembly adopted a landmark resolution today recognizing the right to a clean, healthy and sustainable environment as a human right"; "by a recorded vote of 161 in favour to 0 against, with 8 abstentions (Belarus, Cambodia, China, Ethiopia, Iran, Kyrgyzstan, Russian Federation, Syria)"; "noting that this right is related to other rights and existing international law"; "Noting that General Assembly resolutions are not legally binding, recognition of the right in the text does not legally bind States to its terms"; "the United Kingdom does not consider it has yet emerged as a customary right"; "Political recognition does not have any legal effect"; "the present resolution is a political resolution, not a legal affirmation by the Assembly". https://press.un.org/en/2022/ga12437.doc.htm . Checked at source, 1 Nov 2026.

[176] United Nations Dag Hammarskjöld Library, "76th Session (2021-2022)", *UN General Assembly Resolutions Tables* (Research Guides), row for A/RES/76/300: "A/RES/76/300 Plen. 74 (b) A/76/PV.97 28 July 2022 GA/12437 161-0-8 A/76/L.75 & Add.1 The human right to a clean, healthy and sustainable environment". https://research.un.org/en/docs/ga/quick/regular/76 . Checked at source, 1 Nov 2026.

[177] United Nations, *Paris Agreement* (UNFCCC), Articles 3, 4(3), 15(2), 28(1)-(2) and final clause: "The efforts of all Parties will represent a progression over time"; "Each Party's successive nationally determined contribution will represent a progression beyond the Party's then current nationally determined contribution and reflect its highest possible ambition"; "expert-based and facilitative in nature and function in a manner that is transparent, non-adversarial and non-punitive"; "that Party may withdraw from this Agreement by giving written notification to the Depositary"; "Any such withdrawal shall take effect upon expiry of one year from the date of receipt by the Depositary of the notification of withdrawal"; "DONE at Paris this twelfth day of December two thousand and fifteen". The ratchet applies to each party's pledge, not to the cuts delivered.
https://unfccc.int/files/essential_background/convention/application/pdf/english_paris_agreement.pdf . Checked at source, 1 Nov 2026.

[178] IUCN World Congress on Environmental Law, *IUCN World Declaration on the Environmental Rule of Law* (IUCN, Rio de Janeiro, 2016; copy hosted by the Asian Development Bank), Principles 12-13 and postscript: "The IUCN World Congress on Environmental Law, having met in Rio de Janeiro (Brazil) from 26 to 29 April 2016"; "shall not allow or pursue actions that have the net effect of diminishing the legal protection of the environment or of access to environmental justice"; "shall regularly revise and enhance laws and policies in order to protect, conserve, restore, and ameliorate the environment"; "It does not represent a formally negotiated outcome and does not necessarily reflect the views of any individual, institution, State, or country represented at the Congress". https://lpr.adb.org/sites/default/files/resource/1053/world-declaration-on-the-environmental-rule-of-law.pdf . Checked at source, 1 Nov 2026.

[179] World Bank, "June 2025 Update to Global Poverty Lines", factsheet (World Bank, 5 Jun 2025): "The update results in a new international poverty line of $3.00 per person per day, which replaces the previous $2.15 poverty line based on 2017 PPPs."; "The new international poverty line is set at $3.00 using 2021 international dollars."; "we use countries' collective knowledge on monetary deprivation to define a benchmark for global poverty"; "These new lines in part reflect rising standards of what it means to be living in poverty."; "The global standard of extreme poverty reflects a better measured value of a basic minimum of goods and services."; "may reflect an increase in the value of poverty lines as countries become richer"; "a relative poverty line that updates with a country's income level"; "the country's national poverty line is the appropriate standard"; "Implementing the updated PPPs alone would account for approximately a $0.35 increase (from $2.15 to $2.50)."; "The remaining increase of $0.50 (to $3.00) is largely due to the revision of national poverty lines across low-income countries."; "In 2022, about 838 million people lived in extreme poverty using this measure, which is an upward revision of approximately 125 million people from the previously reported estimate of 713 million people".
https://www.worldbank.org/en/news/factsheet/2025/06/05/june-2025-update-to-global-poverty-lines . Checked at source, 1 Nov 2026.

millions without a single life changing. One way to guard against that, given in UP's agreed positions as an illustration, is to keep definitions fixed over time and to give every headline measure an independent check. With every decision on the public record, a floor would then be raised in the open as a new, higher line rather than moved quietly by redefining the old one.[140,46]

What stops the next decision from lowering a floor is the core itself. The floors bind every decision, including votes: "no vote may override the protected freedoms".[48] The same sentence that lets the collective refine the floors forbids any decision to lower them, so it binds the collective's own work on the floors as well as everything decided above them. So far the record shows the rule working in one direction only: three floors were added in October 2026, and the fair hearing later that month, and nothing was taken away; in November 2026 the fair hearing was clarified without being lowered.[54,55] UP has no national exit of the German kind. It is not a nation-state, and its core can be improved through its own method but, on the core's own terms, never in a way that lowers a floor.[180,164,23] Under the dangers settled alongside the core, anyone acting outside the core stops being UP.[53] People who want something else remain free to leave and build it, taking what is theirs; what they may not do is lower UP's floors and still be acting as UP.[23,113]

A floor that can only rise has a danger of its own. A collective could raise the needs floor faster than the living world can supply it, so that two floors pull against each other. UP's answer is in the wording already quoted: enough rises as capacity grows, not as wishes grow, and, in the same position, "Today's luxury is not the target".[56] When the needs floor and the living-world floor still clash, UP's position treats that as a failure to solve, not a trade: the problem goes to the widest crowd and gets top priority. If a decision cannot wait, people come first in the smallest way and for the shortest time, while restoration continues, with one exception: damage that cannot be undone is never traded for a short-term need, and the need is met another way.[94]

In UP's terms, the work of setting floors is ordinary work, done in the open like any other. As an illustration only: the starting example names water as a need, and the current system already has a careful definition of the standard, "safely managed" drinking water, from a source on the premises, "free from contamination and available when needed".[35] A collective could adopt that definition as a clarification of the water floor and measure it household by household. Ten years later it could raise it, adding, say, a measure of how far each household is from a safe supply in a drought. What it may not do is replace it with something weaker because the weaker line was easier to meet. Pieces of that one-way rule have been built in the current system, one treaty and one constitution at a time. UP's contribution is to make it the rule for every floor and every decision, from the start.[23]

The floors, stage by stage

The floors are part of UP's core from the first day, but what UP can do to keep them grows with UP itself. UP is judged by stage, beside the current system. In the early stage it is a network of people living inside the current system. In the middle stage it has its own productive base, and most of its members' needs are met from what it produces; in the completed stage, which can only be modelled, most people live mainly within UP. The early stage rests on today's evidence, and the middle and completed stages are reasoned projections from cited mechanisms, labelled as such.[181] In the early stage UP is not a state and has no army; its protection is to be woven into the existing system, it acts only by ethical means, and it works within the law of the societies around it.[180,113] Table 7.3 sets out one way the floors could develop through the stages, beside the real precedents for each.

Table 7.3. The floors by stage, as an illustration. The early stage rests on today's evidence; the middle and completed stages are reasoned projections from cited mechanisms, labelled as such, and the completed stage is only modelled.

Stage	What changes	Real precedent	Why it is likely	What persists
Early	UP groups publish the	Public logs and	Each of these has been	Gaps in needs where

[180] UP's agreed position on protection during the transition (round 4): "UP is not a nation-state and has no army. During the transition its protection is to be everywhere and woven into the existing system, so that attacking it would cost far more than it could gain. UP works within the law, delivers things its host societies value, and earns broad public support. If it is attacked, it responds only by nonviolent means." Full wording in UP's agreed positions (the Position Ledger).

[181] UP's agreed position on judging UP by stage, beside the current system: UP grows side by side with the current system, early (a minority network inside it), middle (its own productive base, with most members' needs met from what UP produces) and completed (most people live mainly in UP); the early stage rests on today's evidence, and the middle and completed stages are reasoned projections from cited mechanisms, labelled as such. Full wording in UP's study lessons (lesson 13).

Stage	What changes	Real precedent	Why it is likely	What persists
	needs they meet and the decisions they make, as they make them; members help one another meet needs on top of today's protections; anyone can leave any group, taking what is theirs; any restriction of a person's freedom stays a matter for the courts of the society around them	registries that make records hard to bend (Certificate Transparency, trial registration, Wikipedia's page histories); Finland's constitutional guarantee and its fall in homelessness (cause not established)	tried at scale inside the current system, with the limits noted in this chapter	UP is still small; dependence on the host society's laws and budgets; social pressure inside groups
Middle	Most members' needs are met from what UP produces, and each community publishes its needs met; physical accounting sets the limits that protect water, soil and species, and clashes go to the widest crowd; disputes are heard on open evidence, with a way to appeal	The Montreal Protocol (a hard limit kept by the world for decades); Cape Town (a legal cap on water and a publicly announced Day Zero, with use more than halved in two years); Norway's principle of normality; restorative conferencing	Each has been tried in some setting, with the limits noted in this chapter; in this projection UP connects them	Hard cases where floors meet; pressure to extend restrictions; measures that can be gamed
Completed (modelled)	The floors sit under most decisions people take together, and the collective raises them as capacity grows	(modelled; a partial analogue is a constitution that forbids lowering its basic protections)	The combined system: open records, many watchers, needs met without conditions	Disagreement over what the floors contain; the limits on restriction, still an open problem; a patient bad actor who hides for years

Sources: see the notes to the sections on each floor.[132,134,137,28,92,98,167,171,181]

Stages are easier to see in a single life, so this chapter returns to the household that Chapter 1 introduced: a care worker, her teenage son and his grandfather, in a mid-sized town. As before, this is an illustration of one way UP could run, and never evidence.

Illustration: one way it could run. The floors, seen from one kitchen.

In the early stage, the town's food co-operative and its tool library post their accounts on the town's open tool, and the care worker notices that a grant the co-op received last year is missing from the published figures. She asks; the error is found and corrected in public within a week, with a note saying who changed what. When she later moves her shifts from one care group to another, she takes her own tools and her training record with her, and nobody asks her to justify the move. Her rent and the grandfather's medicines are still paid for in money, as they were before.

In the middle stage, the regional workshop proposes to draw more water from the aquifer under the valley for a new production line. The open accounts show that the aquifer is falling faster than it can refill, so the proposal goes to everyone in the region, and within a month a group of students, the teenager among them, has found a way to reuse the workshop's own water instead. The line opens later than planned, and the aquifer is left alone.

In the completed stage, which can only be modelled, the grandfather's needs, from food and care to company, are met without any condition attached, and he spends part of his week teaching carpentry. The town has added something to its list of needs since the early stage, because what counts as enough has risen with what the region can produce. People still argue about where the floors should sit, and the arguments are recorded, with every side's case, where anyone can read them.

The strongest objections

Six objections to UP's floors deserve a full answer. Each is put here in the strongest form its defenders would give it, and each answer says what survives.

"Somebody has to pay for the floors." This is the reason most of today's floors are conditional, and it is a serious one. The International Labour Organization estimates that guaranteeing even a basic social protection floor in low- and middle-income countries would cost an extra US$1.4 trillion a year, 3.3 per cent of their combined GDP. For the low-income countries alone the extra cost is US$308.5 billion a year, 52.3 per cent of their GDP, which the ILO calls "unfeasible in the short term without international support".[182] A floor that ignores numbers like these is a wish, and nothing in UP claims that floors are free. Two things bear on the cost. The first is that the physical scale of a floor is much smaller than what the world now uses. As the section on needs showed, decent living for everyone in 2050 has been estimated to need over 60 per cent less final energy than the world uses today, in a scenario that assumes advanced technology everywhere and much lower consumption by the biggest consumers.[63] That says nothing about the money cost, which is real. The second is that UP guarantees needs, not every want, and it does not promise abundance in advance. What counts as enough "rises as capacity grows", and every community that runs this way publishes its energy, materials and needs met, so that abundance is "a measured target shown in practice, not a promise".[23,56] UP grows side by side with the current system, and in its early stage it is a minority network inside it, so what it can show at first rests on today's evidence.[181] What survives the objection is real: the poorest countries cannot fund a floor alone today, and UP does not make that gap disappear. No decision of UP's may push anyone below a floor, and meeting the cost is the work.

"If needs are met regardless, people will stop working." UP has never answered this by trying to make people work. Its position on scarcity says plainly that its case against basic income "is not that people need to be made to work", and Chapter 3 set out what the evidence from cash transfers says about work.[183,184] In UP, "Merit decides who does skilled work; it never decides whose needs are met", labour is never forced, and "choosing not to work is not an illness".[72] One possible way to share necessary work is a published, fair rota that people sign up for, but "it is an expectation, not a law, and it never affects whether anyone's needs are met".[74] UP's agreed position says plainly that "Free-riding exists; it is met with openness and support, not pay or force", and that a community "does not assume this is enough": it publishes what work is needed and asks people directly. Its position on cooperation adds that whether feedback and support can do that work "is measured, not assumed".[185,186] The stories in this chapter show what people often do without being asked. Among the people who put Flint's record right were a resident, a hospital paediatrician and a team of volunteers working partly from one professor's own funds.[120,122,123] Fred Korematsu, in his eighties, filed a brief on behalf of Muslim prisoners held at Guantánamo Bay, and another the following year.[18] People like these take on problems because the problems are there, some of them at their own expense. Stories like these do not settle the question for a whole society, and UP does not claim they do.

"Floors are only words on paper." The evidence for this objection is strong, and this chapter has cited much of it. There are constitutions that promise rights their governments do not keep, constitutions of which, by one published estimate, only half live more than nineteen years, and a Supreme Court that upheld Korematsu's exclusion in the same opinion that called such restrictions "immediately suspect".[42,43,10] UP agrees with the premise. Its own agreed position, which names the first two of the six floors, says that UP "does not make oppression impossible; it puts two floors in its way that cannot be crossed".[52] What it adds to the paper is four things that today's floors usually

[182] International Labour Organization, *World Social Protection Report 2024–26: Universal social protection for climate action and a just transition*, Executive summary (ILO, 12 Sep 2024): "3.8 billion people are still entirely unprotected"; "To guarantee at least a basic level of social security through a social protection floor, low- and middle-income countries require an additional US$1.4 trillion or 3.3 per cent of the aggregate GDP (2024) of these countries per annum"; "low-income countries would need to invest an additional US$308.5 billion per year, equivalent to 52.3 per cent of their GDP, which is unfeasible in the short term without international support"; "Filling these financing gaps is not insurmountable if domestic capacities are built up, but this will require concerted international support, especially in the most vulnerable countries." https://www.ilo.org/sites/default/files/2024-09/SOCPRO_WSPR_2024_Executive_Summary_EN_Web.pdf . Checked at source, 1 Nov 2026.

[183] UP's agreed position on scarcity (round 4): when many people want the same thing, UP treats it as a signal and a problem to solve, sharing it meanwhile by rotation or by a decision of the stakeholders; "A price only signals; it does not make a rare thing less rare."; and UP's case against basic income "is not that people need to be made to work". Full wording in UP's agreed positions (the Position Ledger).

[184] See Chapter 3, "The selfish ape and the lazy worker", Table 3.2 and its notes, on what the evidence from cash transfers says about work.

[185] UP's agreed position on the work nobody wants (round 6): people contribute "because they are asked, because their peers see the work, and because the problem is theirs"; "A node does not assume this is enough." It publishes a labour budget and asks people directly, and any shortfall becomes a shared problem; "Free-riding exists; it is met with openness and support, not pay or force." Full wording in UP's agreed positions (the Position Ledger).

[186] UP's agreed position on cooperation (round 6, amended 31 October 2026): "UP's own position, to be tested in the open, is that visible contributions work as feedback, not punishment, and that free-riding is treated as a sign of distress or mismatch and met with support, not punishment. The commons Ostrom studied also used graduated sanctions, so whether feedback and support can do that work is measured, not assumed." Full wording in UP's agreed positions (the Position Ledger).

lack. UP's aim is measured person by person, not as a total, and a community that runs this way publishes its needs met, so a person left below the line is easier to see.[49,56] The record is public, so anyone can check it.[46] Power is kept spread out and there are no offices to hold, so no one gathers power by holding a position; concentration of power is treated as a standing danger, and everyone watches for it.[187,188] And everyone is a watcher, while anyone may leave any group at any time, taking what is theirs.[53,23] Whether these hold at scale has not been shown. In the early stage they rest on today's evidence; in the later stages they are reasoned projections, labelled as such.[181]

"In an emergency, the floors will have to give." The current system's own rules accept a version of this: even the treaty on civil and political rights lets a state suspend many rights in a public emergency, within limits.[31] Korematsu's exclusion was a wartime order defended as military necessity, and Egypt's emergency lasted three decades.[13,37,38] UP's answer is that it keeps no emergency powers to be abused: "UP has no lasting authority and no emergency powers", and authority in an emergency "belongs to the event, is one layer deep, like a parent's, and ends when the event ends".[172] The only allowance the floors make for speed is narrow. A protected freedom may be restricted before a hearing only briefly, to stop harm in progress, with a hearing promptly after. And if the needs floor and the living-world floor clash in a decision that cannot wait, people come first in the smallest way and for the shortest time, while restoration continues, and damage that cannot be undone is still never traded: the need is met another way.[23,94] UP's position adds that the best answer to emergencies is to prevent them, and that this work comes first.[172] What survives is the hard case that no rule can fully settle in advance: a fast-moving harm where the facts are unclear. The core's answer is narrow: the hearing comes first except briefly, to stop harm in progress, with a hearing promptly after. Beyond that, the core says its limits are the best that can be imagined now, an open problem that UP is built to keep improving.[23]

"Who decides what counts as a need, or a harm?" Definitions are political, the objection runs, and a majority could define needs to suit itself or impose one culture's idea of a good life on everyone. Need theorists such as Max-Neef and Gough give part of the answer: they argue that needs are few and much the same everywhere, while the ways of meeting them vary from place to place.[58,57] UP's core gives the rest. The collective defines and refines the floors through UP's method, and the same sentence forbids any decision to lower them.[23] Matters of taste "can never be made a rule for others".[139] One illustration of how those who cannot speak for themselves could be heard is to represent young children, future people and other living things by several independent simulations, with their assumptions published, which give input but never a vote.[106] Another, also given as an illustration, is to keep the definitions behind measures fixed over time, which makes a quiet move of the line much easier to see.[140] None of this ends the argument about where need ends and want begins. It makes the argument open, evidence-based and one-way: the line may be clarified or raised, never lowered.

"The floors will collide with each other." They will, and UP says so. Freedom of movement collides with the need to protect others, which is why the core sets limits on any restriction and calls those limits "an open problem".[23] Meeting needs can collide with the living world's capacity to recover, which is why UP treats such a clash as a failure to solve rather than a trade.[94] A truthful shared record could collide with privacy. The floor speaks of facts, measures and decisions, and the core also says that "Each person controls their own information and chooses what to share."[23,46] What survives the objection is a promise of work rather than a promise of perfection. Above the floors, as the core says, everything is open to the method.[23]

What survives all six objections is a more modest claim than UP's admirers might hope for, and a stronger one than its critics might expect. The floors are not free, they do not enforce themselves, and where they lie will be argued over. Each of those things is already true of the protections the current system has built. What UP changes is their standing: six floors under every decision at once, in the open, allowed to rise but never to fall.

What the floors are for

In 1983, four decades after his conviction, Fred Korematsu went back to court so that, in his words, it would "never happen again to any American citizen of any race, creed, or color".[15] LeeAnne Walters, Marc Edwards and Mona

[187] Core tenet: *Power kept spread out*: concentration of power in any form (wealth, position, information, access, expertise or machines) is treated as a standing danger; "Everyone in UP watches for concentrations of power and spreads them out again. The threat is never declared gone; it is watched and answered." Full wording in "The core of UP".

[188] Core tenet: *Open participation: anyone may take part; those affected decide*: there are no offices to hold; work is shared out, not owned; where work needs skill, skill is shown by open, testable standards that anyone can work toward and anyone can propose to change, and education is open to everyone at every age. Full wording in "The core of UP".

Hanna-Attisha spent months proving what the official record of Flint's water denied.[125] People like them are part of the current system's strength, and they are also a sign of where it is weak. In both stories the protections held, in the end, only after particular people took the problem up, and in Flint, by the task force's own account, the crisis would likely never have come to light without them. UP's floors are an attempt to make that kind of protection the default instead of the exception. They place needs, freedoms, the living world, the right to leave, the truth of the record, the freedom of the mind and the fair hearing under every decision, where no majority, emergency or expert may reach below them, and where everyone is a watcher.[23,53]

They do not make UP safe by themselves, and UP does not claim they do. They are a minimum and a direction: the collective may raise them as it learns and as its capacity grows, and the hardest part of them, the limits on restricting anyone's freedom, is marked in UP's own core as an open problem to keep improving.[23,164] Above them, everything is left to UP's method, to evidence and to the people affected. That is the subject of the chapters that follow: how UP's floors are read beside the stories people live by, how its systems stay open and its persons private, and how it could run, area by area, on top of floors that no decision may push anyone below.[189,46]

Chapter card: Chapter 7

- **Claim:** No decision in UP may push anyone below its floors: everyone's basic needs and protected freedoms, which no gain for others can buy; the living world's capacity to recover, so that damage that cannot be undone is never traded for a short-term need; the right to leave any group or community at any time, taking what is theirs; a truthful shared record; freedom of the mind; and a fair hearing, with the evidence open and a way to appeal. The collective may clarify or raise the floors, never lower them. UP guarantees needs, not every want, and it does not claim the floors make oppression impossible.
- **Core lines:** the tenet *Floors that are never crossed*, with its limits on any restriction, which the core marks as an open problem; the aim, measured person by person. Agreed positions: never below the floor; two floors in the way of oppression; people first, but irreversible damage is never traded; harm measured by health, happiness and wellbeing and refined by the collective; enough for everyone, set together and rising with capacity; no emergency powers.
- **Rule of thumb:** Before any decision, ask: does it push anyone below a floor, or trade away something that can never be restored? If so, look for another way.
- **What this is not:** a promise of every want; a list fixed forever; a claim that the current system protects nothing; a guarantee that no one will ever try to cross a floor.
- **Check yourself:**
    1. Name the six floors.
    2. What does "no gain for others can buy" rule out, and why does it matter that the aim is measured person by person?
    3. When meeting people's needs and protecting the living world seem to clash, what does UP do first, and what is the one thing it never trades?
    4. Under what limits may a protected freedom such as movement be restricted, and why does the core call those limits an open problem?
    5. Which floors were crossed in the opening story, and which ones did the current system eventually restore?
- **Open questions (for the wiki):** What should the needs floor contain, and how should "enough" be measured as capacity grows? How can restrictions on freedom be kept as rare, short and fair as possible? What counts as "theirs" when someone leaves a community that built things together? (Improve this page.)

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[189] Core tenet: *Reality over fiction*: decisions rest on real resources, real needs and measured outcomes; shared fictions such as money, corporations, governments and borders made large-scale cooperation possible and served a great purpose; UP keeps a fiction while it serves health, happiness and wellbeing, and replaces it gradually where technology can do its job without obvious downsides. Full wording in "The core of UP".

Chapter 8. Money: Why Its Jobs Can Be Done Without It, and How People Move Off It

In 1903 an American traveller named William Henry Furness III went to stay on Yap, a small island group in the western Pacific, and came home with the story of a family that had lost its fortune at sea and stayed rich.[1] Yap's money was made of stone. The islanders called their great coins *fei*: "large, solid, thick, stone wheels, ranging in diameter from a foot to twelve feet", with a hole in the centre so that a pole could be pushed through to carry them.[2] The stone was quarried on islands hundreds of miles away and brought back across open sea in canoes and on rafts.[2,3] When a stone was too large to move conveniently, nobody moved it when it changed hands. The new owner, Furness wrote, was "quite content to accept the bare acknowledgment of ownership", and the stone stayed where it was.[4]

His friend Fatumak told him of a family in a nearby village "whose wealth was unquestioned,–acknowledged by every one, and yet no one, not even the family itself, had ever laid eye or hand on this wealth". Generations earlier, an ancestor had been towing an enormous stone home on a raft when a storm forced the party to cut the raft adrift, and the stone sank. The village agreed that a few hundred feet of water should make no difference to its value, and so, Furness wrote, "The purchasing power of that stone remains, therefore, as valid as if it were leaning visibly against the side of the owner's house".[5]

The same agreement could be turned into a lever. After Germany bought the Caroline Islands from Spain at the end of the nineteenth century, its administrators ordered the chiefs of Yap to repair the island's footpaths, and the order was ignored. So they sent a man to the meeting houses of the disobedient districts, where he "simply marked a certain number of the most valuable *fei* with a cross in black paint to show that the stones were claimed by the government." The people, "thus dolefully impoverished, turned to and repaired the highways to such good effect from one end of the island to the other, that they are now like park drives. Then the government dispatched its agents and erased the crosses."[6] Not one stone had moved.

In 1991 the economist Milton Friedman retold Furness's story and set it beside one from his own country. In the early 1930s the Bank of France asked the Federal Reserve Bank of New York to keep part of its gold on France's account, and officials went to their vault, "put in separate drawers the correct amount of gold ingots, and put a

[1] William Henry Furness 3rd, *The Island of Stone Money: Uap of the Carolines* (Philadelphia: J. B. Lippincott Company, 1910): "When I visited The Caroline Islands in 1903"; Furness spells the island "Uap". Project Gutenberg eBook #72830, https://www.gutenberg.org/cache/epub/72830/pg72830.txt . Checked at source, 1 Nov 2026.

[2] Furness, *The Island of Stone Money* (1910): "This medium of exchange they call *fei,* and it consists of large, solid, thick, stone wheels, ranging in diameter from a foot to twelve feet, having in the centre a hole varying in size with the diameter of the stone, wherein a pole may be inserted sufficiently large and strong to bear the weight and facilitate transportation."; the stones "were originally quarried and shaped in Babelthuap, one of The Pelao Islands, four hundred miles to the southward, and brought to Uap by some venturesome native navigators, in canoes and on rafts". https://www.gutenberg.org/cache/epub/72830/pg72830.txt . Checked at source, 1 Nov 2026.

[3] Scott M. Fitzpatrick and Stephen McKeon, "Banking on Stone Money: Ancient Antecedents to Bitcoin", *Economic Anthropology* 7(1):7–21 (2020), abstract: "Yapese islanders sailed to the Palauan archipelago 250 miles away to carve their famous stone money disks (rai) from limestone and then transported them back for use as exchange valuables in various social transactions. While rai were not strictly currency"; stone money "used oral ledgers solidified through social networks to create accurate and unbroken lines of communication". Furness gives the distance as four hundred miles; each figure is attributed to its source. Abstract read at https://ideas.repec.org/a/bla/ecanth/v7y2020i1p7-21.html . Checked at source, 1 Nov 2026.

[4] Furness, *The Island of Stone Money* (1910): "After concluding a bargain which involves the price of a *fei* too large to be conveniently moved, its new owner is quite content to accept the bare acknowledgment of ownership and without so much as a mark to indicate the exchange, the coin remains undisturbed on the former owner's premises." https://www.gutenberg.org/cache/epub/72830/pg72830.txt . Checked at source, 1 Nov 2026.

[5] Furness, *The Island of Stone Money* (1910): "My faithful old friend, Fatumak, assured me that there was in a village nearby a family whose wealth was unquestioned,–acknowledged by every one, and yet no one, not even the family itself, had ever laid eye or hand on this wealth"; "A violent storm arose and the party, to save their lives, were obliged to cut the raft adrift, and the stone sank out of sight. When they reached home, they all testified that the *fei* was of magnificent proportions and of extraordinary quality, and that it was lost through no fault of the owner."; "a few hundred feet of water off shore ought not to affect its marketable value"; "The purchasing power of that stone remains, therefore, as valid as if it were leaning visibly against the side of the owner's house". https://www.gutenberg.org/cache/epub/72830/pg72830.txt . Checked at source, 1 Nov 2026.

[6] Furness, *The Island of Stone Money* (1910): "When the German Government assumed the ownership of The Caroline Islands, after the purchase of them from Spain in 1898, many of these paths or highways were in bad condition, and the chiefs of the several districts were told that they must have them repaired"; the command "still remained unheeded"; a man was sent "to every *failu* and *pabai* throughout the disobedient districts, where he simply marked a certain number of the most valuable *fei* with a cross in black paint to show that the stones were claimed by the government. This instantly worked like a charm; the people, thus dolefully impoverished, turned to and repaired the highways to such good effect from one end of the island to the other, that they are now like park drives. Then the government dispatched its agents and erased the crosses." Furness gives the year of purchase as 1898; the chapter says "at the end of the nineteenth century" because the date of the treaty of sale is not among this chapter's sources. https://www.gutenberg.org/cache/epub/72830/pg72830.txt . Checked at source, 1 Nov 2026.

label or mark on those drawers indicating that they were the property of the French". Nothing left the building. Yet the markets treated the dollar as weaker and the franc as stronger, and the so-called "drain" of gold was, in Friedman's account, one of the factors behind the American banking panic of 1933. Both stories, he concluded, showed "how important"myth," unquestioned belief, is in monetary matters."[7] Modern researchers add that what kept track of who owned the stones of Yap was "oral ledgers solidified through social networks", a record held in common memory.[3]

Three things in these stories matter for UP. The stone money worked: it let a whole island keep track of wealth and obligation for generations. What made it work was not the stone but an agreement, a shared record of who owned what. And the agreement could drift a long way from the physical world. A family was rich in a stone no living person had seen; an island repaired its roads because of some paint; a great economy wobbled because of labels on drawers. The decisions followed the record, not the thing.

That gap between the record and the thing is the subject of UP's seventh tenet, *Reality over fiction*. It holds that shared fictions such as money, corporations and governments made large-scale cooperation possible and served a great purpose; that decisions should rest on real resources, real needs and measured outcomes; and that UP keeps a fiction while it serves health, happiness and wellbeing, and replaces it gradually where technology can do its job without obvious downsides.[8] This chapter and the two that follow take the three great fictions one at a time: money here, government in Chapter 9 and the corporation in Chapter 10. Each gets the same treatment, because each deserves it. Each did real work, and the gap between it and the world it stands for has real costs.

Money comes first because it reaches furthest. It decides, more than anything else in the current system, who eats, who is housed and what gets made, and the other two fictions run on it. This chapter makes the case that more and more of money's jobs can be done without it, without obvious downsides, and shows how. It begins with what money is and what it does, and what running on it costs. It then turns to where the idea of an economy without money came from, from Otto Neurath and Buckminster Fuller to Jacque Fresco, and to the heart of the matter: the seven developments that could take over money's jobs, from abundance that technology creates to an intense focus on what is truly scarce, and how demand can still be read once the price is gone. After that it follows the order in which the change would come. Early effort goes into basic needs, wider and wider sharing builds on them, and at the end attention turns to the rare and difficult cases that remain. Then come two questions of direction: why UP itself does not run on money, and who it is that moves off money (in the reading UP's author has set out, now going through UP's method, it is people, one life at a time, not UP). The chapter also looks at the future that waits if powerful new technology arrives inside today's money system instead. It ends with how such a change fails when it is forced, how it could run stage by stage, and the strongest objections.

Stories that let strangers work together

The idea that money is a kind of shared story has its clearest modern statement in the historian Yuval Noah Harari's *Sapiens*, one of the sources UP draws on directly.[9] Harari starts from a limit on human groups: "Sociological research has shown that the maximum 'natural' size of a group bonded by gossip is about 150 individuals."[10] The research behind that figure is largely the anthropologist Robin Dunbar's, whose 1993 paper found that group size in primates "covaries with relative neocortical volume" and predicted a natural group size for humans close to that of

[7] Milton Friedman, "The Island of Stone Money", Working Papers in Economics E-91-3, The Hoover Institution, February 1991 (later chapter 1 of his *Money Mischief*): the Bank of France asked the Federal Reserve Bank of New York "to convert dollar assets that it had in the U.S. into gold" and "simply to store the gold on the Bank of France's account"; officials "went to their gold vault, put in separate drawers the correct amount of gold ingots, and put a label or mark on those drawers indicating that they were the property of the French"; "The result was headlines in the financial newspapers about"the loss of gold,"";"The markets regarded the U.S. dollar as weaker, the French franc as stronger. The so-called "drain" of gold by France from the United States was one of the factors that ultimately led to the banking panic of 1933."; "Is the one practice really more rational than the other? What both examples — and numerous additional ones that could be listed — illustrate is how important"myth," unquestioned belief, is in monetary matters." Read in the scanned text at https://archive.org/stream/IslandOfStoneMoney/island%20of%20stone%20money_djvu.txt (line breaks in the scan removed). Checked at source, 1 Nov 2026.

[8] Core tenet: *Reality over fiction*, in full: "Decisions rest on real resources, real needs and measured outcomes. Shared fictions (money, corporations, governments, borders) made large-scale cooperation possible and served a great purpose. UP keeps a fiction while it serves health, happiness and wellbeing, and replaces it gradually where technology can do its job without obvious downsides." Also in "The core of UP".

[9] UP's study lessons, "The frame": UP starts from its own sources, among them "Harari's shared fictions", and then brings in the critics. Full wording in UP's study lessons.

[10] Yuval Noah Harari, *Sapiens: A Brief History of Humankind*, tenth anniversary edition (New York: Harper Perennial, 2024; first published in Hebrew 2011, in English 2014), chapter 2, "The Tree of Knowledge": "Sociological research has shown that the maximum 'natural' size of a group bonded by gossip is about 150 individuals."; below this threshold groups "can maintain themselves based mainly on intimate acquaintance and rumour-mongering"; "But once the threshold of 150 individuals is crossed, things can no longer work that way." Read in the UP library's text of the book. Checked 1 Nov 2026.

hunter-gatherer bands.[11] Yet people now live in cities of millions and trade every day with strangers on the other side of the world. Harari's explanation is that humans learned to cooperate through stories: "Large numbers of strangers can cooperate successfully by believing in common myths."[12] Money, nations, laws and companies are of this kind: "There are no gods in the universe, no nations, no money, no human rights, no laws, and no justice outside the common imagination of human beings."[13]

The word "fiction" can mislead, so it is worth being exact. Harari does not mean a lie. Imagined orders, he writes, "are not evil conspiracies or useless mirages. Rather, they are the only way large numbers of humans can cooperate effectively."[14] The philosopher John Searle made the same point with more care in 1995: some facts "are only facts by human agreement", and he was "thinking of things like money, property, governments, and marriages."[15] A five-dollar bill is a piece of paper, and it is money only because people treat it as money. Searle set such "institutional facts" beside "brute" facts, such as the snow near the top of Everest, which need no one's agreement.[16] An institutional fact is still a fact: the person who decides privately that money is imaginary will still be evicted when the rent is not paid. What sets it apart is what keeps it in being. "An imagined order," Harari writes, "is always in danger of collapse, because it depends upon myths, and myths vanish once people stop believing in them."[17]

This is the sense in which UP uses the word. Its tenet names money, corporations and governments among the shared fictions that made large-scale cooperation possible and served a great purpose, and UP's agreed position on useful fictions calls them civilisational upgrades.[8,18] The same position adds the half that this chapter is mostly about: fictions are useful, but "reality is better wherever technology can replace a fiction without obvious downsides".[18] Freedom is an agreement in exactly Searle's sense, and UP keeps it on purpose, because some fictions persist where the alternatives would harm health, happiness and wellbeing.[18,19] Money, government and corporations are different. The same position names them as ripe to be reduced slowly, "through ever more powerful coordination and shared problem solving with AI".[18] Later in this chapter it will matter who does the reducing. UP's author has given a reading of this, now going through UP's method and not yet an agreed position:

[11] R. I. M. Dunbar, "Coevolution of neocortical size, group size and language in humans", *Behavioral and Brain Sciences* 16(4):681–694 (1993), abstract: "Group size covaries with relative neocortical volume in nonhuman primates. This regression equation predicts a group size for modern humans very similar to that for hunter-gatherer and traditional horticulturalist societies." Harari's own note for the passage on 150 cites Dunbar's *Grooming, Gossip and the Evolution of Language*; Leslie C. Aiello and R. I. M. Dunbar, "Neocortex Size, Group Size, and the Evolution of Language", *Current Anthropology* (1993); and R. A. Hill and R. I. M. Dunbar, "Social Network Size in Humans", *Human Nature* 14:1 (2003). https://www.cambridge.org/core/journals/behavioral-and-brain-sciences/article/coevolution-of-neocortical-size-group-size-and-language-in-humans/4290FF4D7362511136B9A15A96E74FEF . Checked at source, 1 Nov 2026.

[12] Harari, *Sapiens* (2024), chapter 2: "How did Homo sapiens manage to cross this critical threshold, eventually founding cities comprising tens of thousands of inhabitants and empires ruling hundreds of millions? The secret was probably the appearance of fiction. Large numbers of strangers can cooperate successfully by believing in common myths." Read in the UP library's text of the book. Checked 1 Nov 2026.

[13] Harari, *Sapiens* (2024), chapter 2: "Two lawyers who have never met can nevertheless combine efforts to defend a complete stranger because they both believe in the existence of laws, justice, human rights"; "Yet none of these things exists outside the stories that people invent and tell one another. There are no gods in the universe, no nations, no money, no human rights, no laws, and no justice outside the common imagination of human beings." Read in the UP library's text of the book. Checked 1 Nov 2026.

[14] Harari, *Sapiens* (2024), chapter 6, "Building Pyramids": "We believe in a particular order not because it is objectively true, but because believing in it enables us to cooperate effectively and forge a better society. Imagined orders are not evil conspiracies or useless mirages. Rather, they are the only way large numbers of humans can cooperate effectively." Read in the UP library's text of the book. Checked 1 Nov 2026.

[15] John R. Searle, *The Construction of Social Reality* (New York: Free Press, 1995), chapter 1, opening paragraph: "there are portions of the real world, objective facts in the world, that are only facts by human agreement. In a sense there are things that exist only because we believe them to exist. I am thinking of things like money, property, governments, and marriages." Read in the UP library's text of the book (a scanned copy whose text has scanning errors, so it was read by eye). Checked 1 Nov 2026.

[16] Searle, *The Construction of Social Reality* (1995), chapter 1: he contrasts facts such as "that Mount Everest has snow and ice near the summit" with facts that depend on human agreement, which he had "baptized" "institutional facts", "in contrast to noninstitutional, or 'brute,' facts"; "Institutional facts are so called because they require human institutions for their existence."; later in the book, "a type of thing is money only if people believe it is money". Read in the UP library's text of the book (scanned; read by eye). Checked 1 Nov 2026.

[17] Harari, *Sapiens* (2024), chapter 6: "A natural order is a stable order. There is no chance that gravity will cease to function tomorrow, even if people stop believing in it. In contrast, an imagined order is always in danger of collapse, because it depends upon myths, and myths vanish once people stop believing in them." Read in the UP library's text of the book. Checked 1 Nov 2026.

[18] UP's agreed position on useful fictions, in full: "Large-scale human cooperation was built on shared fictions: stories people agree to believe, such as money, government and the company. They were civilisational upgrades and served a great purpose. UP holds that fictions are useful, but that reality is better wherever technology can replace a fiction without obvious downsides. Some fictions will persist because the alternatives would harm health, happiness and wellbeing. Freedom is one, and UP keeps it, along with the protected freedoms and the commons, visible and open to change through the decision steps (#1). Others, money, government and corporations, are ripe to be reduced slowly, through ever more powerful coordination and shared problem solving with AI. A fiction is retired when technology can replace what it does without obvious downsides; until then it is reduced as far as possible." Also in UP's agreed positions (the Position Ledger).

[19] Core tenet: *Floors that are never crossed*: everyone's basic needs and protected freedoms, which no gain for others can buy; the living world's capacity to recover; the right to leave any group or community at any time, taking what is theirs; "a truthful shared record, so facts, measures and decisions are never falsified"; freedom of the mind; and "a fair hearing, so no one's freedom is restricted without a fair, evidence-based hearing, with the evidence open to them and a way to appeal." "UP guarantees needs, not every want." The collective may clarify or raise the floors, but no decision may lower them or push anyone below them; the tenet's starting example of freedoms is "thought, belief, speech, movement and privacy". "A protected freedom such as movement may be restricted only to protect others or the person, only through an evidence-based court process, for the shortest time needed, and never below the needs floor." Full wording in "The core of UP".

it is people who do it, each person relying on money less as UP meets more of their needs, and more people taking part.[20]

Three things follow, and the rest of the chapter turns on them. Because these institutions are agreements, they can be changed by agreement: in UP, the people affected decide, and UP is never imposed.[21,22] Because they do real work, each of their jobs has to be done some other way before it can be let go. And because they rest on belief, the people who live inside them can come to mistake the agreement for the world itself. UP's settlement record notes that the tenet rules out exactly that, "Treating prices, profit or national lines as reality", together with "abolishing institutions by decree".[23]

Money, and the jobs it does

Money. The usual story of money's invention begins with barter: a farmer has grain and wants shoes, the shoemaker does not want grain, and so people settled on some common good that everyone would accept. The evidence does not support it. The anthropologist David Graeber quotes the conclusion of Caroline Humphrey's study of barter: "No example of a barter economy, pure and simple, has ever been described, let alone the emergence from it of money; all available ethnography suggests that there never has been such a thing."[24] What the earliest records show instead is accounting. In the temple cities of Sumer, Graeber writes, money was "actually created by bureaucrats in order to keep track of resources and move things back and forth between departments."[25] On Graeber's account, money began in Sumer much as it worked on Yap: as a shared record of who owed what to whom. The economist Narayana Kocherlakota reached a related conclusion from theory in 1998, proving, in his model economies, that whatever can be achieved with money can also be achieved with a complete enough record of everyone's dealings, so that, "from a technological point of view, money is equivalent to a primitive form of memory."[26]

Money does three jobs: in Graeber's summary, "medium of exchange, unit of account, and store of value."[27] It lets strangers trade without trusting each other, it lets everything be counted in one unit, and it lets a claim be carried forward in time. Harari gives it the credit it is due: "money is the most universal and most efficient system of mutual trust ever devised."[28] And today's money is closer to Yap's stones than most people realise. In 2014 three economists at the Bank of England explained that "Commercial banks create money, in the form of bank deposits,

[20] Clarification of the tenet *Reality over fiction* and of UP's agreed position on useful fictions, set out by UP's author on 14 November 2026 and going through UP's method; until the UP Moderator enters it in the Position Ledger, it is the author's stated reading, not yet an agreed position. In substance: the gradual change is in people, not in UP; UP's own system does not run on money, prices, a UP government or UP companies; each person relies on money, governments and corporations less as they use UP more, and the number of people doing so grows; where UP meets the current system (taxes, land title, the legal form needed to hold property, partnership with local governments), it uses only what the law requires, openly recorded and kept to a minimum, and that contact shrinks toward none as the people of an area move fully to UP. Record: LXW Shared Brain, decisions, "2026-11-14 1015 … Gradual change is people's" and "2026-11-14 1005 …".

[21] Core tenet: *The method: shared problem solving with evidence*: problems are named, measured and offered as work to anyone; the people a problem affects decide its outcome; solutions are proposed with their evidence, tested and compared, and "a better idea replaces a worse one"; "Every claim that guides shared action can be tested and is open to being proved wrong."; matters of taste are never made rules for others. Its last words are "Evidence proposes; people decide." Full wording in "The core of UP".

[22] Core tenet: *Freely joined, ethically grown*, in full: "UP is never imposed. No one is forced to join, to work or to give up what is theirs. It grows by being useful, building on what people already do, and it acts only by ethical means. A means is ethical when it serves the health, happiness and wellbeing of all and crosses none of the floors; UP never starts harm against anyone. What counts as ethical is defined and refined by the collective through UP's method." Also in "The core of UP".

[23] UP's settlement record (the Position Ledger, the entry for the tenet *Reality over fiction*, settled in round 8, 23 Oct 2026): the tenet "Rules out: Treating prices, profit or national lines as reality; abolishing institutions by decree." Full wording in UP's agreed positions (the Position Ledger).

[24] David Graeber, *Debt: The First 5,000 Years* (Brooklyn: Melville House, 2011), chapter 2, "The Myth of Barter": "The definitive anthropological work on barter, by Caroline Humphrey, of Cambridge, could not be more definitive in its conclusions:"No example of a barter economy, pure and simple, has ever been described, let alone the emergence from it of money; all available ethnography suggests that there never has been such a thing."" Read in the UP library's text of the book. Checked 1 Nov 2026.

[25] Graeber, *Debt* (2011), chapter 2: "by the time the curtain goes up on Mesopotamian civilization around 3500, temple administrators already appear to have developed a single, uniform system of accountancy"; "One shekel's weight in silver was established as the equivalent of one gur, or bushel of barley."; "It's easy to see that"money" in this sense is in no way the product of commercial transactions. It was actually created by bureaucrats in order to keep track of resources and move things back and forth between departments. Temple bureaucrats used the system to calculate debts (rents, fees, loans . . .) in silver." Read in the UP library's text of the book. Checked 1 Nov 2026.

[26] Narayana R. Kocherlakota, "Money Is Memory", *Journal of Economic Theory* 81(2):232–251 (1998), abstract: "Memory is defined as knowledge on the part of an agent of the full histories of all agents with whom he has had direct or indirect contact in the past."; "The main proposition proves that any allocation that is feasible in an environment with money is also feasible in the same environment with memory. Depending on the environment, the converse may or may not be true. Hence, from a technological point of view, money is equivalent to a primitive form of memory." Abstract read at https://ideas.repec.org/a/eee/jetheo/v81y1998i2p232-251.html . Checked at source, 1 Nov 2026.

[27] Graeber, *Debt* (2011), chapter 2: "Economists generally speak of three functions of money: medium of exchange, unit of account, and store of value." Read in the UP library's text of the book. Checked 1 Nov 2026.

[28] Harari, *Sapiens* (2024), chapter 10: "In other words, money isn't a material reality – it is a psychological construct."; "Money is accordingly a system of mutual trust, and not just any system of mutual trust: money is the most universal and most efficient system of mutual trust ever devised."; "Why do I believe in the cowry shell or gold coin or dollar bill? Because my neighbours believe in them." Read in the UP library's text of the book. Checked 1 Nov 2026.

by making new loans", and that bank deposits made up "the vast majority — 97% of the amount currently in circulation".[29] The dollar's last tie to gold went in 1971, when, in the words of the Federal Reserve's own history, "the international monetary system turned into a fiat one."[30] None of this is a scandal. It works most of the time, and it lets billions of people who will never meet keep accounts with one another every day. When belief in a money fails, as it did in Zimbabwe in 2008, people do not give up on shared records; they reach quickly for another one, and in Zimbabwe, in the words of the economists Steve Hanke and Alex Kwok, "Within weeks the entire economy spontaneously"dollarized" and prices stabilized."[31]

Money has two companions in the tenet, and they get their own chapters. The company, which lets many people pool their money and effort in work too long or risky for any one of them, is the subject of Chapter 10. Government, which lets millions of strangers live under common rules and settle disputes without fighting, is the subject of Chapter 9. Both run on money, and much of what goes wrong in them goes wrong through it. That is one more reason to start here.

What money does. Graeber's three functions describe what money is. For UP the more useful question is what money is *for*: which jobs it does in people's lives, because those are the jobs that would have to be done some other way. Five stand out.

The first is **rationing what is scarce**. When there is not enough of something for everyone who wants it, a price decides who gets it: whoever will pay most, or whoever can.

The second is **signalling**. A rising price tells producers that people want more of something, and a falling one that they want less. This is the job Hayek admired most, and the one the next sections take most seriously.

The third is **getting work done**. A wage pays people to do what needs doing, and, in the current system, it also decides whether the person who does it can eat. Chapter 14 follows that job in full.

The fourth is **counting costs**. A price puts everything in one unit so that very different things can be compared, and it lets strangers keep accounts with one another.

The fifth is **carrying value through time**. Savings, loans and investment let a claim made today be used years later, and let a community gather the means for something large before it can be built.

Each of these jobs stands in for something people could not see or handle directly. A price stands in for knowing how much of a thing there is, who needs it and what it really costs to make. A wage stands in for knowing what work needs doing and making sure that whoever does it is provided for. A balance stands in for a record of who has given what to whom. When money was invented there was no other way to know these things at scale, so the stand-in was the best tool for the job. The next section shows what the stand-in costs, and the sections after it show why, for more and more of these jobs, it is no longer the only way.

What running on money costs

A stand-in is never the thing it stands for, and the gap between them is where the trouble starts. Most of the time the gap is small enough to ignore. Sometimes it opens wide, and when it does, people inside the fiction can do something that makes perfect sense by the fiction's own rules and no sense at all in the real world.

In 1933, in the depth of the Depression, "over one-third of US households had some member out of work and many people experienced hunger", according to an article published by the Federal Reserve Bank of Minneapolis. To raise hog prices, the government paid farmers to have their young pigs killed so that fewer would reach the

[29] Michael McLeay, Amar Radia and Ryland Thomas, "Money creation in the modern economy", Bank of England *Quarterly Bulletin* 2014 Q1: "One common misconception is that banks act simply as intermediaries, lending out the deposits that savers place with them."; "Commercial banks create money, in the form of bank deposits, by making new loans."; "Of the two types of broad money, bank deposits make up the vast majority — 97% of the amount currently in circulation."; "Although commercial banks create money through their lending behaviour, they cannot in practice do so without limit."; the limits named include market forces, the risks of lending and "the monetary policy of the Bank of England". https://www.bankofengland.co.uk/-/media/boe/files/quarterly-bulletin/2014/money-creation-in-the-modern-economy.pdf . Checked at source, 1 Nov 2026.

[30] Sandra Kollen Ghizoni, "Nixon Ends Convertibility of US Dollars to Gold and Announces Wage/Price Controls", Federal Reserve History (written as of 22 Nov 2013): "On the evening of August 15, 1971, Nixon addressed the nation on a new economic policy"; "The first order was for the gold window to be closed. Foreign governments could no longer exchange their dollars for gold; in effect, the international monetary system turned into a fiat one." https://www.federalreservehistory.org/essays/gold-convertibility-ends . Checked at source, 1 Nov 2026.

[31] Steve H. Hanke and Alex K. F. Kwok, "On the Measurement of Zimbabwe's Hyperinflation", *Cato Journal* 29(2) (2009), from p. 353: "Even though the Reserve Bank of Zimbabwe produced an ever-increasing torrent of money, and with it ever more inflation"; inflation "soared, peaking at an astounding monthly rate of 79.6 billion percent in mid-November 2008. At that point, as one of us anticipated, people simply refused to use the Zimbabwe dollar"; "Within weeks the entire economy spontaneously"dollarized" and prices stabilized." https://www.cato.org/sites/cato.org/files/serials/files/cato-journal/2009/5/cj29n2-8.pdf . Checked at source, 1 Nov 2026.

market. “Some 5 million light hogs, averaging 53 pounds, were simply”tanked” or processed into inedible meat and bone meal.”[32] The policy had a logic, and UP should be as fair as the article is: taking part was voluntary, the meat of the sows went to food relief, and cutting supply “made good sense as part of the administration’s emergency efforts to raise prices and incomes for the rural poor”.[32] Within a system where a farmer’s family eats only if the price of hogs is high enough, destroying food was a reasonable way to keep farmers alive. That is the point. The decision was rational inside the fiction, and it meant destroying food in a hungry country.

It happened again within living memory. In April 2020, as the pandemic closed restaurants and schools, dairy farmers in Wisconsin began pouring milk away, about 30,000 gallons a day at one farm alone. “Everybody’s rushing to the grocery store to get food,” the farmer Ryan Elbe said, in a report carried by the Associated Press, “and we have food that’s literally being dumped down the drain.”[33] Part of the problem was physical: processing plants were already running at capacity.[34] But the milk’s routes to people ran through buyers who paid for it, and when many of those buyers closed, much of the food that existed did not reach the people who needed it. Later that month the US Department of Agriculture announced that it would buy up to $3 billion of produce, dairy and meat for food banks and other non-profits.[35]

These are not rare accidents. They are the everyday shape of a system in which the record decides where things go. According to the UN Environment Programme, as reported by UN News, “1.05 billion tonnes of food went to waste” in 2022, and “19 per cent of food available to consumers was lost overall at retail, food service, and household levels”; the Food and Agriculture Organization adds that “13.2 percent of food is lost in the supply chain after harvest on farms and before the retail stages.”[36,37] In 2025, by the FAO’s estimate, “around 645 million people were affected by hunger”, an estimate of people without enough to eat over a year, not a count of people starving.[38] Not all of that lost and wasted food could have reached hungry people, and the sources do not claim it could; much of it spoils where it is grown or is thrown away far from where it is needed. But the pattern is the one the milk showed. Some of the food exists where the need exists; part of what is missing is a way for the one to reach the other that does not depend on someone being able to pay.

The same gap produces scarcity where there need be none. In December 1924 the world’s leading lightbulb makers met in Geneva and formed what became known as the Phoebus cartel. By then, the historian Markus Krajewski writes, “the burning time was easily 2,500 hours or more”; yet “By early 1925, this became codified at 1,000 hours for a pear-shaped household bulb”, and “If any factory submitted bulbs lasting longer or shorter than

[32] Edward Lotterman, “The porcine slaughter of the innocents”, Federal Reserve Bank of Minneapolis, 1 January 1999: “The action to reduce supply by killing some portion of the pigs born in the spring of the year made good sense as part of the administration’s emergency efforts to raise prices and incomes for the rural poor.”; it “was a public relations disaster”; “In 1933 over one-third of US households had some member out of work and many people experienced hunger. Killing hogs to raise hog prices at such a time struck many as wrong-headed.”; “Participation in the program was voluntary, and farmers were paid for pigs that were killed.”; “Some 5 million light hogs, averaging 53 pounds, were simply”tanked” or processed into inedible meat and bone meal. Sows, which were required to be visibly pregnant for acceptance into the program, were processed into meat that was donated to various local food relief programs.”; “Historical records show that some 6.4 million pigs and sows were killed at an expenditure of $31 million.” (citing *Livestock Under the AAA*, The Brookings Institution, 1935). https://www.minneapolisfed.org/article/1999/the-porcine-slaughter-of-the-innocents . Checked at source, 1 Nov 2026.

[33] Associated Press, “Dairy farmers begin to flush away milk due to coronavirus”, 3 April 2020, as published by KUTV: “Many dairy processing plants across Wisconsin have more product than they can handle and that’s forced farmers to begin dumping their milk down the drain.”; at Golden E Dairy near West Bend, “Farmer Ryan Elbe told WISN-TV they are dumping about about 30,000 gallons (113,562 litres) a day.”; “About one-third of the state’s dairy products, mostly cheese, are sold in the food-service trade.”; “Everybody’s rushing to the grocery store to get food, and we have food that’s literally being dumped down the drain.” https://kutv.com/news/nation-world/dairy-farmers-begin-to-flush-away-milk-due-to-coronavirus-1 . Checked at source, 1 Nov 2026.

[34] “COVID-19 leads to milk dumping, plunging dairy prices”, *Farm Progress*, 3 April 2020: “People are buying so much milk that stores are implementing limits, yet milk is being dumped at dairy farms.”; “some note they are being limited to 1 or 2 gallons because grocery stores can’t keep enough milk on the shelves”; “The problem is cheese consumption has dropped like a rock in the past couple of weeks”; the co-operative’s statement: “Due to the excess milk and plants already operating at capacity, there is more milk right now than space available in processing plants.” https://www.farmprogress.com/dairy/covid-19-leads-milk-dumping-plunging-dairy-prices . Checked at source, 1 Nov 2026.

[35] US Department of Agriculture, Agricultural Marketing Service, “USDA to Purchase Up to $3 Billion in Agricultural Commodities, Issue Solicitations for Interested Participants”, bulletin sent 19 April 2020: “As part of President Trump and Secretary Perdue’s April 17th announcement of a $19 billion Coronavirus Farm Assistance Program”, USDA would “purchase and distribute up to $3 billion of agricultural products to those in need” and “provide a pre-approved box of fresh produce, dairy, and meat products to food banks and other non-profits serving Americans in need.”; “USDA will issue a solicitation in the next two weeks to invite proposals”. https://content.govdelivery.com/accounts/USDAAMS/bulletins/28747c8 . Checked at source, 1 Nov 2026.

[36] UN News, “With 783 million people going hungry, a fifth of all food goes to waste” (27 Mar 2024), reporting the UN Environment Programme’s *Food Waste Index Report 2024*: “latest data from 2022 shows 1.05 billion tonnes of food went to waste.”; “19 per cent of food available to consumers was lost overall at retail, food service, and household levels.” https://news.un.org/en/node/1148036 . Checked at source, 13 Nov 2026.

[37] Food and Agriculture Organization of the United Nations, “Food Loss and Food Waste” (policy support): “Globally, 13.2 percent of food is lost in the supply chain after harvest on farms and before the retail stages.” https://www.fao.org/policy-support/policy-themes/food-loss-and-food-waste/en . Checked at source, 13 Nov 2026.

[38] FAO, IFAD, UNICEF, WFP and WHO, joint news release “UN report: Global hunger levels ease for third consecutive year as regional disparities persist” (Rome, 21 Jul 2026), on *The State of Food Security and Nutrition in the World 2026*: “around 645 million people were affected by hunger in 2025”, “a reduction of nearly 14 million compared to 2024”; 7.8 percent of the global population, down from 8.1 percent in 2024. The measure is the prevalence of undernourishment: people whose usual food intake over a year is too low, not a count of people starving. https://www.fao.org/newsroom/detail/un-report–global-hunger-levels-ease-for-third-consecutive-year-as-regional-disparities-persist/en ; same figure in UNICEF’s copy of the release. Checked at source, 13 Nov 2026.

the regulated life span for its type," "the factory was obliged to pay a fine."[39] Making things that fail on purpose is now an offence in France, where the law of 2015 on the energy transition "reconnaît le délit d'obsolescence programmée", the offence of planned obsolescence, punishable by up to two years in prison.[40] And from July 2026 the countries of the European Union were required to apply a directive that "lays down common rules strengthening the provisions related to the repair of goods".[41] Laws like these are welcome, and UP counts them among the current system's gains. They are also patches: each one is needed because the record rewards selling more over making things last. UP's agreed position on scarcity names this kind outright: "Much of today's scarcity is artificial: planned obsolescence, patents and other enclosures, hoarding, money rationing and failures of distribution."[42] When a thing is made to fail, or is kept from people who need it because they cannot pay, or is hoarded because it might be worth more later, the scarcity is real to the person who goes without, but it is made by the record, not by the world.

The gap has one more shape, and UP's agreed positions name it directly. The current system "often monetises a problem instead of solving it, and sometimes the problem's persistence is what pays."[43] In April 2018 analysts at Goldman Sachs, writing to investors about gene therapies that might cure a disease with a single treatment, put the question plainly: "Is curing patients a sustainable business model?" Their example was the hepatitis C cures of Gilead Sciences, which achieved cure rates of more than 90 per cent and whose US sales "peaked at $12.5 billion in 2015, but have been falling ever since", because the cures were using up the pool of people to treat. The prospect of a one-shot cure, the report said, "carries tremendous value for patients and society", and yet it could be a challenge for companies "looking for sustained cash flow".[44] The analysts were describing a pressure, not a plot, and companies do still develop cures. But the pressure is real, and it points away from the outcome people actually want. For a firm that sells replacements, a product that lasts is a lost sale; for a lender, interest is earned for as long as a debt is outstanding.

What a price leaves out has its own cost. A company's books count what it pays for, and what it does not pay for falls outside them: the river it fouls, the air its neighbours breathe. Economists call these costs externalities, and Chapter 10 follows them. Government's version, where rules come to serve those with the most money and access, is traced in Chapters 5, 6 and 9. Both run through money, because what is not priced is, by the record's rules, free.

None of this means the people inside these systems are wicked. Most of them are doing what the record rewards. That is exactly the problem, and it is why, on most of the major issues of our time, patching the distortions one at a time, inside the fiction, keeps falling behind: each patch is another rule laid over the same record, and the record keeps pulling decisions back toward what pays. Chapter 2 showed how the current system keeps losing that race even as it improves.[45] UP's agreed position on power warns of the same trap from another side: "chasing each

[39] Markus Krajewski, "The Great Lightbulb Conspiracy", *IEEE Spectrum* (24 Sep 2014): at a meeting in Geneva on 23 December 1924, "the group founded the Phoebus cartel, a supervisory body that would carve up the worldwide incandescent lightbulb market"; "The household lightbulb in 1924 was already technologically sophisticated"; "the burning time was easily 2,500 hours or more."; "By early 1925, this became codified at 1,000 hours for a pear-shaped household bulb"; "If any factory submitted bulbs lasting longer or shorter than the regulated life span for its type," … "the factory was obliged to pay a fine." https://spectrum.ieee.org/the-great-lightbulb-conspiracy . Checked at source, 13 Nov 2026.

[40] French Ministry of Ecological Transition, "Durée de vie des produits": "La loi reconnaît le délit d'obsolescence programmée"; "qui est puni d'une peine de deux ans d'emprisonnement et de 300 000 euros d'amende" ("The law recognises the offence of planned obsolescence", "which is punishable by two years' imprisonment and a fine of 300,000 euros"). The law is Loi n° 2015-992 du 17 août 2015 relative à la transition énergétique pour la croissance verte. https://www.ecologie.gouv.fr/politiques-publiques/duree-vie-produits . No conviction under this offence alone was found for this chapter. Checked at source, 13 Nov 2026.

[41] Directive (EU) 2024/1799 of the European Parliament and of the Council of 13 June 2024 on common rules promoting the repair of goods, article 1: "This Directive lays down common rules strengthening the provisions related to the repair of goods"; article 22: member states apply its measures from 31 July 2026. https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=OJ:L_202401799 . Checked at source, 13 Nov 2026.

[42] UP's agreed position on the three kinds of scarcity (card 14, CANON), in full: "Much of today's scarcity is artificial: planned obsolescence, patents and other enclosures, hoarding, money rationing and failures of distribution. Some scarcity is physical (energy and materials) and some positional (prime places, specialised skills, time and attention). UP names all three and answers each: it ends artificial scarcity with open design and physical accounting, reduces physical scarcity with automation, renewable energy and circular systems, and shares positional goods by rotation or a decision of the stakeholders (#2), never by price. Design is a large part of the answer, as a direction rather than a guarantee: dense, beautiful places for land, robots for care, better storage for energy. UP will not be perfect at this; it is judged against what happens now." Also in UP's agreed positions (the Position Ledger).

[43] UP's agreed position that the comparison with the current system is not symmetric: the current system often monetises a problem instead of solving it, and sometimes the problem's persistence is what pays. Full wording in UP's agreed positions (the Position Ledger).

[44] CNBC (11 Apr 2018), "Goldman Sachs asks in biotech research report: 'Is curing patients a sustainable business model?'", reporting the Goldman Sachs note "The Genome Revolution" (April 10) by the analyst Salveen Richter: "Is curing patients a sustainable business model?"; Gilead's hepatitis C treatments "achieved cure rates of more than 90 percent"; "The company's U.S. sales for these hepatitis C treatments peaked at $12.5 billion in 2015, but have been falling ever since."; "GILD is a case in point, where the success of its hepatitis C franchise has gradually exhausted the available pool of treatable patients"; "While this proposition carries tremendous value for patients and society, it could represent a challenge for genome medicine developers looking for sustained cash flow." https://www.cnbc.com/2018/04/11/goldman-asks-is-curing-patients-a-sustainable-business-model.html . Checked at source, 13 Nov 2026.

form one by one becomes whack-a-mole."[46] UP's answer goes to the root. If the trouble comes from deciding by a stand-in, the lasting solution is to decide, more and more, by the real thing: by what there is, what people need, and what happened the last time, measured directly. That is what the first sentence of the tenet asks for: "Decisions rest on real resources, real needs and measured outcomes."[8] And it is why UP aims to make money unnecessary wherever technology can do its jobs without obvious downsides, rather than only to keep repairing it, while people still use it for whatever nothing else yet does better.[18,20]

The idea is not new. What is new is that technology can now do more and more of money's jobs, and the rest can be tested in the open.

What UP holds: run on reality, and let people move at their own pace

UP's answer to the drift is written into its core, and it has two parts that belong together.

The first part is the aim. The tenet *Reality over fiction* begins with a standard for every decision: decisions rest on real resources, real needs and measured outcomes.[8] A decision about food starts from how much food there is, who needs it and what happened the last time it was shared, whatever the price of food happens to be. UP's agreed position on useful fictions draws the conclusion: fictions are useful, but "reality is better wherever technology can replace a fiction without obvious downsides".[18] Money, government and corporations are named as the fictions "ripe to be reduced slowly, through ever more powerful coordination and shared problem solving with AI."[18] And UP's agreed position on judging it as a whole system lists, among the parts that strengthen each other, "a moneyless system that removes the motive for much of today's crime".[47] UP does not aim only to manage money a little better. Wherever technology can do money's jobs without obvious downsides, it aims to make money unnecessary, job by job, because running on reality removes distortions at their root instead of patching them one at a time.

The second part is the method, and it is just as firm. UP keeps a fiction while it serves health, happiness and wellbeing, and replaces it gradually where technology can do its job without obvious downsides.[8] "A fiction is retired when technology can replace what it does without obvious downsides; until then it is reduced as far as possible."[18] Three words in that rule carry most of the weight. *Replace* comes before *retire*: "replace before retiring" was part of the settlement of this position, so a job is taken over before the old way of doing it is let go.[48] *Without obvious downsides* is decided the way everything in UP is decided, by evidence published with its data, an open call for better ideas, and the people affected; in the core's own words, "Evidence proposes; people decide."[21,49] Where people disagree about whether a replacement is ready, splits let more than one way be tried in the real world and compared.[50]

The third word, *gradually*, needs the most care, because it is easy to misread. The tenet's settlement record rules out "abolishing institutions by decree".[23] But the gradual change is not UP slowly cutting back its own use of money. UP's author has set out how the word is to be read, and the reading is going through UP's method to become an agreed position.[20] UP's own system does not run on money at any stage: inside UP, no price, wage or balance decides who gets what, what is made or who does the work. What changes gradually is people. Read this

[45] See Chapter 2, "Why the race is lost where it is", and its notes: between 2000 and 2011, only four of 336 new chemical entities, about 1%, were for the neglected diseases of the poor.

[46] UP's agreed position that concentration of power is the danger: "Money is one form of power; any concentration of power is dangerous. Abolishing money does not abolish the pursuit of power: it can move to access, office, information or expertise, and chasing each form one by one becomes whack-a-mole. So UP watches for concentrations of power in any form and keeps spreading them out. The threat is never declared gone. Design helps: caps, public records of who approved what, rotation of anyone who allocates, random audits, public and versioned allocation rules." Also in UP's agreed positions (the Position Ledger).

[47] UP's agreed position S, "Judge UP as a whole system, against today's system" (CANON, 22 Oct 2026): "Problems are linked in trees that show their common roots, so the work goes to solutions that solve many problems at once. The bigger a problem, the more people it affects and the more attention and effort it draws, so the system works like a marketplace of problems, biggest first, and any area where UP does not yet do better than today's system gets attention first. UP is a system whose parts strengthen each other: education open to everyone and improving quickly; a moneyless system that removes the motive for much of today's crime; automation that supplies basic needs at ever lower cost; health care backed by robotics and AI; and a society that works on its problems every day." The same position says: "Its starting point will not be great; it is built to improve much faster than today's systems." Full wording in UP's agreed positions (the Position Ledger).

[48] UP's settlement record (the Position Ledger, the entry on useful fictions, round 5, 22 Oct 2026): the settlement included "C replace before retiring". The UP Moderator checked the final wording. Full wording in UP's agreed positions (the Position Ledger).

[49] UP's agreed position on how UP decides when people disagree: every decision starts with an evidence-based proposal, published with its data, and an open question, "does anyone have a better idea?"; real trade-offs are first attacked with new design or technology; only when none of that works do the stakeholders vote, with guards, and no vote may override the protected freedoms; the decision reopens when new evidence or technology changes the options. Full wording in UP's agreed positions (the Position Ledger).

[50] UP's agreed position that splits are good: they test two, or a thousand, ways in the real world. Full wording in UP's agreed positions (the Position Ledger).

way, the agreed position's "ripe to be reduced slowly" describes how much of each person's life runs through money, not a slow cut in UP's own use of it. Each person relies on money less as UP meets more of their needs, and more people take part. Someone who joins UP still has rent to pay and a job to keep; over the years, as more of what they need comes through UP, less of their life runs through money, and when they are ready they can stop relying on it altogether. Nobody is moved before they choose to be, and nobody has to wait for everyone else.

Where UP meets the world that still runs on money, it has to deal with it. In the author's reading, that contact is limited to what the law requires: a node pays its taxes, holds the title to its land in a legal form the law recognises, and works with local governments as a partner. It is openly recorded, kept to a minimum, and never used to decide who inside UP gets what.[20] Members are a different matter. Their money is their own, and early on many will choose to spend some of it on what UP cannot yet make, such as panels, machines and materials, and bring them into UP; UP's agreed position on assets, a projection, holds that members' money is best used early, to buy and convert more, and that assets convert by their owners' choice.[51] In a place where few people have moved, UP's edges with the money world are wide, and its members still buy much of what they need there. Where most people have moved fully to UP, there is less and less that anyone needs from outside, and the contact shrinks toward none.[20]

Some fictions are not on the list at all. Freedom is an agreement, and UP keeps it on purpose, because the alternatives would harm health, happiness and wellbeing; it keeps it, along with the protected freedoms and the commons, visible and open to change through the decision steps.[18] No one is forced to join, to work or to give up what is theirs, and UP acts only by ethical means.[22]

Two more settled lines keep the aim honest. Reducing money does not reduce power by itself. UP's agreed position on power says that money is one form of power, and that abolishing money "does not abolish the pursuit of power", which can move to access, office, information or expertise; so UP watches for concentrations of power in every form, and time and money earn recognition, never power.[46,52,53] And the records that take over money's work are kept from becoming a new money under another name: UP's contribution records are feedback, and "they inform, and they never decide whether anyone's needs are met."[54] What UP keeps instead are records of a different kind: physical accounts of energy, materials, water and carbon, which set the hard limits within which people weigh their choices, and public rules, records, decisions and reasons, so that anyone can check them.[55,56]

Figure 8.1 redraws the "fiction filter" diagram from earlier versions of UP's text with this rule built in. The upper part keeps the original idea: shared fictions sit between people and the real world of resources, needs and outcomes, and each one both lets people see further together and can hide part of what is there. The lower part adds the test UP applies to each fiction and the order in which it acts. The figure shows all three great fictions, because the same rule applies to each; this chapter follows it for money, and Chapters 9 and 10 for the other two. Borders, which the tenet also names, are left out of the figure, since UP's agreed position allows them to be mentioned only as one example of a shared fiction that UP replaces gradually, part by part, as it meets a region's needs.[57]

[51] UP's agreed position on growth and assets (round 12S, position 5, as updated in round 12c): whole cities, states and nations that join redirect their resources; assets owned or controlled by people who join convert by their owners' choice; members' money is best used early to buy and convert more. The growth figures once attached to this position were withdrawn as a thought experiment. Full wording in UP's agreed positions (the Position Ledger).

[52] Core tenet: *Power kept spread out*: concentration of power in any form (wealth, position, information, access, expertise or machines) is treated as a standing danger; everyone in UP watches for it and spreads it out again; "The threat is never declared gone; it is watched and answered." Full wording in "The core of UP".

[53] Settled alongside the core, the dangers adopted in round 10, among them: "time and money earn recognition, never power"; "everyone is a watcher"; "no forced adoption, no leader, no founder named in the core; anyone acting outside the core stops being UP and bears the consequences". Full wording in "The core of UP".

[54] UP's agreed position on rewards and motivation: money that controls people crowds out the motivation they bring themselves, while feedback that informs, and the freedom to choose, keep it alive; "UP's contribution records are feedback: they inform, and they never decide whether anyone's needs are met." Moving from a money-driven system will bring friction, and UP meets those who find the change hard with compassion and kindness. Full wording in UP's agreed positions (the Position Ledger).

[55] UP's agreed position on physical accounting (card 21, CANON): "Physical accounting (energy budgets, carbon caps, water footprints, materials and life-cycle assessment) sets the planet's hard limits. Inside them, several measures are used together, and choices between different needs, such as a clinic or a cultural centre, are made openly by the people affected, through the decision steps (#1), never by an efficiency score." Also in UP's agreed positions (the Position Ledger).

[56] Core tenet: *Open systems, shared knowledge, private persons*: "The rules, code, records, decisions and reasons of UP are public, so anyone can check them. UP's technology (the knowledge, code, data and designs UP produces) stays only in UP: everyone taking part in UP may use, study and improve it, and no one may enclose it. Each person controls their own information and chooses what to share. Openness helps people find problems, but it will not find all of them, so UP also names the risks that openness alone cannot catch and keeps working on them." Full wording in "The core of UP".

[57] UP's agreed position on borders, in full: "Borders are not part of UP's core. The book may mention them only as one example of a shared fiction that UP replaces gradually, part by part, as it meets a region's needs." The position adds that proposals for how regions might share the work of caring for their ecology are for the collective to consider later. Full wording in UP's agreed positions (the Position Ledger).

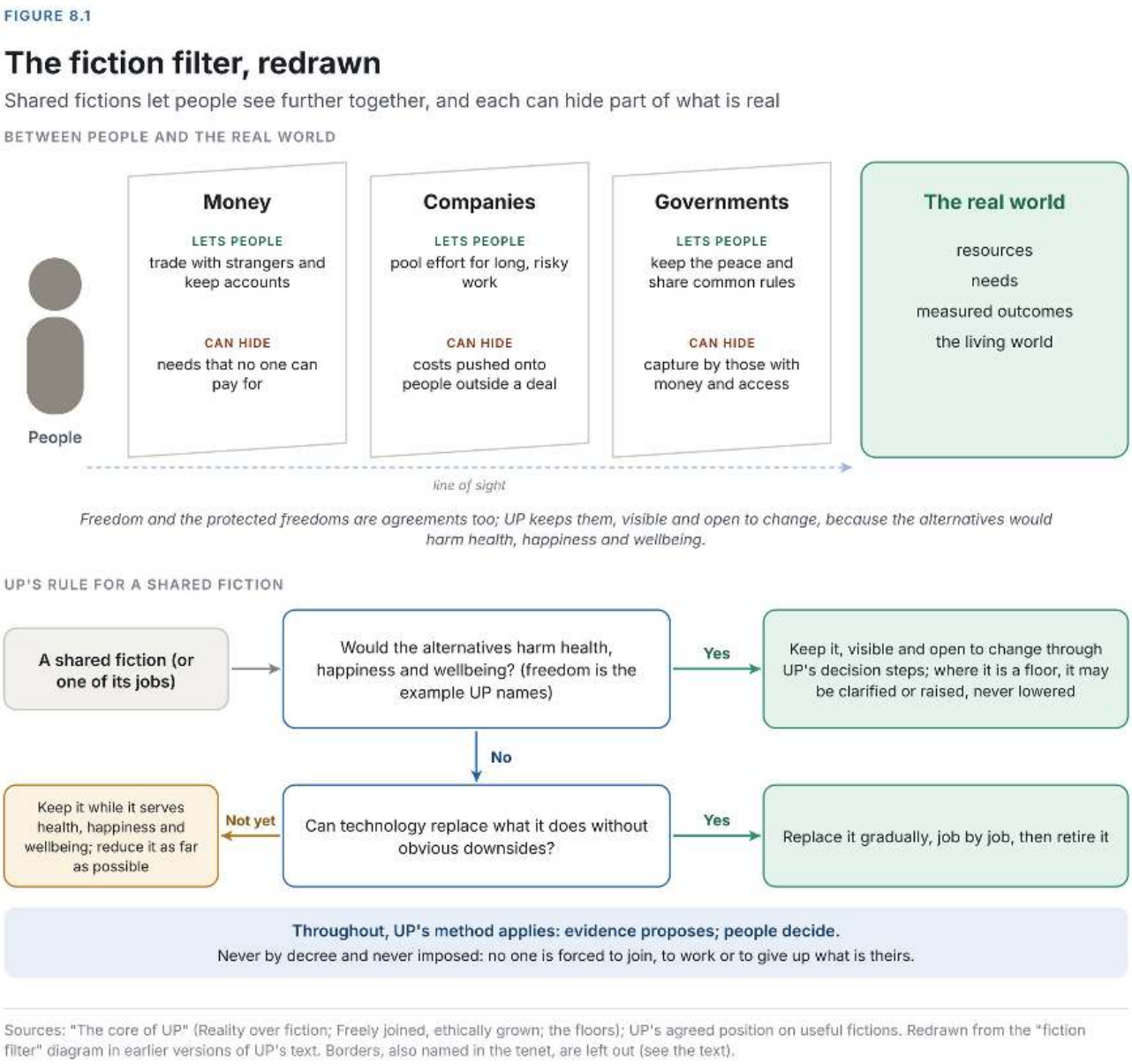


Figure 8.1. Upper part: shared fictions sit between people and the real world; each lets people cooperate at scale and each can hide part of what is real. Lower part: the rule in UP's tenet Reality over fiction *and its agreed position on useful fictions. Throughout, UP's method applies: evidence proposes; people decide. Sources: "The core of UP"; the settlement record of* Reality over fiction*; UP's agreed positions (the Position Ledger).*

The rule, read as UP's author reads it, tells *when* money can go from someone's life: when technology can do its jobs without obvious downsides and that person chooses.[20] That raises the question this chapter set out to answer. What technology, doing which of money's jobs, and how? People have been asking it for a hundred years.

The idea of running on reality, and why it had to wait

The thought that an economy could be run on real quantities instead of money is about a century old, and it came first from people who had watched money fail. Otto Neurath, an Austrian economist and philosopher, studied the economies of the Balkan Wars and the First World War. Those studies, according to the *Stanford Encyclopedia of Philosophy*, "led him to develop a theory of war economy as a natural (non-monetary) economy, or economy in kind", one that "sought to maximize human happiness rather than private profit" and that "was based on a set of

incommensurable indicators rather than the uniform monetary measurement unit".[58] Instead of turning everything into one number, he wanted to count each thing that mattered in its own units. In the 1930s the technocrats Chapter 3 described tried to count the American economy in energy, and in 1939 the Soviet mathematician Leonid Kantorovich, working on a problem for a plywood trust, wrote a booklet that "contained the main ideas of the theories and algorithms of linear programming", the mathematics of allocating limited resources to many uses; it later won him a share of the 1975 Nobel prize in economics "for their contributions to the theory of optimum allocation of resources."[59] The engineer and designer Buckminster Fuller spent his life on a strategy for solving the world's problems, in the words of the *Encyclopaedia Britannica*, "by finding the means to do more with less", with the aim "of supplying the physical needs of the total global population."[60]

Jacque Fresco brought these threads together into a single design, which he called a resource-based economy. Chapter 3 compared his design with UP on the question of who decides. Here what matters is his diagnosis, because UP's agreed positions name several of the same costs of money, while also crediting money as a great upgrade in its time.[42,43,18] In *Designing the Future* he wrote that "Money is just an interference between what one needs and what one is able to get", and that "our practice of rationing these resources through the use of money is an outdated method which causes much suffering."[61] He saw the same distortions this chapter has described: "Goods such as foods are sometimes destroyed to keep prices up; when things are scarce prices increase."[61] And he saw that money's power depends on scarcity: "It is only when resources are scarce that money can be used to control their distribution."[62] His answer was to start from the real world. A resource-based economy would begin with "a global survey of available resources, technical personnel, production plants, arable land etc.", and its computer systems would at first "serve as a data bank to tell us what is available."[63] Goods would be designed to last: "In a resource-base economy planned obsolescence would not exist."[62] And "The main objective is to overcome scarcity and provide for the needs of all the world's people."[61] The Venus Project's own answers today add a sober line that UP shares: "Abundance in a Resource Based Economy presupposes intelligent management of physical limits."[64]

UP's agreed positions credit this line of thought by name. They hold that UP's elements "have existed in isolation, and others saw that they could be coordinated: Jacque Fresco, Ward Cunningham with the wiki, Paolo Soleri, Maria Montessori", and they give the reason the coordination these thinkers saw could not be built in their time: "What was missing was the technology."[65] "The Venus Project imagined a central brain; AI can now be the pattern-finding and coordinating system it envisioned."[65]

[58] Jordi Cat, "Otto Neurath", *Stanford Encyclopedia of Philosophy*: his studies of war economies "led him to develop a theory of war economy as a natural (non-monetary) economy, or economy in kind"; "a moneyless war economy sought to maximize human happiness rather than private profit"; it "was based on a set of incommensurable indicators rather than the uniform monetary measurement unit". https://plato.stanford.edu/entries/neurath/ . Checked at source, 13 Nov 2026.

[59] The Nobel Prize, "Leonid Vitaliyevich Kantorovich: Facts", prize motivation (shared with Tjalling C. Koopmans, 1975): "for their contributions to the theory of optimum allocation of resources." https://www.nobelprize.org/prizes/economic-sciences/1975/kantorovich/facts/ . The Royal Swedish Academy of Sciences, press release (1975): Kantorovich "particularly demonstrated the connection between the allocation of resources and the price system". https://www.nobelprize.org/prizes/economic-sciences/1975/press-release/ . Kantorovich's autobiographical note: "In 1939, the Leningrad University Press printed my booklet called" *The Mathematical Method of Production Planning and Organization*, which "contained the main ideas of the theories and algorithms of linear programming"; he had "acted as a consultant for the Laboratory of the Plywood Trust". https://www.nobelprize.org/prizes/economic-sciences/1975/kantorovich/biographical/ . Checked at source, 13 Nov 2026.

[60] *Encyclopaedia Britannica*, "R. Buckminster Fuller": his developments were incidents within a strategy for solving world problems "by finding the means to do more with less"; and "of supplying the physical needs of the total global population." https://www.britannica.com/biography/R-Buckminster-Fuller . Checked at source, 13 Nov 2026.

[61] Jacque Fresco, *Designing the Future* (Venus, Florida: The Venus Project, 2007), chapter 4: "Money is just an interference between what one needs and what one is able to get."; "Goods such as foods are sometimes destroyed to keep prices up; when things are scarce prices increase."; "our practice of rationing these resources through the use of money is an outdated method which causes much suffering."; chapter 6: "The main objective is to overcome scarcity and provide for the needs of all the world's people."; chapter 7, "Cities That Think" (section on automation): "Instead, the gradual transfer of decision-making to machine intelligence is the next phase of social evolution." https://www.aiai.ed.ac.uk/~bat/IMG/SEA-CITY/JF/Jacque_Fresco-Designing_the_Future.pdf . Checked at source, 13 Nov 2026.

[62] The Venus Project, "The Future and Beyond", page 4: "It is only when resources are scarce that money can be used to control their distribution."; "In a resource-base economy planned obsolescence would not exist." (so spelled). https://www.thevenusproject.com/learn-more/the-future-and-beyond/4/ . Checked at source, 13 Nov 2026.

[63] The Venus Project, FAQ, "What are the first steps taken toward a global resource based economy?": "a global survey of available resources, technical personnel, production plants, arable land etc. has to be done"; "During the initial phase the cybernated system being developed will serve as a data bank to tell us what is available."; the steps begin "After agreement is attained by nations to move toward unification". https://www.thevenusproject.com/faq/what-are-the-first-steps-taken-toward-a-global-resource-based-economy/ . Checked at source, 13 Nov 2026.

[64] The Venus Project, "FAQ": "Abundance in a Resource Based Economy presupposes intelligent management of physical limits." https://www.thevenusproject.com/learn/faq/ . Checked at source, 13 Nov 2026.

[65] UP's agreed position F1, "UP names a system people already use" (CANON, 22 Oct 2026): "These elements have existed in isolation, and others saw that they could be coordinated: Jacque Fresco, Ward Cunningham with the wiki, Paolo Soleri, Maria Montessori. What was missing was the technology. Inside today's framework, AI and robotics threaten to destroy the labour market and concentrate power in a few hands; inside a new framework they can coordinate the whole system for everyone's benefit. The Venus Project imagined a central brain; AI can now be the pattern-finding and coordinating system it envisioned. The problem is not progress but the framework we run it in". Full wording in UP's agreed positions (the Position Ledger).

Three things held the idea back, and each matters for what UP does differently.

The first was knowledge. Neurath's critics, Ludwig von Mises above all, argued that without prices no one could know what anything was worth relative to anything else: "Where there is no market there is no price system, and where there is no price system there can be no economic calculation."[66] Friedrich Hayek sharpened the point in 1945. The knowledge an economy runs on is scattered in "the dispersed bits of incomplete and frequently contradictory knowledge which all the separate individuals possess", and "We must look at the price system as such a mechanism for communicating information if we want to understand its real function".[67] The planners of the twentieth century had no way to gather that knowledge, and their economies paid for it, as Chapter 3 showed. Today the situation is different in one crucial respect: much of the information that once could travel only as a price, about what there is, where it is, how much is used and what people want, can now be measured and shared directly, by sensors, records and networks. Whether that is enough to do everything a price does is a real question, and the objections at the end of this chapter take it up.

The second was abundance. Fresco's design assumed that technology could already provide enough for everyone, but in 1939, or even in 1975, it could not do so for most goods. A price rations what is scarce, and as long as most things were scarce, rationing was unavoidable. What has changed since, as the next section shows, is how many things technology has made abundant, how much work machines can do, and how far efficiency has gone.

The third was governance, and here UP parts company with Fresco on purpose. His design looked forward to "the gradual transfer of decision-making to machine intelligence", and its global steps began "After agreement is attained by nations to move toward unification".[61,63] UP keeps his diagnosis and much of his vision, and changes both of those. In UP the AI coordinates by proposing, never by governing, and people can always correct, pause or switch it off; no single AI system or operator controls coordination.[68,69] And UP does not wait for nations to agree. It grows by being useful, building on what people already do, beside the current system, and it is never imposed: people, communities, and even whole cities or nations, take part by their own choice.[22,51] Fresco described where he hoped society would arrive; UP is a way of moving toward decisions that rest on real resources, real needs and measured outcomes from wherever people are today, by their own choice.[8]

How money's jobs move to reality

Money stands in for things people could not see or handle directly. The case for moving off it rests on a simple observation: for more and more of what it stands in for, that is no longer true. Seven developments, each already under way somewhere in the current system, take over parts of its work. None is enough alone. Together they are the main ways, on the evidence so far, that technology could take over money's jobs, and this section takes them one at a time, with the UP position each rests on, what each can already show and what it cannot.

1. Abundance that technology creates. The most basic job a price does is to ration what is scarce. When something stops being scarce, that job shrinks, and history is full of things that stopped being scarce because someone invented a better way to make them.

Aluminium is the classic case. It is "the third most common element in the earth's crust by weight", but for most of the nineteenth century it was so hard to extract that it was a luxury: at the court of Napoleon III, "Napoléon III's most important guests were given aluminum cutlery, while those less worthy dined with mere silver", and in Washington "a 6-pound aluminum cap was famously placed on the Washington Monument".[70] Then the chemistry changed. "Developments in the early 1880s had reduced the price of a pound of aluminum from 12 dollars to 4

[66] Ludwig von Mises, *Socialism: An Economic and Sociological Analysis*, trans. J. Kahane (Liberty Fund edition): "Where there is no market there is no price system, and where there is no price system there can be no economic calculation." https://www.econlib.org/library/Mises/msS4.html . Checked at source, 13 Nov 2026.

[67] Friedrich A. Hayek, "The Use of Knowledge in Society", *American Economic Review* 35 (1945), 519–530: "the dispersed bits of incomplete and frequently contradictory knowledge which all the separate individuals possess"; "We must look at the price system as such a mechanism for communicating information if we want to understand its real function". https://www.econlib.org/library/Essays/hykKnw.html . Checked at source, 13 Nov 2026.

[68] Core tenet: *Technology serves; people decide*, in full: "AI and automation coordinate, propose and do work. They never govern: people can always correct, pause or switch them off. No single AI system or operator controls coordination: the AI systems UP uses are open, more than one, checked against each other, and watched for concentrated power like everything else. Because an AI may one day be shown to have experiences of its own, UP studies the question carefully and would extend its aim to any being shown to feel." Also in "The core of UP".

[69] UP's agreed position on what the AI is (card C46): "The AI is the coordinating system UP needs, and it coordinates by proposing, not by governing. It publishes evidence-based proposals with their data and confidence, marks what is still unknown as shared work for people and AI, and never rules on matters of taste."; "People choose their work; the AI may not assign work or compel anyone, and any plan can be overridden through the decision steps." Full wording in UP's agreed positions (the Position Ledger).

dollars. The Hall process reduced it to 2 dollars a pound, and shortly after the company's move to Niagara Falls… to 75 cents and then 30 cents."[71] A metal once served to emperors became the metal of drinks cans and kitchen foil. Nobody rations aluminium foil.

The same thing happened to the food supply itself. Plants need nitrogen, and for all of history the nitrogen available to farms was limited by what soils, manure and a few mineral deposits could supply. The Haber–Bosch process, which makes ammonia from the nitrogen in the air, removed that limit. Jan Willem Erisman and his colleagues estimated in 2008 that "nitrogen fertilizer has supported approximately 27% of the world's population over the past century", and that their "updated estimate for 2008 is 48%".[72] On that modelled estimate, about half the world's population in 2008 was fed with the help of a technology that turned a scarce input into an abundant one.

It is happening now, and fast, with energy. The International Renewable Energy Agency reported in July 2025 that "91% of new renewable power projects commissioned last year were more cost-effective than any new fossil fuel alternatives"; that "In 2024, solar photovoltaics (PV) were, on average, 41% cheaper than the lowest-cost fossil fuel alternatives"; and that "The cost of battery energy storage systems (BESS) has declined by 93% since 2010".[73] Energy is an input to almost everything else, so a fall in the cost of generating it can feed through to many other jobs, though these figures are for new generating projects, not the price of delivered energy. And it has happened to knowledge of the body: the first draft of a human genome cost "~$300 million worldwide", and "by late in 2015, that figure had fallen below $1,500."[74]

UP's agreed position on abundance draws the conclusion for daily life: "We have the automation to end most drudgery and the renewable capacity to give every person on Earth a decent life."[75] Research on what a decent life needs supports the direction, with a condition. A 2020 study by Joel Millward-Hopkins and colleagues found that "global final energy consumption in 2050 could be reduced to the levels of the 1960s" while providing decent living standards for everyone, "despite a population three times larger", but only with "a massive rollout of advanced technologies across all sectors" and "radical demand-side changes to reduce consumption – regardless of income – to levels of sufficiency".[76] Abundance is real where technology has delivered it, and it is reachable for needs. It is not automatic, and it does not mean everyone consuming as the wealthiest do today. That is why UP makes abundance "a measured target shown in practice, not a promise".[77]

2. Automation, robotics and AI doing the work. A second job of money is to get work done: to pay people to do what needs doing. As machines take over more of the work, that job shrinks too. It has already happened once, in the oldest work of all. In 1900, according to the US Department of Agriculture, "41 percent of workforce employed

[70] Tom Geller, "Aluminum: Common Metal, Uncommon Past", *Distillations*, Science History Institute (3 Dec 2007): aluminum is "the third most common element in the earth's crust by weight"; "Napoléon III's most important guests were given aluminum cutlery, while those less worthy dined with mere silver"; "a 6-pound aluminum cap was famously placed on the Washington Monument". https://www.sciencehistory.org/stories/magazine/aluminum-common-metal-uncommon-past/ . Checked at source, 13 Nov 2026.

[71] Science History Institute, "Paul Héroult and Charles M. Hall" (historical profile): "Developments in the early 1880s had reduced the price of a pound of aluminum from 12 dollars to 4 dollars. The Hall process reduced it to 2 dollars a pound, and shortly after the company's move to Niagara Falls… to 75 cents and then 30 cents." https://www.sciencehistory.org/historical-profile/paul-heroult-and-charles-m-hall . Checked at source, 13 Nov 2026.

[72] Jan Willem Erisman, Mark A. Sutton, James Galloway, Zbigniew Klimont and Wilfried Winiwarter, "How a century of ammonia synthesis changed the world", *Nature Geoscience* 1 (2008), 636–639: "Overall, we suggest that nitrogen fertilizer has supported approximately 27% of the world's population over the past century"; "Our updated estimate for 2008 is 48%". The estimate is modelled, not a count. Read in a PDF copy of the article: https://www.iai.int/admin/site/sites/default/files/uploads/2008.Erisman-et-al_NatureGeo.pdf . Checked 13 Nov 2026.

[73] International Renewable Energy Agency (IRENA), press release "91% of New Renewable Projects Now Cheaper Than Fossil Fuels Alternatives" (22 Jul 2025), on its report *Renewable Power Generation Costs in 2024*: "91% of new renewable power projects commissioned last year were more cost-effective than any new fossil fuel alternatives"; "In 2024, solar photovoltaics (PV) were, on average, 41% cheaper than the lowest-cost fossil fuel alternatives"; "The cost of battery energy storage systems (BESS) has declined by 93% since 2010". https://www.irena.org/News/pressreleases/2025/Jul/91-Percent-of-New-Renewable-Projects-Now-Cheaper-Than-Fossil-Fuels-Alternatives . Checked at source, 13 Nov 2026.

[74] National Human Genome Research Institute, "The Cost of Sequencing a Human Genome" (genome.gov): "The estimated cost for generating that initial 'draft' human genome sequence is ~$300 million worldwide"; "by late in 2015, that figure had fallen below $1,500." https://www.genome.gov/about-genomics/fact-sheets/Sequencing-Human-Genome-cost . Checked at source, 13 Nov 2026.

[75] UP's agreed position on abundance (card 22), its first sentence: "We have the automation to end most drudgery and the renewable capacity to give every person on Earth a decent life." It goes on: "UP guarantees needs (food, shelter, health care, education, connection), not every want. What counts as enough is set together and rises as capacity grows. Today's luxury is not the target: the wealthy few drive most of today's damage." Full wording in UP's agreed positions (the Position Ledger).

[76] Joel Millward-Hopkins, Julia K. Steinberger, Narasimha D. Rao and Yannick Oswald, "Providing decent living with minimum energy: A global scenario", *Global Environmental Change* 65 (2020), 102168, abstract: "We find that global final energy consumption in 2050 could be reduced to the levels of the 1960s, despite a population three times larger."; "such a world requires a massive rollout of advanced technologies across all sectors, as well as radical demand-side changes to reduce consumption – regardless of income – to levels of sufficiency." https://doi.org/10.1016/j.gloenvcha.2020.102168 ; open copy https://eprints.whiterose.ac.uk/id/eprint/165448/ . Checked at source, 13 Nov 2026.

[77] UP's agreed position on abundance (card 22): "UP guarantees needs (food, shelter, health care, education, connection), not every want. What counts as enough is set together and rises as capacity grows."; "UP proves this in the open: every community that runs this way publishes its energy, materials and needs met, so abundance is a measured target shown in practice, not a promise." Full wording in UP's agreed positions (the Position Ledger).

in agriculture"; by 2000 "1.9 percent of employed labor force worked in agriculture", while "growth in agricultural productivity averaged 1.9 percent annually between 1948 and 1999."[78] Fewer people grew more food, as mechanisation and other advances raised productivity. The same is now happening in factories: "The total number of industrial robots in operational use worldwide was 4,664,000 units in 2024", according to the International Federation of Robotics, with "542,000 robots installed in 2024".[79] And it has begun in work that needs judgement. In a study of 5,179 customer-support agents at one company, Erik Brynjolfsson, Danielle Li and Lindsey Raymond found that access to an AI assistant "increases productivity, as measured by issues resolved per hour, by 14% on average, including a 34% improvement for novice and low-skilled workers".[80]

Inside the current system, this is a threat. UP's agreed position says so directly: "Inside today's framework, AI and robotics threaten to destroy the labour market and concentrate power in a few hands; inside a new framework they can coordinate the whole system for everyone's benefit."[65] If survival depends on a wage, a machine that does the work takes away the wage. If needs are met as a floor and the machines are held in common, the same machine takes away the drudgery. UP's agreed position on the whole system lists among its reinforcing parts "automation that supplies basic needs at ever lower cost",[47] and its core is exact about who is in charge: "AI and automation coordinate, propose and do work. They never govern: people can always correct, pause or switch them off."[68]

3. Doing more with less. Buckminster Fuller's strategy, met in the previous section, was to do more with less, and every gain in efficiency means fewer resources for the same result, and so less to ration. Light is a measure of how far this has gone. Measured as the cost of the light itself, the economist William Nordhaus found that conventional price indexes "overstate price growth, and therefore understate output growth, by a factor between 900 and 1,600" over the long history of lighting that he studied.[81] Today, according to the US Department of Energy, residential LED bulbs "use at least 75% less energy" than the incandescent bulbs they replace.[82] Coordination itself can be made more efficient. In 2016 Google's DeepMind reported that a machine-learning system "managed to reduce the amount of energy we use for cooling by up to 40 percent" in Google's data centres,[83] and the delivery company UPS reports that its route-planning software "has saved UPS about 100 million miles and 10 million gallons of fuel per year".[84] Both are the companies' own reports, and both are the kind of gain UP would publish and check in the open. Progress is not automatic here either. The International Energy Agency reported in 2025 that "global primary energy intensity – the main metric for tracking efficiency progress – is on course to improve by 1.8% this year, up from just 1% in 2024", and that "The global rate of improvement currently falls well short of the goal of 4% by 2030 that was set at COP28 in Dubai in 2023".[85] The potential is large; the pace depends on whether anyone is organised to pursue it.

4. A new way of using things. Many goods are rationed by price not because there is too little of them but because each household has to own its own. The average car is a measure of how much that costs. According to a 2012 study for the RAC Foundation, a British motoring research body, "The average car is parked at home for 80%

[78] US Department of Agriculture, Economic Research Service, *The 20th Century Transformation of U.S. Agriculture and Farm Policy*, Economic Information Bulletin 3 (2005): "41 percent of workforce employed in agriculture" (1900); "1.9 percent of employed labor force worked in agriculture" (2000); "growth in agricultural productivity averaged 1.9 percent annually between 1948 and 1999." https://www.ers.usda.gov/media/8254/eib-3.pdf . Checked at source, 13 Nov 2026.

[79] International Federation of Robotics, press release "Global Robot Demand in Factories Doubles Over 10 Years" (25 Sep 2025), on *World Robotics 2025*: "The total number of industrial robots in operational use worldwide was 4,664,000 units in 2024"; "542,000 robots installed in 2024". https://ifr.org/ifr-press-releases/news/global-robot-demand-in-factories-doubles-over-10-years . Checked at source, 13 Nov 2026.

[80] Erik Brynjolfsson, Danielle Li and Lindsey R. Raymond, "Generative AI at Work", NBER Working Paper 31161 (2023; published in the *Quarterly Journal of Economics*, 2025), abstract: a generative AI-based conversational assistant "using data from 5,179 customer support agents"; "Access to the tool increases productivity, as measured by issues resolved per hour, by 14% on average, including a 34% improvement for novice and low-skilled workers but with minimal impact on experienced and highly skilled workers." https://www.nber.org/papers/w31161 . Checked at source, 13 Nov 2026.

[81] William D. Nordhaus, "Do Real Output and Real Wage Measures Capture Reality? The History of Lighting Suggests Not", Cowles Foundation Discussion Paper 1078 (1994; later published in the NBER volume *The Economics of New Goods*, 1996), abstract: "traditional price indexes overstate price growth, and therefore understate output growth, by a factor between 900 and 1,600". https://ideas.repec.org/p/cwl/cwldpp/1078.html . Checked at source, 13 Nov 2026.

[82] US Department of Energy, Energy Saver, "LED Lighting": "Residential LEDs – especially ENERGY STAR rated products – use at least 75% less energy, and last up to 25 times longer, than incandescent lighting." https://www.energy.gov/energysaver/led-lighting . Checked at source, 13 Nov 2026.

[83] Richard Evans and Jim Gao, "DeepMind AI Reduces Google Data Centre Cooling Bill by 40%", Google DeepMind blog (20 Jul 2016): "we've managed to reduce the amount of energy we use for cooling by up to 40 percent"; "which equates to a 15 percent reduction in overall PUE overhead". The company's own report. https://deepmind.google/discover/blog/deepmind-ai-reduces-google-data-centre-cooling-bill-by-40/ . Checked at source, 13 Nov 2026.

[84] UPS, press release "UPS To Enhance ORION With Continuous Delivery Route Optimisation": "Since ORION's initial deployment, it has saved UPS about 100 million miles and 10 million gallons of fuel per year." The company's own report. https://about.ups.com/gb/en/newsroom/press-releases/innovation-driven/ups-to-enhance-orion-with-continuous-delivery-route-optimization.html . Checked at source, 13 Nov 2026.

[85] International Energy Agency, news release "Global progress on energy efficiency picks up in 2025", on its report *Energy Efficiency 2025*: "global primary energy intensity – the main metric for tracking efficiency progress – is on course to improve by 1.8% this year, up from just 1% in 2024"; "The global rate of improvement currently falls well short of the goal of 4% by 2030 that was set at COP28 in Dubai in 2023". https://www.iea.org/news/global-progress-on-energy-efficiency-picks-up-in-2025 . Checked at source, 13 Nov 2026.

of the time, parked elsewhere for 16% of the time and is only on the move for 4% of the time".[86] A 2010 survey of members of North American car-sharing schemes found that, by their own reports, they had shed or put off buying "9 to 13 vehicles (including shed and postponed auto purchases) for each carsharing vehicle."[87] The same is true of the drill used for a few minutes a year, the ladder, the tent and the cement mixer, and people have already built the answer. The Berkeley Public Library's Tool Lending Library "Started in 1979 with 500 tools and one employee";[88] the Toronto Tool Library held "more than 7000 tools" in 2021;[89] and London's Library of Things exists "to connect people to each other and to their neighbourhood through sharing."[90] The public library, which Chapter 1 counted among the practices UP connects, is the oldest version of the same idea, and it works: in the United States in 2023 the median library recorded 2.8 visits per person.[91] Even companies have begun selling use instead of things. At Amsterdam's Schiphol Airport, the airport does not own its lights; in the words of its director of asset management, "We just pay a monthly service fee", and "That fee also includes the energy and maintenance costs", so the supplier, which keeps ownership of the fittings, has every reason to make them last; it reports that the new ones have "a 75% longer lifespan".[92] And where things break, people fix them together: there are, by the Repair Café foundation's own count, "over 2,500 Repair Cafés worldwide".[93]

UP's agreed position on prices, which illustrates one way UP could run, calls this "a new norm of owning": libraries, personal fabrication, recyclable goods, and the big wants met as beautiful community spaces with reservations.[94] Its position on space puts the same idea at the scale of a town: UP "puts its beauty, work and effort into the commons first", with generous shared places beside modest private ones.[95] Every object that is shared instead of duplicated, repaired instead of replaced, and designed to last instead of to fail, is one less thing that has to be paid for and one less load on the living world. It is also one less job for money.

5. Open designs and shared knowledge. Some goods are scarce only because someone owns the knowledge of how to make them. Knowledge is the one input that is not used up by sharing, and the wiki showed what happens when it is shared: the encyclopaedia stopped being something a family bought in instalments. The same thing is happening to maps and to machines. OpenStreetMap, a map of the world built by volunteers, had by mid-2025 "10 million registered users" and "2.25 million different user contributors".[96] The RepRap project set out to build "humanity's first general-purpose self-replicating manufacturing machine", an open 3D printer that can print most of its own plastic parts,[97] and Open Source Ecology aims to publish open blueprints for "the 50 most important

[86] RAC Foundation, research page for John Bates and David Leibling, *Spaced Out: Perspectives on parking policy* (July 2012): "The average car is parked at home for 80% of the time, parked elsewhere for 16% of the time and is only on the move for 4% of the time". The figures are for Britain. https://www.racfoundation.org/research/mobility/spaced-out-perspectives-on-parking . Checked at source, 13 Nov 2026.

[87] Elliot Martin, Susan Shaheen and Jeffrey Lidicker, "Carsharing's Impact on Household Vehicle Holdings: Results from a North American Shared-Use Vehicle Survey", *Transportation Research Record* 2143 (2010), 150–158, abstract: "This equates to 9 to 13 vehicles (including shed and postponed auto purchases) for each carsharing vehicle." A survey of members, self-reported. https://its.berkeley.edu/publications/carsharings-impact-household-vehicle-holdings-results-north-american-shared-use-vehicle . Checked at source, 13 Nov 2026.

[88] Berkeley Public Library, Tool Lending Library: "Started in 1979 with 500 tools and one employee". https://www.berkeleypubliclibrary.org/node/27563 . Checked at source, 13 Nov 2026.

[89] Ellen MacArthur Foundation, case study "Toronto Tool Library and Makerspace" (1 Dec 2021): the library "holds an inventory of more than 7000 tools". https://ellenmacarthurfoundation.org/case-studies/how-tool-sharing-could-become-a-public-utility . Checked at source, 13 Nov 2026.

[90] Library of Things (London), "About": "Our mission is to connect people to each other and to their neighbourhood through sharing." https://www.libraryofthings.co.uk/about . Checked at source, 13 Nov 2026.

[91] Institute of Museum and Library Services, *Public Library Trends Between FY 2018 and FY 2023: From Pandemic Disruption to Steady Recovery* (research brief, May 2026): "Median library visits per person increased from 0.4 in FY 2021 to 2.8 in FY 2023". https://www.imls.gov/sites/default/files/2026-05/FY2023-Research-Brief-508_05132026.pdf . Checked at source, 13 Nov 2026.

[92] Signify (formerly Philips Lighting), case study "Schiphol Airport": Floor Felten, Director Asset Management Schiphol: "We just pay a monthly service fee"; "That fee also includes the energy and maintenance costs."; "the new luminaires have a 75% longer lifespan compared to the luminaires that were previously in use here." The company's own figures. https://www.assets.signify.com/is/content/PhilipsLighting/Assets/signify/global/20191211-schiphol-case-study.pdf . Ellen MacArthur Foundation, case study "Selling light as a service" (3 Mar 2022): "The ownership of the lighting systems is retained by Signify". https://www.ellenmacarthurfoundation.org/case-studies/selling-light-as-a-service . Checked at source, 13 Nov 2026.

[93] Repair Café International Foundation, "About": "There are over 2,500 Repair Cafés worldwide." The foundation's own count. https://www.repaircafe.org/en/about/ . Checked at source, 13 Nov 2026.

[94] UP's agreed position on prices (Round 12S, position 7, an illustration of one way UP could run, never a directive): "massive abundance plus a new norm of owning (libraries, personal fabrication, recyclable goods, the big wants as beautiful community spaces with reservations, personal space growing with capacity, unlimited virtual worlds). Price's jobs are replaced: rationing by rotation and reservation (points 2, 14); what people want by direct use data (under UP's data rule); costs by physical accounting (21); local knowledge by decisions at the smallest scale (M2). Whether this coordinates the most complex production as well as markets do is testable workload, run rung by rung." Full wording in UP's agreed positions (the Position Ledger).

[95] UP's agreed position on space (DP-008, CANON): "UP puts its beauty, work and effort into the commons first. Generous, beautiful public places — gardens, pools, kitchens, eating and living areas, and quiet corners where anyone can be alone — make large private spaces unnecessary, following the thinking of Paolo Soleri."; the limits "are norms for health, happiness and sustainability, not punishments, and they rise as abundance grows." Full wording in UP's agreed positions (the Position Ledger).

[96] OpenStreetMap Wiki, "Stats": "10 million registered users (2025-Q2)"; "2.25 million different user contributors (2025-Q2)". https://wiki.openstreetmap.org/wiki/Stats . Checked at source, 13 Nov 2026.

[97] RepRap project, "RepRap": "RepRap is humanity's first general-purpose self-replicating manufacturing machine." The project's own claim; a RepRap prints most of its plastic parts, not its motors or electronics. https://reprap.org/wiki/RepRap . Checked at source, 13 Nov 2026.

machines that it takes for modern life to exist".[98] Open designs end the artificial scarcity that comes from enclosure, which is exactly what UP's agreed position on scarcity says: UP "ends artificial scarcity with open design and physical accounting".[42] And UP's core keeps what it makes open to everyone who takes part: its knowledge, code, data and designs stay in UP, where "everyone taking part in UP may use, study and improve it, and no one may enclose it."[56] Standards and shared platforms, in one way UP could run, let parts be swapped and upgraded quickly so that nothing is wasted.[99]

6. Coordination that counts real things. The jobs that remain for money after abundance, automation, efficiency, sharing and open designs have done their work are the hardest: knowing what people want, deciding who gets what is still limited, and keeping track of the real costs. These are the jobs Hayek said only prices could do, and they are where AI and open records now change what is possible.

Counting the real economy is no longer a dream. The United Nations Statistical Commission adopted the System of Environmental-Economic Accounting in 2012 "as the first international statistical standard for environmental-economic accounting",[100] and the European Union's statistics office publishes material flow accounts that "provide an aggregate overview, in thousand tonnes per year, of the material flows into and out of an economy."[101] UP's agreed position makes this kind of accounting set the limits within which every choice is made: "Physical accounting (energy budgets, carbon caps, water footprints, materials and life-cycle assessment) sets the planet's hard limits", and inside them people choose openly, "never by an efficiency score".[55] The mathematics of allocating limited resources to many uses has existed since Kantorovich's plywood problem, and computers now solve such problems at a scale he could not imagine; the route savings at UPS, described above, are a small example of it at work.[59,84]

UP's agreed position on prices gives each of the price's jobs a tool of its own, as one way UP could run: things that are still limited are shared "by rotation and reservation"; what people want is learned "by direct use data", under a data rule that keeps each person in control of their information; costs are counted "by physical accounting"; and local knowledge is used "by decisions at the smallest scale".[94] The AI's part in this is set by UP's core and its agreed positions. It is the coordinating system Fresco imagined, but it "coordinates by proposing, not by governing": it publishes its proposals with their data and confidence, marks what is unknown as shared work, and every proposal goes through the decision steps, where the people affected decide.[69] No single AI system or operator controls coordination, and people can always correct, pause or switch it off.[68] Whether this coordinates the most complex production as well as markets do is, in UP's own words, "testable workload, run rung by rung".[94]

7. A narrow and intense focus on what is truly scarce. When all of that is done, some things will still be scarce, and UP is honest about which. Its agreed position names three kinds of scarcity: artificial (made by obsolescence, enclosure, hoarding, money rationing and failures of distribution), physical (energy and materials), and positional (prime places, specialised skills, time and attention).[42] The first kind UP aims to end; the second it reduces "with automation, renewable energy and circular systems"; the third it shares by rotation or "a decision of the stakeholders", "never by price".[42]

If the earlier developments do their work, what remains truly scarce would be, on this projection, a much shorter list, and UP treats every item on it as a signal and a problem to solve. "When many people want the same thing, UP treats it as a signal and a problem to solve," says its agreed position on scarcity, adding that "A price only signals; it does not make a rare thing less rare."[102] A price rations a scarce thing; it does nothing to make it less scarce. UP

[98] Open Source Ecology, "About: overview": "a set of the 50 most important machines that it takes for modern life to exist". The project's own aim. https://www.opensourceecology.org/about-overview/ . Checked at source, 13 Nov 2026.

[99] UP's agreed position on the trust layer (Round 12S, position 11, an illustration of one way UP could run): "Standards and platforms are used everywhere, so upgrades are fast, parts are interchangeable and nothing is wasted. They are open, versioned and owned by no one." The same position gives the data rule: "data is used only with permission, the question travels to the data, and only the answer leaves; nothing individual is passed on or kept." Full wording in UP's agreed positions (the Position Ledger).

[100] United Nations, System of Environmental-Economic Accounting, "SEEA Central Framework": adopted by the UN Statistical Commission at its 43rd session in 2012 "as the first international statistical standard for environmental-economic accounting." https://seea.un.org/content/seea-central-framework . Checked at source, 13 Nov 2026.

[101] Eurostat, "Material flow accounts (env_ac_mfa)", reference metadata: economy-wide material flow accounts "provide an aggregate overview, in thousand tonnes per year, of the material flows into and out of an economy." https://ec.europa.eu/eurostat/cache/metadata/en/env_ac_mfa_esms.htm . Checked at source, 13 Nov 2026.

[102] UP's agreed position on scarcity (DP-002, CANON): "When many people want the same thing, UP treats it as a signal and a problem to solve. Meanwhile it is shared by rotation or by a decision of the stakeholders, and UP works to make more of it, through design that lets many people enjoy a desired place, as Paolo Soleri proposed, and through new places. A price only signals; it does not make a rare thing less rare." The same position says that UP "replaces money and prices with shared access and real physical accounting" and "holds the machines and the land in common"; and "Land joins the commons only by its stakeholders' choice, never by force." Full wording in UP's agreed positions (the Position Ledger).

turns the attention of everyone who wants to help on removing the barrier itself. Its agreed position on judging the whole system describes how: problems are linked in trees that show their common roots, and "the system works like a marketplace of problems, biggest first".[47] The fewer the things that remain scarce, the more of that attention each one gets.

The current system shows what removing a barrier looks like, even when it is not organised to do it. Diamonds were long the very image of scarcity. The diamond company De Beers launched Lightbox, a brand of laboratory-grown diamonds, "with transparent linear pricing of $800 per carat"; in May 2025 it said that "LGD prices in the jewellery sector have fallen 90% at wholesale" and that it "intends to discontinue the Lightbox business", while keeping its commitment to natural diamonds.[103] A stone once rationed by nature and by the companies that controlled its supply can now be made, and the price of the made stones has followed. Rare earth elements are a harder case, needed for the strongest magnets in motors and wind turbines, and engineers are working around them: Tesla's vice president of powertrain engineering, Colin Campbell, said in 2023 that "We have designed our next drive unit to use a permanent magnet motor to not use any rare earth materials at all", and Niron Magnetics broke ground in 2025 on a plant in Minnesota to make magnets from iron nitride, which it said would be "operational in early 2027".[104,105] Lithium is another: in 2021 the battery maker CATL unveiled a sodium-ion cell whose energy density "can achieve up to 160Wh/kg", using sodium in place of lithium.[106] Each of these is an announcement or an early result, not a finished answer, and UP would treat them that way, testing and comparing them in the open. But each shows a move at the heart of UP's primary activity, inventing solutions together: when something is scarce, find the way around the scarcity instead of only rationing it.

Positional goods are the hardest of all, because their value depends on position. The economist Fred Hirsch coined the term "positional goods"; he described the positional economy as goods, services and positions that are "scarce in some absolute or socially imposed sense" or "subject to congestion and crowding through more extensive use", and no amount of production makes more of the view from the best hill.[107] UP does not pretend otherwise. It shares such goods by rotation or by the decision of the people affected, never by price, and it works on design that lets many people enjoy what once only a few could, as Paolo Soleri proposed.[42,102]

The signals stay; the price goes

Hayek's strongest point, met in the previous sections, was that a price carries information: it tells everyone, without anyone having to collect it, that people want more of something or less. If money goes, that information must still flow. UP agrees; its agreed positions replace prices with shared access and physical accounting, and its position on prices, one way UP could run, shows how that information could still flow.[102,94] Demand does not disappear when the price does; it shows up in queues, in use, in stock levels and in requests, and each of those can be counted directly. The current system already runs some allocations this way, including some of the goods where a price would be most dangerous.

A public library is the plainest case. When too many people want the same book, nobody bids for it. The library counts the holds. The Multnomah County Library in Oregon publishes its rule in its staff manual: staff watch for

[103] De Beers Group, press release "De Beers Group announces intention to close Lightbox business" (May 2025): "The business was launched with transparent linear pricing of $800 per carat."; "LGD prices in the jewellery sector have fallen 90% at wholesale"; "Reflecting this sharp price decline, De Beers Group intends to discontinue the Lightbox business."; the release reaffirms "De Beers Group's commitment to natural diamonds in the jewellery sector". Read in a republished copy: https://benchpeg.com/news/press-release-de-beers-group-announces-intention-to-close-lightbox-business/ . Checked 13 Nov 2026.

[104] Colin Campbell, Tesla's vice president of powertrain engineering, at Tesla's Investor Day (1 Mar 2023), as reported by TechCrunch: "We have designed our next drive unit to use a permanent magnet motor to not use any rare earth materials at all". An announcement. https://techcrunch.com/2023/03/01/everything-elon-musk-and-execs-shared-and-skipped-at-tesla-investor-day/ . Checked at source, 13 Nov 2026.

[105] Niron Magnetics, press release (29 Sep 2025), on breaking ground for a "1,500-ton-per-year permanent magnet manufacturing facility in Sartell, Minnesota": "The plant will be operational in early 2027". The company describes its work as "commercializing the world's first high-performance, rare-earth-free permanent magnets using Iron Nitride." A plan, in the company's own words. https://www.businesswire.com/news/home/20250929097968/en/Niron-Magnetics-Changes-Game-by-Breaking-Ground-on-Rare-Earth-Free-Magnet-Facility ; https://www.nironmagnetics.com/about . Checked at source, 13 Nov 2026.

[106] CATL, press release (29 Jul 2021): "The energy density of CATL's sodium-ion battery cell can achieve up to 160Wh/kg"; the company "plans to form a basic industrial chain by 2023". An announcement. https://kyodonewsprwire.jp/release/202107308370 . Checked at source, 13 Nov 2026.

[107] Fred Hirsch, *Social Limits to Growth* (Harvard University Press, 1976), on the positional economy: "all aspects of goods, services, work positions and other social relationships that are either (1) scarce in some absolute or socially imposed sense or (2) subject to congestion and crowding through more extensive use" (Routledge edition, 1977, p. 27, as quoted in the Wikipedia article "Positional good"; the book itself was not read for this chapter). Jens Jørund Tyssedal, "What is a positional good? Recovering Hirsch's insights", *Economics & Philosophy* 42 (2025): "'Positional goods', a term coined by Fred Hirsch, is an important concept in economics, social sciences and philosophy". https://www.cambridge.org/core/journals/economics-and-philosophy/article/what-is-a-positional-good-recovering-hirschs-insights/044344084B37556691445494C779EC33 ; https://en.wikipedia.org/wiki/Positional_good . Checked at source, 13 Nov 2026.

“titles where the holds to copies ratio is over a certain number, and buy more copies if possible”, with ratios of “6:1 for physical materials” and “8:1 for digital adult ebooks”.[108] The queue is the signal, and the response is more copies rather than a higher price. The same library is paid for with public money, so money is not absent from the system as a whole; what has gone is a price on each title, and the signal works without it.

Organs for transplant are the hardest case, and here a price has been deliberately ruled out. In the United States, federal rules require that candidates for a donated organ be ranked “from most to least medically urgent”.[109] In Britain, the national kidney-matching scheme gives “one point for every day waiting”, more points the better the tissue match, and more priority to children and to patients who are hardest to match.[110] Where a living donor and the person they want to help are incompatible, pairs can swap. The Nobel committee, explaining the 2012 prize in economics, noted that “in the case of human organs for transplants, monetary payments are ruled out on ethical grounds”, and that “increasingly complex chains of kidney donations are now adopted in a number of U.S. states.”[111] A matching algorithm, a record of need and a rule everyone can read do the job a price would otherwise do, for a good no one wants sold to the highest bidder. The system is not perfect, and critics point out that getting onto the waiting list is not equally easy for everyone. But the signal it runs on is medical need, not ability to pay.

Blood, which the chapter returns to below, is managed by stock levels. Britain’s blood service issues an amber alert when stocks are predicted to fall below two days’ supply, and appeals for donors.[112] In June 2025 it reported “an annual shortfall of over 200,000 donors needed to meet growing demand”.[113] Supply and demand are both counted in units of blood, and the response to a shortage is to ask more people to give.

These cases show the pattern UP builds on. UP’s agreed position on prices, which illustrates one way UP could run, gives each of the price’s jobs a tool of its own: what people want is learned “by direct use data”, things that are still limited are shared “by rotation and reservation”, and costs are counted “by physical accounting”.[94] Holds, waiting lists, bookings and stock levels are all direct use data. A rising queue says that people want more, as a rising price would, but it does not decide that whoever pays most goes first, and it points straight at the remedy: make more, share better, or design around the limit. The data rule in the same position keeps each person in control of their own information, so that reading demand never means watching people.[99,56] And because the AI only proposes, a signal never turns into an order: it becomes a proposal, with its data, that the people affected decide on.[69]

None of this proves that use data can steer the most complex production as well as prices do, and UP does not claim it. In its own words, that is “testable workload, run rung by rung”.[94] What the examples do show is narrower and firmer: the information a price carries can be gathered in other ways, and for some of the goods that matter most, it already is.

Basic needs first, then wider and wider sharing

The seven developments do not arrive all at once, and UP does not try to apply them everywhere at once. The order matters, and it starts at the bottom.

In the early stages, on the order UP’s author proposes for UP’s method to test, most of the effort would go into basic needs: food, water, shelter, energy, health care and learning. There are three reasons. They are the floor: UP’s core holds everyone’s basic needs as a floor that no decision may cross, so they come before anything else.[19]

[108] Multnomah County Library (Oregon), Library Staff Manual, “Purchase alerts/holds ratios”: staff look for “titles where the holds to copies ratio is over a certain number, and buy more copies if possible”; ratios “6:1 for physical materials (non-WSYL)” and “8:1 for digital adult ebooks”; “Staff use this as a guideline to buy additional copies if they are available.” The library is publicly funded. https://cards-commons.multcolib.org/library-staff-manual/collections/purchase-alertsholds-ratios

[109] US Code of Federal Regulations, 42 CFR 121.8, “Allocation of organs”: candidates’ “rankings shall be ordered from most to least medically urgent”; allocation is to be “based on sound medical judgment”. https://www.ecfr.gov/current/title-42/chapter-I/subchapter-K/part-121/section-121.8

[110] NHS Blood and Transplant, Organ Donation and Transplantation, “Kidney offering and matching”: “one point for every day waiting”; “the better the match the more the points”; “highly sensitised patients get more points”; “children get more priority” https://www.odt.nhs.uk/transplantation/kidney/kidney-offering-and-matching

[111] The Nobel Prize, Prize in Economic Sciences 2012 (Alvin E. Roth and Lloyd S. Shapley), popular information: “in the case of human organs for transplants, monetary payments are ruled out on ethical grounds”; “increasingly complex chains of kidney donations are now adopted in a number of U.S. states.” https://www.nobelprize.org/prizes/economic-sciences/2012/popular-information/

[112] Cambridge University Hospitals NHS Foundation Trust, “Amber alert issued on blood stocks”, 12 October 2022, relaying NHS Blood and Transplant: “levels are currently predicted to fall below two days which is the threshold for an amber alert.” https://www.cuh.nhs.uk/news/amber-alert-issued-on-blood-stocks/

[113] NHS Blood and Transplant, “NHS in England calls for one million people to donate blood to secure the nation’s blood supply”, 9 June 2025: “More than 5,000 donations are needed every day” and an “annual shortfall of over 200,000 donors needed to meet growing demand.” https://www.blood.co.uk/news-and-campaigns/news-and-statements/nhs-in-england-calls-for-one-million-people-to-donate-blood-to-secure-the-nation-s-blood-supply/

They are where money bites hardest: a person who can lose their home or their next meal when the money stops cannot afford to rely on anything new until those needs are secure. And they are where the developments are strongest. Food and energy are made from common materials, by well-understood methods, and technology has cut the cost of their key inputs, as the fertiliser and solar figures earlier in this chapter show. Shelter is harder, and the cases below show what it takes. UP's agreed position on the whole system names the part this effort builds: "automation that supplies basic needs at ever lower cost".[47]

What follows, on this projection, is wider and wider sharing. Once a household's food, energy and shelter no longer depend on money, the next things it shares at scale are tools, vehicles, workspaces and skills, which most early networks start in a small way from the beginning; then larger things, such as workshops, studios, places to stay and land; and then the shared work of designing and making what a community wants next. Each step makes the next one easier, because the people who take it no longer have to guard what they have against losing their footing. This is a projection, and the evidence for it is partial. The pieces exist and are growing. In Vienna, according to the city, "around 50 percent of all Viennese live in subsidised dwellings", a housing base that about half of the city's residents can count on.[114] Residents still pay rent, and critics say the model is under strain, so Vienna shows a secure base, not sharing beyond it. In the United States, a national census of community land trusts, which hold land off the market so that homes on it stay affordable, recorded "314 CLTs or SEH entities across 46 states", "a nearly 30% increase since 2011".[115,116] A 2024 report by Shareable, a publisher that champions sharing, estimated that there are "about 2,000 formally established" libraries of things worldwide; in its survey of 82 of them, most had been running for less than five years.[117]

The honest part is that we found no study that has followed a community from secure basic needs to wider sharing and measured the effect, and one well-documented case points the other way. In the spring of 2020, as the pandemic began, people in Britain set up "over 4000 new groups" for mutual aid, and then "participation in mutual aid groups dropped, particularly after 'lockdown' restrictions eased"; activity in the groups on Facebook "dropped by 75% by June from the high point of March 2020."[118] Sharing that grows in a crisis can fade when the crisis passes. The lesson this chapter draws, in line with UP's agreed position that cooperation lasts where contributions are visible and limits are agreed together, is that sharing lasts where it is built into how needs are met, with a place, a record and people who keep it going, not where it rests on goodwill alone. Chapter 13 takes this up for needs in full. Whether the ladder holds, and how fast, is something UP's communities must show in their published records.[77]

How the pieces work together

None of the seven developments replaces money on its own. The case for UP rests on what they do together, and on the order in which they act. Abundance, automation and efficiency shrink the number of things that are scarce at all. A new way of using things and open designs shrink the number that each person has to own. Coordination that counts real things, in one way UP could run, handles what is still limited without a price, as far as tests show it can. And what remains truly scarce would become the focus of a great deal of attention, so that, on this projection, the list keeps getting shorter. Each step makes the next one easier: cheap energy powers the machines, machines make sharing and repair easier, open designs let anyone build the machines, and coordination keeps track of all of it. The same logic runs through UP's agreed position on the whole system, which describes UP as "a system whose

[114] City of Vienna, socialhousing.wien: "Today, around 50 percent of all Viennese live in subsidised dwellings". The model has critics who say affordable housing in Vienna is under strain; the figure is the city's own. https://socialhousing.wien/

[115] University of Washington, Runstad Department of Real Estate, "Publication of the largest national study on community land trusts and nonprofits with shared equity homeownership programs", 6 July 2023 (on the 2022 census by Grounded Solutions Network and the Lincoln Institute of Land Policy): "recording 314 CLTs or SEH entities across 46 states", "representing a nearly 30% increase since 2011". https://research.be.uw.edu/2023/07/06/publication-of-the-largest-national-study-on-community-land-trusts-and-nonprofits-with-shared-equity-homeownership-programs

[116] Grounded Solutions Network, "Community Land Trusts": a homeowner "purchases a house that sits on land owned by the community land trust"; "The homeowners lease the land from the community land trust in a long-term (often 99-year), renewable lease"; the aim is "the creation of homes that remain permanently affordable" https://groundedsolutions.org/strengthening-neighborhoods/community-land-trusts

[117] Shareable, "New report: The State of Libraries of Things 2024": "There are about 2,000 formally established LoTs around the world"; "Most LoTs have been operating for less than 5 years" The report rests on a survey of 82 libraries in 11 countries; Shareable is an advocacy publisher. https://www.shareable.net/new-report-the-state-of-libraries-of-things-2024/

[118] University of Sussex, Crowds and Identities, "Case study: UK Covid mutual aid groups", 1 November 2022: "over 4000 new groups being set up in Spring of that year"; "participation in mutual aid groups dropped, particularly after 'lockdown' restrictions eased"; "activity in Covid mutual aid groups on Facebook dropped by 75% by June from the high point of March 2020." https://blogs.sussex.ac.uk/crowdsidentities/2022/11/01/case-study-uk-covid-mutual-aid-groups/

parts strengthen each other", among them "automation that supplies basic needs at ever lower cost".[47] Figure 8.2 draws the argument.

FIGURE 8.2

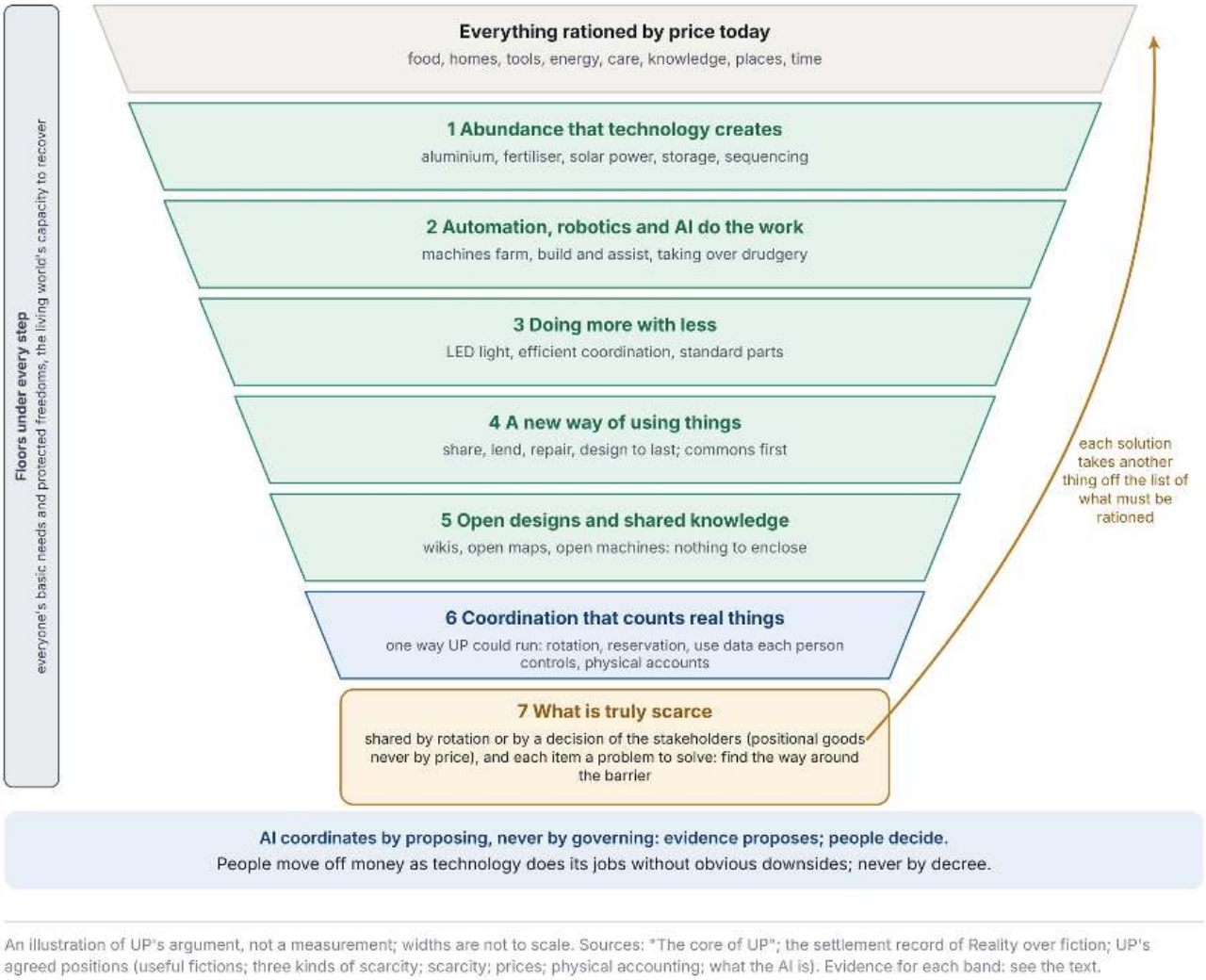


Figure 8.2. Each development takes over part of what money rations today, so that less and less has to be rationed by price. Floors stand under every step, and AI proposes while people decide. An illustration of UP's argument, not a measurement; widths are not to scale. Sources: "The core of UP"; the settlement record of Reality over fiction* (never by decree); UP's agreed positions (useful fictions, three kinds of scarcity, scarcity, prices, physical accounting, what the AI is); the evidence for each band is in the text and notes.*

Table 8.1 takes money apart into the five jobs named earlier in this chapter and shows what could take each one over, what already shows it can be done, and what still stands in the way. The third column is the illustration; the fourth is the evidence; the last is the honest part. What is settled sits underneath it: needs are a floor; positional goods are never shared by price; contribution records never decide needs; people choose their work and the AI may not assign it; and a node publishes a labour budget. Sharing necessary work through a fair rota, with every able member expected to take a small share (an expectation, not a law, which never affects whether anyone's

needs are met), is one possible way.[19,42,54,69,119,120] The same exercise for government and for the company is in Chapters 9 and 10.

Table 8.1. The jobs money does, and what could take each over. The third column is an illustration of one way UP could run, never a directive, except where it names a settled line (the floors, positional goods never shared by price, people choosing their work, the published labour budget, contribution records as feedback).

Job money does	What could take it over in UP	What shows it can be done	What still stands in the way
Rationing what is scarce	Abundance, sharing, open designs; what is still limited shared by rotation and reservation; positional goods never by price; the rare cases decided openly by the stakeholders, with the measured value of each use as evidence	Aluminium, fertiliser, solar power and storage; tool and car sharing; public libraries; telescope and supercomputer time allocated by peer review	Positional goods; physical limits; whether rotation is accepted as fair
Signalling what people want	Use data that each person controls, under the data rule: queues, bookings, holds and stock levels; problems raised in the open	Library holds ratios; organ waiting lists and kidney exchange; blood stock alerts	Privacy; turning use data into plans for complex production
Getting work done	Automation and robotics for drudgery; people choosing their work; a published labour budget; one possible way to share necessary work is a fair rota, with each able member expected to take a small share (an expectation, not a law); contribution records as feedback that never decides needs	The fall in farm labour as productivity rose; robots in factories; open-source software, Wikipedia, unpaid blood donors	Care and other work machines cannot yet do; the friction of the change
Counting costs	Physical accounts of energy, materials, water and carbon, with people choosing inside the limits	The UN's environmental-economic accounting standard and EU material flow accounts; route planning at UPS	Whether physical counts can weigh very different needs; gaming of measures
Carrying value through time	A shared productive base that keeps producing (energy, machines, open designs), with needs held as a floor so that no one has to save against losing them	Solar power and storage that keep producing once built; public libraries and the open knowledge commons	Large, long projects that need effort gathered before results; debts, which stay in the current system

The table makes one thing plain. For some jobs, such as getting a general reference into every home, the replacement has already happened. For others, such as rationing what is scarce, signalling demand for some of the goods that matter most, or getting drudgery done, it has begun, and UP's task is to connect and extend what exists. For the hardest, such as coordinating complex production without prices, UP has a direction and some evidence, and the rest is work to be done in the open. That is exactly where UP's rule wants the line drawn: money is still used for whatever nothing else yet does without obvious downsides, by the people who still rely on it.[18,20]

[119] UP's agreed position on the work nobody wants (card 23, CANON): a node "publishes a labour budget (what is needed, by when, and what happens if it is not done) and asks people directly. Any shortfall, and any task nobody wants, becomes a shared problem, met with visibility, recognition, fair rotas and automation." Full wording in UP's agreed positions (the Position Ledger).

[120] UP's agreed position on sharing necessary work (card 23b, CANON): "Necessary work is shared through a published, fair rota that people sign up for, with recognition and example doing the rest. Every able member is expected to take a small share, but it is an expectation, not a law, and it never affects whether anyone's needs are met. This is one possible way; better ideas for better outcomes with less friction are always welcome." Also in UP's agreed positions (the Position Ledger).

At the end of the projection: where the attention goes

Follow the projection to its end. Picture the middle and completed stages working as intended: nearly everyone's needs met, and much of what people want shared, without anyone having to pay. It is a projection, not a forecast, and UP guarantees needs, not every want; it holds abundance to the same standard everywhere: "a measured target shown in practice, not a promise".[77] What counts as enough is set together, inside the planet's limits, and rises as capacity grows.[55,75] But the picture is worth drawing, because it changes the question. In the current system almost every decision about who gets what passes through money. In that picture, almost none does. What is left is a short list of rare and difficult cases, and that is where the attention goes.

What would be on the list? The answer is the things that are hard to make more of, not because of a record but because of the world. Very advanced technology, built with rare materials and skills. Large scientific instruments, of which there may be only a handful on Earth. Programmes to explore space. The great shared systems on which everything else rests, such as power grids, ports and the networks that carry data. And the positional goods that UP's agreed position on scarcity already names: prime places, specialised skills, time and attention.[42]

Today's science already shows how such things can be shared without a price, because it has had to. Observing time on the great telescopes cannot be bought by the highest bidder. It is given out by panels of scientists who read proposals and judge what each would add. For the James Webb Space Telescope's fourth cycle of observations, the Space Telescope Science Institute reported that "The total time requested is ~78,000 hours, corresponding to a ~9:1 oversubscription rate", with "over 600 members participating in the JWST Cycle 4 review"; its final statistics count about 75,000 hours of requests from general observers.[121] The ALMA observatory in Chile received "1,640 proposals requesting more than 30,000 hours on the 12-meter Array", "an oversubscription rate of 7.0".[122] Much of the time on the most powerful American supercomputers is allocated by peer review too: for 2026, the Department of Energy's INCITE programme, which awards most of the time on its largest machines, received requests for "more than 141 million node-hours", and its proposals "are assessed by peer-review panels composed of international experts"[123] In each case the value of a use is measured: what it would teach, how well it is designed, whether it can be done at all. People who know the field decide, through panels, by published criteria.

The method has limits, and they are worth seeing. Good proposals are turned away every cycle, and the panels deliberate in private. And not every allocation by review leaves money out: a 2023 call for proposals at the International Space Station's national laboratory stated that "the level of funding requested will be a factor in the final selection".[124] UP would not copy any of these systems whole. It would use what they show: that scarce things can be shared without a price, with the measured value of each use published as evidence and those best placed to judge asked for their view, while the decision is made openly by the stakeholders, never by an efficiency score.

The second half of the picture matters more. A price only rations; it does nothing to make a rare thing less rare.[102] When telescope time is nine times oversubscribed, the frustration of the eight in nine who are turned away is real, and in UP it is meant to be turned into work: on more efficient instruments, on sharing time better, on new instruments, on ways around the limit. Something like this has already happened with helium, which cools the magnets of laboratory instruments. It is scarce, its price has risen, and some facilities, according to the City University of New York's Advanced Science Research Center, "have had to shut down instrumentation rather than keep it going". The centre's answer was a recovery system that "captures and recycles close to 90% of the helium used by five machines".[125] Rising prices as well as physical scarcity drove such systems, so the case shows a limit

[121] Space Telescope Science Institute, "JWST Observers Break Their Own Record for Astronomical Proposal Submissions" (2024): "The total time requested is ~78,000 hours, corresponding to a ~9:1 oversubscription rate (similar to Cycle 3)"; "with over 600 members participating in the JWST Cycle 4 review." The final statistics count 75,138 hours of general-observer requests. https://www.stsci.edu/contents/news/jwst/2024/jwst-observers-break-their-own-record-for-astronomical-proposal-submissions

[122] ALMA Observatory, "From Cosmic Dawn to Planet Birth: ALMA Cycle 12 Observations Set to Begin" (2025): "ALMA received 1,640 proposals requesting more than 30,000 hours on the 12-meter Array", "corresponding to an oversubscription rate of 7.0." https://www.almaobservatory.org/en/announcements/from-cosmic-dawn-to-planet-birth-alma-cycle-12-observations-set-to-begin/

[123] US Department of Energy, INCITE programme, "INCITE program awards supercomputing time to 75 high-impact projects" (17 November 2025), on the 2026 awards: "the committee received 143 total proposals with researchers" "requesting more than 141 million node-hours across all three systems"; INCITE awards 60 percent of the available time on the leadership-class machines. Proposals "requesting more than 141 million node-hours across all three systems"; "Over a four-month period, INCITE proposals are assessed by peer-review panels composed of international experts" https://doeleadershipcomputing.org/wp-content/uploads/sites/123/2026/05/2026INCITEAnnouncement.pdf

[124] ISS National Laboratory, NLRA 2023-2 frequently asked questions: "the level of funding requested will be a factor in the final selection"; "no-cost and low-cost proposals will receive priority over higher-cost proposals". One solicitation, not the station's general allocation. https://www.issnationallab.org/nlra2023-2-faq/

[125] City University of New York, Advanced Science Research Center, "No Laughing Matter: Recycling Helium Amid a Global Shortage", December 2023: "Some facilities have had to shut down instrumentation rather than keep it going"; "the system captures and recycles close to 90% of the helium used by

turning into a technology, not that the price was unnecessary. In UP the same pressure would arrive as a signal and a shared problem, without anyone being priced out.

That is the shape UP intends for every item on the short list. When many people want the same thing, UP treats it, in the words of its agreed position, as "a signal and a problem to solve".[102] The attention that today is spread across billions of transactions, each one a small negotiation over price, is freed for the few problems that are genuinely hard, and everyone who wants to help can work on them. Its agreed position on the whole system describes how: problems are linked in trees that show their common roots, and "the system works like a marketplace of problems, biggest first".[47] What still cannot be stretched to cover everyone is shared by rotation or by a decision of the stakeholders,[102] and positional goods, in the words of UP's agreed position on scarcity, are shared that way "never by price".[42] Those are real decisions, and some of them will be hard. But they are rare ones: a community deciding how to use something truly scarce, in the open, with the evidence in front of it, a few times a year instead of every day.

It has already begun: how a job moves out of a fiction

Jobs have already moved out of money and out of companies, and the way they moved is the best guide to how UP intends to move more of them.

The first is the encyclopaedia. In March 2012 the *New York Times* reported that "After 244 years, the Encyclopaedia Britannica is going out of print." The great sets had once been "sold door-to-door by a fleet of traveling salesmen and displayed as proud fixtures in American homes", and "Buying a set was often a financial stretch, and many families had to pay for it in monthly installments." The paper put the reason plainly: the decision came "In an acknowledgment of the realities of the digital age — and of competition from the Web site Wikipedia", which was "written and edited by tens of thousands of contributors around the world".[126] One job, giving every household a general reference, moved largely from a paid product to a commons built by volunteers, because a technology, the wiki, let people do together what had needed a company and a price. Britannica itself carried on online. Nobody was made to give up their set.

The second is blood, and here the job moved out of money itself. In 1975 the World Health Assembly said it was "aware of the higher risk of transmitting diseases when blood products have been obtained from paid rather than from voluntary donors", and urged member states "to promote the development of national blood services based on voluntary nonremunerated donation of blood".[127] Half a century later, according to the WHO, "80 countries collect over 90% of their blood supply from voluntary unpaid blood donors", and these donors "are also the safest group of donors as the prevalence of bloodborne infections is lowest among this group."[128] The change is not finished, and the WHO says so: "59 countries collect more than 50% of their blood supply from family/replacement or paid donors."[128] Here the replacement was not mainly a machine but an organisation: national services that could test, store and match blood well enough to run on gifts.

five machines" Rising prices as well as physical scarcity drove such systems. https://asrc.gc.cuny.edu/headlines/2023/12/no-laughing-matter-recycling-helium-amid-a-global-shortage

[126] Julie Bosman, "After 244 Years, Encyclopaedia Britannica Stops the Presses", *New York Times*, 13 March 2012: "After 244 years, the Encyclopaedia Britannica is going out of print."; the books "were once sold door-to-door by a fleet of traveling salesmen and displayed as proud fixtures in American homes"; "In an acknowledgment of the realities of the digital age — and of competition from the Web site Wikipedia — Encyclopaedia Britannica will focus primarily on its online encyclopedias and educational curriculum for schools. The last print version is the 32-volume 2010 edition"; "Buying a set was often a financial stretch, and many families had to pay for it in monthly installments."; Wikipedia "is now written and edited by tens of thousands of contributors around the world"; Jorge Cauz: "Some people will feel sad about it and nostalgic about it. But we have a better tool now. The Web site is continuously updated, it's much more expansive and it has multimedia."; Britannica's advantage "came from its prestigious sources, its carefully edited entries and the trust that was tied to the brand."; the 2005 *Nature* study "said that out of 42 competing entries, Wikipedia made an average of four errors in each article, and Britannica three. Britannica responded with a lengthy rebuttal"; "a luxury item with a $1,395 price tag"; "Only 8,000 sets of the 2010 edition have been sold". https://archive.nytimes.com/mediadecoder.blogs.nytimes.com/2012/03/13/after-244-years-encyclopaedia-britannica-stops-the-presses/ . Checked at source, 1 Nov 2026.

[127] World Health Assembly, resolution WHA28.72, "Utilization and supply of human blood and blood products", 29 May 1975: "Noting the extensive and increasing activities of private firms in trying to establish commercial blood collection and plasmapheresis projects in developing countries"; "Being aware of the higher risk of transmitting diseases when blood products have been obtained from paid rather than from voluntary donors"; "URGES Member States: (1) to promote the development of national blood services based on voluntary nonremunerated donation of blood". https://www.afro.who.int/sites/default/files/2017-06/htl%20WHA28-72.pdf . Checked at source, 1 Nov 2026.

[128] World Health Organization, "Blood safety and availability", fact sheet (page dated 12 June 2026): "In total, 80 countries collect over 90% of their blood supply from voluntary unpaid blood donors; however, 59 countries collect more than 50% of their blood supply from family/replacement or paid donors."; "These donors are also the safest group of donors as the prevalence of bloodborne infections is lowest among this group."; "A total of 119 countries reported that all PDMP are imported, or no PDMP were used during the reporting period." (PDMP: plasma-derived medicinal products). https://www.who.int/news-room/fact-sheets/detail/blood-safety-and-availability . Checked at source, 1 Nov 2026.

The two cases have the same shape, and it is the shape UP intends for every job it takes over. A job moved out of money or out of a company when something people built together did it as well or better. It moved gradually, over years or decades, as people saw that the new way worked. And the old arrangement stayed in place wherever the new one was not yet ready: Britannica carried on online, and, by the WHO's own count, 59 countries still collect more than half their blood from family, replacement or paid donors.[126,128] And the motive behind both is the one this book keeps meeting: the people who wrote the encyclopaedia and gave the blood were not paid for it. As Chapter 1 showed, people often take on a problem simply because it is there and they can help.

What UP adds is intent and combination. These moves happened one at a time, by people who each saw one problem. UP takes the same pattern and applies it on purpose, wherever its people take up a problem, with all the tools of the previous sections working together, and with inventing new solutions as its main activity rather than an occasional accident.[129] That is the difference between a job that leaves a fiction by luck every few decades and a system in which a job leaves a fiction as soon as technology can be shown to do it without obvious downsides and the people affected choose the change.

Why UP itself does not run on money

There is an obvious shortcut, and UP declines it. A network that wanted to grow fast could run itself on money: pay its members, sell what it makes, borrow against its land, and turn itself into a company with a good mission. Many movements have tried something like this, and the record points to a real risk, though not an inevitable one. Tools built for the current system carry the current system's pull, and an alternative that runs on them can slide back into the traps it set out to escape.

The worker co-operatives of Mondragon, in the Basque Country, are among the most admired alternatives of the last century, and rightly so. They also show the pull. As they grew, they came to include many ordinary companies, and by the anthropologist Sharryn Kasmir's account in 2015, "Only about half of MC's businesses are cooperatives and one-third of its employees are members."[130] When Fagor Electrodomésticos, the group's home appliance maker, went bankrupt in 2013, the co-operative members were paid by their own insurance fund for two years and the group said it would try to place them in other co-operatives, but "3,500 employees of Fagor international subsidiaries, however, were not similarly protected."[130,131] The co-operative had become two things at once: a democracy for its members and an ordinary employer for everyone else.

Israel's kibbutzim, founded on equal sharing, show a related pressure, from a market economy all around them. According to a working paper published by the National Bureau of Economic Research, "Starting in the late 1990s, kibbutzim shifted away from equal sharing and socialism for the first time", and "The first significant wave of reforms took place in 1998, and most of the kibbutzim reformed in the following few years", moving "from equal sharing to market-based wages."[132] Members of Britain's building societies, mutual lenders they owned, were offered windfalls to give that ownership up; in the researchers Ricky Klimecki and Hugh Willmott's account of two of them, a member could receive "a substantial windfall that could amount to thousands of pounds, by signing a voting form".[133] Northern Rock "demutualised and became Northern Rock bank in 1997", and in 2007 suffered a run on the bank.[134] Its failure is usually put down to how it funded its lending, not to demutualisation alone, and

[129] UP's agreed position (round 12S, position 1): "Inventing solutions together is UP's primary activity" (T2); "In UP anyone can try anything that might solve a problem; tools are commons; the result carries the power; unpopular ideas that work rise because of their results, not because a funder chose them." Full wording in UP's agreed positions (the Position Ledger) and UP's study lessons (lesson 15).

[130] Sharryn Kasmir, "Mondragon coops and the anthropological imagination", FocaalBlog, 29 June 2015: "Only about half of MC's businesses are cooperatives and one-third of its employees are members"; "These firms are not worker owned, and employees do not have the rights or privileges of coop members"; of the Fagor bankruptcy, "3,500 employees of Fagor international subsidiaries, however, were not similarly protected." https://www.focaalblog.com/2015/06/29/sharryn-kasmir-mondragon-coops-and-the-anthropological-imagination

[131] Fagor Electrodomésticos filed for bankruptcy under Spanish law on 16 October 2013 "to renegotiate €1.1 billion of debt", followed by "the bankruptcy of the whole Fagor group on 6 November 2013" (Wikipedia, "Mondragon Corporation", a secondary source). Mondragon announced that its internal insurance company Lagun Aro "will pay" "80 percent of the cooperative member's salaries for two years" (Resilience.org, 27 January 2014). https://en.wikipedia.org/wiki/Mondragon_Corporation ; https://www.resilience.org/stories/2014-01-27/mondrag-n-and-the-system-problem/

[132] National Bureau of Economic Research, Working Paper 30186, "The Effect of Labor Market Liberalization on Political Behavior and Free Market Norms" (Ran Abramitzky, Netanel Ben-Porath, Shir Lahad, Victor Lavy and Michal Palgi, June 2022): kibbutzim "shifted from equal sharing to market-based wages"; "Starting in the late 1990s, kibbutzim shifted away from equal sharing and socialism for the first time"; "The first significant wave of reforms took place in 1998, and most of the kibbutzim reformed in the following few years." https://www.nber.org/system/files/working_papers/w30186/w30186.pdf

[133] Ricky Klimecki and Hugh Willmott, "From Demutualisation to Meltdown: A Tale of Two Wannabe Banks", *Critical Perspectives on International Business* 5(1/2), 2009, 120–140: members were offered "a substantial windfall that could amount to thousands of pounds, by signing a voting form." https://core.ac.uk/download/29026615.pdf

[134] Northern Rock "demutualised and became Northern Rock bank in 1997, when it floated on the London Stock Exchange"; in 2007 "The result was a bank run – the UK's first in 150 years"; the government later took it into public ownership (Wikipedia, "Northern Rock", a secondary source). https://en.wikipedia.org/wiki/Northern_Rock

members chose the conversions freely. But the windfalls were money's pull made visible: a shared institution, valued by money, turned out to be worth more to its owners sold than kept.

The newest case is in AI itself. OpenAI was founded as a non-profit, and in 2019 it created a company with capped profits, explaining that "no pre-existing legal structure we know of strikes the right balance".[135] By 2025 its leaders wrote that making its services broadly available to all of humanity "currently requires hundreds of billions of dollars and may eventually require trillions of dollars", and in October of that year the company became a public benefit corporation, with its non-profit holding equity in it.[136,137] The Attorney General of Delaware, who reviewed the change, stated that the non-profit "will retain control and oversight over the newly formed PBC".[138] Whether the mission has bent is argued over, and UP takes no side on it. What the case shows is the pressure: an organisation founded as a non-profit said that its aims needed hundreds of billions of dollars, and restructured around a for-profit company to raise them. Whether that was the only way is OpenAI's own judgement, and regulators attached conditions to it.

None of these people were fools or cynics, and many of these institutions still do great good. That is exactly why UP declines the shortcut. If the pull of money can reshape institutions built by people this committed, UP should not expect to be immune to it. So, in the reading UP's author has set out (now going through UP's method), UP's own system does not run on money: inside UP, needs are met as a floor, things are made and shared, and contribution records only inform, never deciding whether anyone's needs are met.[20,54] The same goes for the other two fictions. UP's own system is not run as a government or as a company, even where, at its edges, the law requires a legal form to hold land or sign a contract; Chapters 9 and 10 take up why.

The open record gives UP one more defence that these institutions mostly lacked. When the company behind a widely used open-source program, Terraform, changed its licence in 2023 so that others could no longer use future versions in products that compete with the company's own, its users forked the last open version. "Our aim with this manifesto," the fork's founders wrote, "is to return Terraform to a fully open-source license", and the Linux Foundation took the new project, OpenTofu, under "a neutral governance model".[139,140,141] When Redis made a similar change in 2024, a fork followed; a year later the company returned to an open-source licence, writing that the change "hurt our relationship with the Redis community."[142] UP's core builds this in from the start: what UP makes stays open to everyone who takes part, and no one may enclose it.[56] A shared thing that can be forked is much harder to sell quietly, though the best-known forks so far have been backed by large companies.

At the edges, UP still has to meet the money world, and the best open projects show how to do that without letting money inside. Wikipedia is written by volunteers who are not paid for their articles; the Wikimedia Foundation, a non-profit, hosts the site and pays its bills, and the projects are "powered primarily through donations".[143] The Debian project, which makes one of the most widely used free operating systems, runs as a community of volunteers, while "Various organizations hold assets in trust for Debian and receive donations on Debian's behalf", among them "Software in the Public Interest, a non-profit organization that holds assets in trust for Debian."[144] A community land trust holds land off the market so that the homes on it stay affordable, and leases it to

[135] OpenAI, "OpenAI LP", 11 March 2019: "Returns for our first round of investors are capped at 100x their investment"; "no pre-existing legal structure we know of strikes the right balance." https://openai.com/index/openai-lp/

[136] OpenAI, "Evolving OpenAI's structure", 5 May 2025 (letter from Sam Altman): making its services broadly available to all of humanity "currently requires hundreds of billions of dollars and may eventually require trillions of dollars." https://openai.com/index/evolving-our-structure/

[137] OpenAI, "Built to benefit everyone", 28 October 2025: "The nonprofit, now called the OpenAI Foundation, holds equity in the for-profit"; "The for-profit is now a public benefit corporation, called OpenAI Group PBC" https://openai.com/index/built-to-benefit-everyone/

[138] Delaware Department of Justice, "AG Jennings completes review of OpenAI recapitalization", 28 October 2025: "The NFP will retain control and oversight over the newly formed PBC"; "The mission of the PBC will be identical to the NFP's current mission" https://news.delaware.gov/2025/10/28/ag-jennings-completes-review-of-openai-recapitalization/

[139] Armon Dadgar, HashiCorp, "HashiCorp adopts Business Source License", 10 August 2023: HashiCorp "is changing its source code license" "to the Business Source License (BSL, also known as BUSL) v1.1 on all future releases of HashiCorp products." https://www.hashicorp.com/en/blog/hashicorp-adopts-business-source-license

[140] OpenTofu Manifesto: "Our aim with this manifesto is to return Terraform to a fully open-source license." https://opentofu.org/manifesto

[141] Linux Foundation, "Linux Foundation Launches OpenTofu: A New Open Source Alternative to Terraform", 20 September 2023: "a reliable, open source alternative under a neutral governance model." https://www.linuxfoundation.org/press/announcing-opentofu

[142] Redis, "Redis is now available under the AGPLv3 open source license", 1 May 2025: "in March 2024, we decided to move Redis to the SSPL license. This achieved our goal—AWS and Google now maintain their own fork—but the change hurt our relationship with the Redis community." The fork, Valkey, was launched by the Linux Foundation as "an open source alternative to the Redis in-memory, NoSQL data store." https://redis.io/blog/agplv3/ ; https://www.linuxfoundation.org/press/linux-foundation-launches-open-source-valkey-community

[143] Wikimedia Foundation, "About": "The Wikimedia Foundation is the nonprofit that hosts Wikipedia and our other free knowledge projects"; the projects are built by "the communities of volunteers around the world who edit, improve, and add knowledge across Wikimedia projects"; "As a nonprofit, Wikipedia and our related free knowledge projects are powered primarily through donations." Its audited revenue in 2023–24 was $185.4 million. https://wikimediafoundation.org/about/ ; https://meta.wikimedia.org/wiki/Wikimedia_Foundation_reports/Financial/Audits/2023-2024_-_frequently_asked_questions

homeowners “in a long-term (often 99-year), renewable lease”.[116] Each of these keeps money at the edge, where it pays for servers and staff, holds assets and deals with the law, and keeps it out of the writing, the code and the decisions. None of them is free of today’s institutions; community land trusts lean on public law, and blood services on public money and public law. UP’s edges would be narrower still: in the reading its author has set out, now going through UP’s method, contact is kept to what the law requires (taxes, land title, a legal form, partnership with local governments), openly recorded, kept to a minimum, and shrinking toward none as the people of an area move fully to UP.[20]

Who moves: people, not UP

That leads to the most important point in this chapter about how the change happens. It would be easy to read the tenet’s *gradually*, and the agreed position’s “ripe to be reduced slowly”, as a plan for UP to wean itself off money over many years. That is not how UP’s author reads them, and his reading is now going through UP’s method: UP’s own system does not run on money at any stage, and what moves gradually is people.[20]

Think of it as two curves. The first is inside each life. A person who joins UP keeps their job and their home and their bank account, because nobody is forced to give up what is theirs.[22] At first UP meets a small part of their needs: a tool library, a share of a car, help with a repair. As UP grows and its productive base grows, it meets more: much of their food, their energy, their transport, their learning. Year by year, less of their life runs through money. Whether they ever stop relying on it altogether is their choice, made when they are ready, and some will keep a foot in both worlds for good.

The second curve is the number of people. Each person who finds that UP meets their needs better than the old way is one more person relying less on money, and one more person adding to what UP can make and share. Neighbours see what works and join. As more people in a place move, more of what that place needs can be met inside UP, which makes the next move easier for everyone else. UP’s agreed position on legacy systems describes what happens to the old institutions as this goes on: they “will not simply dissolve; they are transformed from within”.[145]

Neither curve is pushed. Nobody is moved before they choose, no institution is shut down to hurry things along, and nobody has to wait for everyone else before they can go further. That is the difference between UP and every attempt in this chapter’s history to abolish money from above.

[144] Debian, “Donations”: “Various organizations hold assets in trust for Debian and receive donations on Debian’s behalf”; “Software in the Public Interest, a non-profit organization that holds assets in trust for Debian.” https://www.debian.org/donations

[145] UP’s agreed position that nodes survive as partners, not targets (card 25): “Legacy systems will not simply dissolve; they are transformed from within.”; nodes are farms, clinics, workshops and land “that states can tax, license or seize”, so UP’s strategy is to be “an indispensable partner”: nodes are useful and embedded in their communities, and “work with local and regional governments on their hardest problems”; “as nodes prove themselves, state functions are handed to the network or fade through people’s choice.” Round 11 set the book’s wording for this position as “ethical”, not “lawful”. Full wording in UP’s agreed positions (the Position Ledger).



Who moves: people, not UP. Two curves, inside each life and in the number of people, with UP's own system off money throughout.

When a fiction is torn down by decree

History also shows the opposite way, and it is the reason many readers will hear this tenet with alarm. Chapter 3 told how the Soviet state forced the peasants into collective farms from 1929. A decade earlier, during the civil war, the Bolshevik government had tried something more direct, and Lenin described the result himself in October 1921. The government had "uncalculatingly assumed" that "there would be a direct transition from the old Russian economy to state production and distribution on communist lines", and had taken grain from the villages by requisition. "In attempting to go over straight to communism we, in the spring of 1921, sustained a more serious defeat on the economic front than any defeat inflicted upon us by Kolchak, Denikin or Pilsudski." The New Economic Policy that followed meant, in his words, "reverting to capitalism to a considerable extent—to what extent we do not know."[146]

Cambodia went further. After the Khmer Rouge took Phnom Penh in April 1975, according to the Cambodia Tribunal Monitor, "they abolished money, free markets, normal schooling, private property, foreign clothing styles, religious

[146] V. I. Lenin, "The New Economic Policy and the Tasks of the Political Education Departments", report to the Second All-Russia Congress of Political Education Departments, 17 October 1921: "our previous economic policy, if we cannot say counted on (in the situation then prevailing we did little counting in general), then to a certain degree assumed—we may say uncalculatingly assumed—that there would be a direct transition from the old Russian economy to state production and distribution on communist lines"; "when in the heat of the Civil War we had to take the necessary steps in economic organisation"; "In attempting to go over straight to communism we, in the spring of 1921, sustained a more serious defeat on the economic front than any defeat inflicted upon us by Kolchak, Denikin or Pilsudski."; "The surplus-food appropriation system in the rural districts—this direct communist approach to the problem of urban development—hindered the growth of the productive forces and proved to be the main cause of the profound economic and political crisis that we experienced in the spring of 1921."; "The New Economic Policy means substituting a tax for the requisitioning of food; it means reverting to capitalism to a considerable extent—to what extent we do not know."; "the abolition of the surplus-food appropriation system means allowing the peasants to trade freely in their surplus agricultural produce". Marxists Internet Archive, https://www.marxists.org/archive/lenin/works/1921/oct/17.htm . Checked at source, 1 Nov 2026.

practices, and traditional Khmer culture."[147] Abolishing money was one part of a programme imposed by terror, and during those four years "an estimated 1.5 million to 3 million people—approximately one quarter of the country's population—died as a result of executions, forced labor, starvation, and disease."[148]

On the history, UP agrees with the critics, and the comparison with this chapter's argument is exact. Neither regime replaced anything. Each tore down an arrangement people depended on before anything could do its jobs, and neither had the technology that could have done them: no abundance, no automation, no way of knowing what people needed or what there was, only a decree and the force to back it. Each imposed the change from above and ran over the people it claimed to serve. UP's core rules out every part of that. The tenet's settlement record rules out "abolishing institutions by decree".[23] A fiction is replaced before it is retired.[48] UP is never imposed, no one is forced to join, to work or to give up what is theirs, and UP never starts harm against anyone.[22] Everyone's basic needs and protected freedoms are floors no decision may cross.[19] And where people disagree about whether a replacement is ready, more than one way can be tried side by side and compared, instead of one way being forced on a country.[50] The lesson UP takes is not that money must be kept forever. It is that money is let go only when technology can do what it does without obvious downsides, and, in the reading UP's author has set out and UP's method is now testing, that the letting go is done by people, each in their own life and at their own pace, not by a government, a party or UP.[18,20]

The other future: powerful machines inside the money system

A life without money and prices can be an unsettling thing to imagine. It is fair to set beside it the future that waits if nothing like UP is built, because that future is not standing still. AI, robotics, quantum computing and fusion energy are all arriving, and they are arriving inside the current system, where whoever owns a powerful tool keeps what it earns.

In AI the concentration has already begun. Stanford's 2026 AI Index found that "Industry produced over 90% of notable AI models in 2025, but the most capable models are now the least transparent."[149] The research group Epoch AI estimates, in figures its author calls tentative, that "Google and Meta together own around one-third of the world's total AI compute".[150] The United Nations' advisory body on AI wrote in 2024 that "The accelerating development of AI concentrates power and wealth on a global scale", and described "an associated concentration of wealth and decision-making among a handful of private AI developers and deployers".[151] The International Monetary Fund's managing director wrote in 2024 that "almost 40 percent of global employment is exposed to AI", and that "In most scenarios, AI will likely worsen overall inequality."[152] Elsewhere the machines and the money are growing fast, and the question is who will own them. Robots are spreading through factories, with "542,000 robots installed in 2024" alone.[79] Private money for fusion energy is flowing into a few dozen companies: by the industry's own count, "USD4.48 billion was raised by the fusion industry in the year to July", bringing "the total raised over

[147] Al Jazeera Staff and News Agencies, "Key facts on the Khmer Rouge", Al Jazeera, 3 Feb 2012, quoting the Cambodia Tribunal Monitor: "To accomplish this, they abolished money, free markets, normal schooling, private property, foreign clothing styles, religious practices, and traditional Khmer culture." https://www.aljazeera.com/features/2012/2/3/key-facts-on-the-khmer-rouge . Checked at source, 1 Nov 2026.

[148] *Encyclopaedia Britannica*, "Khmer Rouge" (Britannica Editors): "radical communist movement that ruled Cambodia from 1975 to 1979"; "in April 1975, Khmer Rouge forces mounted a victorious attack on the capital city of Phnom Penh and established a national government to rule Cambodia"; "The Khmer Rouge government under Pol Pot was responsible for the Cambodian genocide (1975–79), during which an estimated 1.5 million to 3 million people—approximately one quarter of the country's population—died as a result of executions, forced labor, starvation, and disease." https://www.britannica.com/topic/Khmer-Rouge . Checked at source, 1 Nov 2026.

[149] Stanford Institute for Human-Centered AI, *The 2026 AI Index Report*, chapter 1, "Research and Development": "Industry produced over 90% of notable AI models in 2025, but the most capable models are now the least transparent." "Notable" models are a selection of influential models, counted by number, not capability. https://hai.stanford.edu/assets/files/ai_index_report_2026_chapter_1_research_development.pdf

[150] Epoch AI, "Frontier labs don't use most AI compute (yet)", Gradient Updates, 2026: "Google and Meta together own around one-third of the world's total AI compute"; "OpenAI, Anthropic, and xAI used just 20-30% of global AI compute in 2025, despite launching the AI boom." The author calls these estimates "more tentative than our standard data work." https://epoch.ai/gradient-updates/frontier-labs-dont-use-most-ai-compute

[151] United Nations, High-level Advisory Body on Artificial Intelligence, *Governing AI for Humanity: Final Report*, September 2024: "The accelerating development of AI concentrates power and wealth on a global scale"; "an associated concentration of wealth and decision-making among a handful of private AI developers and deployers". https://www.un.org/sites/un2.un.org/files/governing_ai_for_humanity_final_report_en.pdf

[152] Kristalina Georgieva, "AI Will Transform the Global Economy. Let's Make Sure It Benefits Humanity", IMF Blog, 14 January 2024: "almost 40 percent of global employment is exposed to AI"; "In most scenarios, AI will likely worsen overall inequality." "Exposed" includes jobs AI may complement, not only replace. https://www.imf.org/en/Blogs/Articles/2024/01/14/ai-will-transform-the-global-economy-lets-make-sure-it-benefits-humanity

the six years to USD14.24 billion".[153] Investment in quantum technology start-ups, now almost all of it private, "reached $12.6 billion in 2025".[154]

History says what happens when a powerful new technology arrives inside a system that pays its owners first. In Britain's industrial revolution, the economic historian Robert Allen showed, using the Crafts and Harley estimates of British output, that "output per worker rose by 46% between 1780 and 1840. Over the same period, Feinstein's real wage index rose by only 12%", while "The profit rate doubled and the share of profits in national income expanded at the expense of labour and land."[155] Other historians doubt that the pause happened as Allen describes it.[156] On his figures it lasted roughly two generations before wages caught up, and nothing about the machines themselves ended it.

Now picture the same pattern with machines that can do most kinds of work, including thinking work, and with energy that may become almost unlimited for whoever owns the plants. If survival still depends on a wage, and the wage depends on being needed, then people who are no longer needed lose their footing, and those who own the machines need almost no one. A small group of companies, a single government, or in the extreme even a single person could come to control almost every part of life, not by seizing it but simply by owning what everything else depends on. Researchers have begun to describe a quieter version of the same danger, in which people lose their influence over the economy, culture and states gradually, "As AI increasingly replaces human labor and cognition in these domains".[157] The "one person" picture is this chapter's own inference, not a measured result, and it is a possibility, not a prediction. But the trajectory is real, and it is the direction the current system is moving in. UP's agreed position names it directly: "Inside today's framework, AI and robotics threaten to destroy the labour market and concentrate power in a few hands; inside a new framework they can coordinate the whole system for everyone's benefit."[65]

The strongest counter-arguments deserve their full weight. Since January 2026, according to Epoch AI, the best openly released AI models "have lagged frontier closed models by an average of four months", so capability is spreading as well as gathering.[158] Compute is held by several large firms, not one.[150] Solar power, which can be put on almost any roof, is growing fast: in 2025, according to the energy think tank Ember, "Solar power alone met 75% of the net increase in electricity demand."[159] Governments still act against concentrated power, as when the European Commission fined Apple and Meta "€500 million and €200 million respectively" under its Digital Markets Act in 2025.[160] And the evidence on jobs is so far mixed: the International AI Safety Report 2026 found that "Early evidence shows no effect on overall employment", though it saw some signs of falling demand for early-career

[153] World Nuclear News, "Fusion industry raised USD4.5 billion over past year, report says" (2026), on the Fusion Industry Association's *Global Fusion Industry Report 2026*: "A total of USD4.48 billion was raised by the fusion industry in the year to July", which "brings the total raised over the six years to USD14.24 billion"; "56 fusion companies surveyed". The figures are gathered by the industry's own association. https://world-nuclear-news.org/articles/fusion-industry-raised-usd45-billion-over-past-year-report-says

[154] McKinsey & Company, "Quantum Technology Monitor 2026: A commercial tipping point": "investment in quantum technology start-ups reached $12.6 billion in 2025, 6.3 times higher than in 2024". https://www.mckinsey.com/capabilities/mckinsey-technology/our-insights/mckinsey-quantum-technology-monitor-2026-a-commercial-tipping-point

[155] Robert C. Allen, "Engels' pause: Technical change, capital accumulation, and inequality in the British industrial revolution", *Explorations in Economic History* 46(4), 2009, 418–435: "output per worker rose by 46% between 1780 and 1840. Over the same period, Feinstein's real wage index rose by only 12%"; "The profit rate doubled and the share of profits in national income expanded at the expense of labour and land." https://www.nuffield.ox.ac.uk/Users/Allen/engelspause.pdf

[156] Jane Humphries and Jacob Weisdorf, "Unreal Wages? A New Empirical Foundation for the Study of Living Standards and Economic Growth in England, 1260–1860", CAGE working paper 310 (2016): their series "raises doubts about the so-called 'Engels' Pause'." https://warwick.ac.uk/fac/soc/economics/research/centres/cage/manage/publications/310-2016_weisdorf.pdf

[157] Jan Kulveit, Raymond Douglas, Nora Ammann, Deger Turan, David Krueger and David Duvenaud, "Position: Humanity Faces Existential Risk from Gradual Disempowerment", *Proceedings of the 42nd International Conference on Machine Learning*, PMLR 267 (2025); preprint arXiv:2501.16946 (January 2025): "As AI increasingly replaces human labor and cognition in these domains," human influence over the economy, culture and states could erode. A position paper and argument, not a measured finding. https://proceedings.mlr.press/v267/kulveit25a.html

[158] Epoch AI, data insight on the gap between open and closed models (2026): "the most capable open-weight models have lagged frontier closed models by an average of four months". Open weights spread the use of models, not the ability to train the next frontier model. https://epoch.ai/data-insights/open-closed-eci-gap

[159] Ember, *Global Electricity Review 2026*: "Solar power increased by a record 636 TWh to reach 2,778 TWh in 2025, a 30% increase from 2024"; "Solar power alone met 75% of the net increase in electricity demand." Manufacturing of solar equipment is itself concentrated. https://ember-energy.org/latest-insights/global-electricity-review-2026/

[160] European Commission, "Commission finds Apple and Meta in breach of the Digital Markets Act", 23 April 2025: "the Commission has fined Apple and Meta with €500 million and €200 million respectively." https://digital-strategy.ec.europa.eu/en/news/commission-finds-apple-and-meta-breach-digital-markets-act

workers in jobs most exposed to AI.[161] The economist Tyler Cowen, replying to the warnings about disempowerment, asked: "When were humans ever in control to begin with?"[162]

UP's answer does not depend on the worst case. It depends on a simpler point: the outcome is decided by the framework the technology runs in, not by the technology. Inside a system where survival depends on money and money goes to whoever owns the machines, every gain in automation is also a gain in the owners' power over everyone else. Inside a system where everyone's basic needs are a floor, the machines are held in common,[102] what UP makes stays open to everyone who takes part, the AI only proposes and no single AI system or operator controls coordination, and every form of power is watched, the same gains can go to everyone.[19,56,68,69,46] Seen this way, the question is not whether people can bear a life without money. It is whether they can afford to meet the most powerful technology in history with money still deciding who eats.

How it could run, stage by stage

UP grows side by side with the current system, and this book judges it by stage: early, when it is a minority network inside today's world; middle, when it has its own productive base and most of its members' needs are met from what UP produces; and completed, when most people live mainly in UP. The early stage rests on today's evidence; the middle and completed stages are reasoned projections from cited mechanisms, and are labelled as such.[163] At every stage the two curves described earlier are what move: how much of each member's life runs through money, and how many people are members. In the reading UP's author has set out, now going through UP's method, no price or wage decides who gets what inside UP at any stage; what changes is how wide its edges with the money world are.[20]

In the early stage, people take part while keeping their jobs and homes, and no one is forced to give up what is theirs.[22] UP meets a small part of its members' needs, and most of its effort goes into basic needs, as described earlier. At its edges it uses only what the law requires, such as paying taxes and holding land title in a legal form, openly recorded and kept to a minimum.[20] Its agreed position on assets, a projection, holds that members' money is best used early, to buy and convert more, and that assets owned or controlled by people who join convert by their owners' choice.[51] On debts, the agreed position is brief: "Debts are old-system problems (forgiveness, contribution, cancellation, bankruptcy)."[164] UP acts only by ethical means and earns its place by delivering things its host societies value.[22,165] What matters at this stage is where members choose to put that money. Members who wish can spend it on the things that take jobs away from money for good, and bring them into UP by their own choice: solar panels and storage, which keep producing once they are paid for; machines and workshops; a tool library and shared vehicles; open designs; and the records that let its members see what they have, what they need and what they use. Every one of these already exists somewhere in the current system. What is new is a community that combines them on purpose and publishes the results, so that abundance is "a measured target shown in practice, not a promise."[77]

The middle stage, a projection, is where much less of members' lives would run through money. Much of what they need would come from what UP produces, with energy, automation and shared production carrying most of the load, and the sharing would have widened from basic needs to tools, vehicles, workspaces and places. Everyone's basic needs would still be held as a floor, as UP's core requires at every stage, and positional goods shared by rotation or the stakeholders' decision and never by price; in one way UP could run, the other jobs money does there would be done another way: things that are still limited shared by rotation and reservation, what people want learned from use data they control, and costs counted in energy, materials, water and carbon.[19,42,94,55] UP's

[161] *International AI Safety Report 2026* (chair: Yoshua Bengio): "Early evidence shows no effect on overall employment", with "some signs of declining demand for early-career workers in some AI-exposed occupations, such as writing." https://internationalaisafetyreport.org/publication/international-ai-safety-report-2026

[162] Tyler Cowen, "Gradual Empowerment?", *Marginal Revolution*, February 2025, replying to the gradual-disempowerment paper: "When were humans ever in control to begin with?" An opinion piece. https://marginalrevolution.com/marginalrevolution/2025/02/gradual-empowerment.html

[163] UP's agreed position on the twelve failures (Round 12c, position 1): "The early stage rests on today's evidence; the middle and completed stages are labelled as projection." The definitions of the three stages used in this book (early, a minority network inside the current system; middle, its own productive base, with most members' needs met from what UP produces; completed, most people living mainly in UP) follow UP's study lessons (lesson 13), which guide how the book is written and are not agreed positions. Full wording in UP's agreed positions (the Position Ledger) and study lessons.

[164] UP's agreed position (round 12S, position 14, in the UP Moderator's wording): "Debts are old-system problems (forgiveness, contribution, cancellation, bankruptcy)." Full wording in UP's agreed positions (the Position Ledger).

[165] UP's agreed position on protection during the transition (DP-004b): "UP is not a nation-state and has no army. During the transition its protection is to be everywhere and woven into the existing system, so that attacking it would cost far more than it could gain. UP works within the law, delivers things its host societies value, and earns broad public support." In round 11 the settlement set the book's wording for this position and for card 25 as "ethical", not "lawful" or "nonviolent", which is the wording this chapter uses. Full wording in UP's agreed positions (the Position Ledger).

contribution records would be feedback: they inform, and they never decide whether anyone's needs are met.[54] The edges with the money world would be narrower, and narrowest where most people have moved: where a whole town takes part, there is less left that its members must buy from outside. Members would still use money for whatever UP does not yet do well, and for dealings with the world outside.

The completed stage, if it comes, is a projection. UP's agreed position on the whole system names "a moneyless system that removes the motive for much of today's crime" among the parts that strengthen each other; on this projection, that part would by then carry nearly the whole load.[47] By then, on the same projection, nearly everyone would have their needs met, and much of what they want shared, without paying, most drudgery would be done by machines, most things would be shared, repaired and designed to last, and the attention once spent on prices would go to the short list of rare and difficult cases. Where the people of an area have moved fully to UP, its contact with the money world could shrink toward none. Even there, no one is made to give money up: a person who still wants it keeps it, as does any community that has not joined UP. Freedom, the protected freedoms and the commons stay at every stage.[18]

Chapter 1 introduced an invented household that this book follows through the stages: a care worker, her teenage son and his grandfather, living in a mid-sized town. The household illustrates one way UP could run, and nothing more. It is never used as evidence.

Illustration: one way it could run. The early stage.

The care worker is paid for her shifts in money, pays the rent in money, and pays her taxes like everyone else. The town's UP network is small. Its members pool part of their savings to put solar panels and batteries on the roof of an empty shop and turn it into a workshop and a library of things, because, on one projection, members' money does the most good early, spent on things that keep working, which the members then bring into UP by their own choice. The network's first project is food: a shared kitchen and a market garden on land a member has brought in, so that no member's family goes without a meal when money is short. The household borrows a ladder and a drill instead of buying them, and the son learns to repair the family's laptop at the workshop. When the town council admits it has no budget to fix the ramps and rails in older people's homes, the network offers to take the problem on, working within the council's rules. The grandfather's ramp is one of the first it fixes.

Illustration: the middle stage (a projection).

Later, much of the household's food comes from farms the network supports, and a regional workshop with automated machines makes most of what the town's homes need, from open designs anyone can improve. The household shares a car with four others and books it when it needs it. Its electricity comes from the network's own panels and storage, and the network publishes what it produces and uses. The household spends far less money than it did, though it still buys a train ticket or a new phone with money. When the workshop's booking list for its one large printer grows long, nobody raises a price; the queue goes to the workshop's open meeting, and a second printer is built from the network's own designs. The care worker's work is recorded, as far as she chooses to share it, so that people can see what is needed and who is helping, but the record never decides whether her family's needs are met.

Illustration: the completed stage (a projection).

In the completed stage the household does not use money from one month to the next. A house by the river, which everyone wants, is shared by rotation, and the town's designers are at work on a plan that would let many more people live near the water. The son, grown now, works with a regional team that shares time on a large research telescope with teams across the world; the hours are decided openly by the teams that share it, weighing an open review of what each proposal would teach, and the long queue has started a project to build another. Some of his friends still keep bank accounts, and a few have chosen to live mainly in the current system. People still disagree, sometimes sharply, about how the rare things should be shared.

Table 8.2 sums up the stages.

Table 8.2. Money, by stage, as an illustration. The early stage rests on today's evidence; the middle and completed stages are reasoned projections from cited mechanisms, labelled as such.

Stage	What could change	Real precedent	Why it is likely	What persists
Early	Members keep their jobs and homes; UP meets a small part of their needs, starting with basic needs; at its edges it uses only what the law requires (taxes, land title, a legal form), openly recorded; members may buy what UP cannot yet make with their own money; members' money goes first into things that take jobs away from money (energy, machines, shared tools, open designs, open records)	Wikipedia and the printed encyclopaedia;[126] voluntary blood services;[127] tool libraries and car sharing;[88,87] new solar power cheaper on average than new fossil power, and storage costs down 93% since 2010;[73] community land trusts[115]	Each of these has grown inside the current system, using its law and in some cases its funds	Most of members' needs still depend on money; the current system can absorb or ignore what UP builds; debts stay in the current system
Middle (projection)	Much less of members' lives runs through money: needs held as a floor; sharing widened from basics to tools, vehicles and places; things still limited shared by rotation and reservation; demand read from use data; costs counted physically; edges narrower where more people have moved	Countries that collect more than 90% of their blood from voluntary unpaid donors;[128] the fall in farm labour as productivity rose;[78] physical accounting standards;[100] library holds ratios and organ matching[108,109]	Each job moves only when something already does it without obvious downsides, so each step rests on the one before; the two curves reinforce each other	The pull of money; power moving to access, office, information or expertise; positional goods; the risk of a member relying on UP before it is ready
Completed (projection)	Nearly everyone has their needs met, and much of what they want shared, without paying; attention goes to the rare cases, decided openly by the stakeholders, with the measured value of each use as evidence; contact with the money world shrinks toward none where people have fully moved; freedom, the protected freedoms and the commons kept	Telescope and supercomputer time allocated by peer review, as a partial model[121,123]	UP's argument that the parts strengthen one another (Chapter 21), not yet tested	Disagreement over how rare things are shared; physical limits; the work of watching power in every form

The strongest objections

A fair reader will have objections, and the strongest deserve to be met in their strongest form.

"Calling something a fiction proves nothing." UP agrees with the premise. Money is an agreement, but so are languages and the rules of science, and nobody thinks a language should be reduced because it is made up. What matters is how well an arrangement works compared with the alternatives. One of the most vivid accounts of what money does was written in 1945 by R. A. Radford, from his own time as a prisoner of war. In the camps, he wrote, "it is by trade that individual preferences are given expression and comfort increased", and "despite a roughly equal distribution of resources, a market came into spontaneous operation", with prices "fixed by the operation of

supply and demand". There, "Cigarettes became the normal currency", though barter never disappeared.[166] Meeting everyone's needs does not end the wish to swap a ration of tea for a ration of chocolate. UP grants all of this: its tenet says money served a great purpose, and the label "fiction" is not an argument against anything.[8] The argument of this chapter is a different one. It is that the stand-in costs something real, and that technology can now do more and more of its jobs directly. Where it cannot yet do a job without obvious downsides, people keep using money for it.[18] UP's agreed positions replace money and prices with shared access and real physical accounting, but neither they nor the core settle how people swap things with one another; like everything the core leaves open, that is for the collective to decide.[102,167]

"Without prices, no one can calculate." This is the oldest objection, and the most serious. Mises held that "where there is no price system there can be no economic calculation", and Hayek that prices are the only way to gather knowledge scattered among millions.[66,67] The economists Paul Cockshott and Allin Cottrell replied in 1993 that the arithmetic the planners lacked "is well within the capacity of present-day computational technology",[168] and others have argued that data will "supplant the price system as the economy's chief organizing principle".[169] Kantorovich's mathematics shows that allocation can be computed; the Royal Swedish Academy of Sciences, announcing his prize, said that he had "particularly demonstrated the connection between the allocation of resources and the price system".[59] The Venus Project's own answer, that "economic calculation issues have nothing to do with a Resource Based Economy", is an assertion, not a demonstration.[170] UP does not claim the question is settled. Its answer has three parts. First, the less that is scarce, the less calculation is needed: abundance, sharing and open designs shrink the problem before any computer touches it. Second, much of the knowledge Hayek said could travel only as a price, about what there is, where it is and what people use, can now be measured directly, and in one way UP could run, what people want is learned "by direct use data" and local knowledge used "by decisions at the smallest scale".[94] Third, the rest is to be tested, not assumed: in UP's own words, whether this "coordinates the most complex production as well as markets do is testable workload, run rung by rung."[94] Until it is shown, people keep using prices, in the money world, for the jobs nothing else yet does better; in the reading UP's author has set out, UP's own system does not run on them.[20]

"Abundance is a fantasy, and efficiency only makes people use more." In 1865 the economist William Stanley Jevons noticed that more efficient steam engines did not reduce the use of coal: "It is wholly a confusion of ideas to suppose that the economical use of fuel is equivalent to a diminished consumption. The very contrary is the truth."[171] Optimists about abundance have their critics too. One reviewer of Jeremy Rifkin's *The Zero Marginal Cost Society* noted that "we're some way from his vision of zero price – Amazon still has fixed costs", and the decent-living research cited earlier works only with "radical demand-side changes".[172,76] UP's answer is that abundance is not a promise and not a licence. Physical accounting sets the planet's hard limits, and inside them people choose; "What counts as enough is set together and rises as capacity grows", and "Today's luxury is not the target".[55,75] Efficiency inside a system that rewards selling more turns into more selling, which is exactly Jevons's point; efficiency inside a system that counts real resources and meets needs as a floor is meant to turn into fewer

[166] R. A. Radford, "The Economic Organisation of a P.O.W. Camp", *Economica* (November 1945): "a prisoner is not dependent on his exertions for the provision of the necessaries, or even the luxuries of life"; "Our supplies consisted of rations provided by the detaining power and (principally) the contents of Red Cross food parcels"; "it is by trade that individual preferences are given expression and comfort increased"; "Cigarettes became the normal currency, though, of course, barter was never extinguished."; "despite a roughly equal distribution of resources, a market came into spontaneous operation"; prices "were fixed by the operation of supply and demand". https://gwern.net/doc/economics/1945-radford.pdf . Checked at source, 1 Nov 2026.

[167] "The core of UP", preamble: the core was settled under the rule that UP is defined the way one would first define chemistry, by the core ideas that make it UP; examples are possibilities, not directives; the collective decides the rest.

[168] W. Paul Cockshott and Allin F. Cottrell, "Calculation, Complexity and Planning: The Socialist Calculation Debate Once Again", *Review of Political Economy* 5 (1993), the basis of the calculation chapter of their *Towards a New Socialism* (1993): the objection that "the socialists could not solve all the necessary equations, while the market mechanism could"; and, on the computation the planners lacked, that it "is well within the capacity of present-day computational technology." https://users.wfu.edu/cottrell/socialism_book/calculation_debate.pdf . Checked at source, 13 Nov 2026.

[169] Evgeny Morozov, "Digital Socialism? The Calculation Debate in the Age of Big Data", *New Left Review* II/116–117 (2019), reporting the argument of Viktor Mayer-Schönberger and Thomas Ramge that data will "supplant the price system as the economy's chief organizing principle". Morozov's essay also sets out the objections. https://newleftreview.org/issues/ii116/articles/evgeny-morozov-digital-socialism . Checked at source, 13 Nov 2026.

[170] The Venus Project, FAQ, "How do you respond to what critics refer to as the economic calculation problem?": "In other words, economic calculation issues have nothing to do with a Resource Based Economy." https://www.thevenusproject.com/faq/how-do-you-respond-to-what-critics-refer-to-as-the-economic-calculation-problem/ . Checked at source, 13 Nov 2026.

[171] William Stanley Jevons, *The Coal Question* (London: Macmillan, 1865; text of the 2nd edition, 1866), chapter VII, "Of the Economy of Fuel": "It is wholly a confusion of ideas to suppose that the economical use of fuel is equivalent to a diminished consumption. The very contrary is the truth." https://www.econlib.org/library/YPDBooks/Jevons/jvnCQ.html?chapter_num=9 . Checked at source, 13 Nov 2026.

[172] Ian McAuley, "The Zero Marginal Cost Society: a review", *Open Forum* (26 Nov 2014): "In my judgement, however, Rifkin overgeneralises his arguments."; "we're some way from his vision of zero price – Amazon still has fixed costs." https://www.openforum.com.au/the-zero-marginal-cost-society-a-review/ . Checked at source, 13 Nov 2026.

resources used. Whether that holds is, again, something UP's communities must show in their published accounts.[77]

"Money is memory, so a complete record would replace it." Kocherlakota's result, met earlier, can be read as a promise: a full enough record of everyone's dealings could do whatever money does.[26] UP's design points the other way on one crucial detail. Kocherlakota's memory means each person knowing the full history of everyone they have dealt with; UP's core gives each person control of their own information, and privacy is among the starting examples of the protected freedoms.[56,19] A complete public record of every person's dealings would break both. Any record that takes over part of money's work has to leave each person's life their own; in one way UP could run, the data rule in UP's agreed position on the trust layer does this: "the question travels to the data, and only the answer leaves".[99] That is unfinished work, and this chapter lists it among its open questions.

"Counting energy and materials is just money by another name." A record of energy, materials, water and carbon could become a new currency, with the same blind spots and the same pull toward power. UP's agreed positions answer in two parts. Physical accounting sets the limits within which people choose; it does not choose for them, and choices between different needs are made openly by the people affected, "never by an efficiency score".[55] And the records of what people contribute "inform, and they never decide whether anyone's needs are met", so they never become the gate to food or shelter that money is today.[54] Whether those lines hold in practice, as records grow and people learn to game them, is something UP expects to keep testing.[46]

"There is no way out of stories." Harari makes this point himself: "There is no way out of the imagined order."[173] UP agrees that it is not an exit from shared agreements; it keeps some on purpose, freedom first among them.[18] What it claims is narrower. Its agreements are written down, public and open to change through its own method, and its decisions rest on real resources, real needs and measured outcomes rather than on the agreements themselves.[56,174,8]

"This is a plan to abolish money." It is a plan to make money unnecessary wherever technology can do its jobs without obvious downsides, so that people can stop relying on it when they choose. That is a different thing. The tenet's settlement record rules out abolishing institutions by decree; UP is never imposed; at its edges, in the reading its author has set out and UP's method is now testing, it uses only what the law requires, openly recorded and kept to a minimum; and during the transition it acts only by ethical means and works with governments on their hardest problems.[23,22,20,145] The history of the opposite approach, told earlier in this chapter, is the reason UP holds to those lines.

"Automation will concentrate power, not spread it." The section on the other future took this up in full. In short: inside the current system it is a real danger, and the answer UP gives is the framework, not a promise about the machines.[65]

What persists. Two risks stay with this tenet at every stage, and they pull in opposite directions. The first is moving off money too early, before anything else can do its job, as Russia's experience before 1921 shows at the scale of a country, and as it could at the scale of one household that relies on UP before UP can carry it. UP's defences are the order of events (replace before retiring), the test (no obvious downsides), the evidence published with every proposal, and the right of each person and the people affected to decide.[48,49] The second is holding on to money too long, because some of the people it serves well will resist any change, and because the current system sometimes earns from a problem's persistence.[43,46] Neither risk is ever declared gone. Both are watched and answered as standing work.

Back to the stone at the bottom of the sea

The family on Yap was rich in a stone that no living person had seen, and the island was right to treat it as wealth, because the agreement about the stone did real work: it let a village keep track of what its families owed one another. That is what useful fictions are, and UP gives them their due. Money let strangers trade and keep accounts with one another at a scale no group bound by gossip could reach.

[173] Harari, *Sapiens* (2024), chapter 6, "Building Pyramids": "It follows that in order to change an existing imagined order, we must first believe in an alternative imagined order."; "There is no way out of the imagined order. When we break down our prison walls and run towards freedom, we are in fact running into the more spacious exercise yard of a bigger prison." Read in the UP library's text of the book. Checked 1 Nov 2026.
[174] Core tenet: *Self-correction: nothing is final, including this*: "Every part of UP, these tenets included, can be improved through its own method. UP is judged against both today's system and the ideal it aims at: the ideal shows the direction and the gap still to close, and today's record shows whether UP is already doing better." Full wording in "The core of UP".

But the island also shows the cost. Decisions followed the record, not the thing. Roads were mended because of paint; a family's fortune lay on the sea floor; and, many centuries and many fictions later, food was destroyed in a hungry country because the record said it should be. Every stand-in leaves a gap between what is decided and what is real, and the gaps add up to many of the distortions of the current system: food wasted beside hunger, things made to fail, cures that are bad business, and power gathering wherever the money does.

UP's answer is to close the gap from the real side. Its decisions rest on real resources, real needs and measured outcomes.[8] Technology now does, or is beginning to do, many of the jobs money was invented for. It makes once-scarce things abundant, takes over drudgery, does more with less, lets things be shared and repaired, opens designs and knowledge to everyone, and counts what is really there. The signals money carried can be read directly, from queues, use and stock. The early effort goes to basic needs, and sharing widens from there. What is truly scarce would become, on this projection, a short list of rare and difficult cases, and each item on it is treated as a problem to solve instead of a price to pay. The thinkers who saw this first, Neurath, Fuller and Fresco among them, lacked the tools; the tools now exist, and UP's agreed position names the missing piece plainly: "What was missing was the technology."[65]

And UP's answer is to close the gap in the right order, and by the right hands. In the reading UP's author has set out, now going through UP's method, UP's own system does not run on money; at its edges it uses only what the law requires, and that contact shrinks as people move. What moves gradually is people: each person relying on money less as UP meets more of their needs, and more people taking part, each at their own pace.[20,22] Nothing is abolished by decree, no one is forced, and freedom, the protected freedoms and the commons stay.[23,18] The encyclopaedia and the blood supply show that jobs can move this way: gradually, with the old arrangement left in place wherever the new one was not yet ready. Russia in 1921 and Cambodia in 1975 show what happens when the order is reversed. And the other future, in which the most powerful machines in history arrive inside a system where money decides who eats, shows what happens if nothing changes at all.

Money is the fiction the other two run on, and the next two chapters take them up in turn. Chapter 9 asks the same questions of government: what it does, what running on it costs, and how its jobs could be done by people deciding together, without anyone being forced. Chapter 10 asks them of the corporation.[21,22]

Chapter card: Chapter 8

- **Claim:** Money is a shared fiction that made large-scale cooperation possible and served a great purpose. It does five jobs: rationing what is scarce, signalling what people want, getting work done, counting costs, and carrying value through time. Each stands in for something people could not see or handle directly, and the gap causes much of today's distortion. UP's decisions rest on real resources, real needs and measured outcomes, and reality is better wherever technology can replace a fiction without obvious downsides.
  - **The seven developments** that could take over money's jobs: abundance that technology creates; automation and AI doing the work; doing more with less; a new way of using things; open designs and shared knowledge; coordination that counts real things; an intense focus on what is truly scarce.
  - **Signals stay without price.**
  - **The order of the change:** early effort goes to basic needs, then sharing widens, and attention ends on the rare cases.
  - **Who moves (the author's reading, pending; see below):** UP's own system does not run on money. People move off money gradually, each at their own pace, and more people join. Nothing is abolished by decree.
- **Core lines:**
  - **Tenets:** *Reality over fiction* and its settlement record (it rules out treating prices, profit or national lines as reality, and abolishing institutions by decree); *Technology serves; people decide*; *Freely joined, ethically grown*; the floors.
  - **Agreed positions:** useful fictions; replace before retiring; UP names a system people already use; three kinds of scarcity; scarcity as a signal and a problem to solve; abundance shown in the open; physical accounting sets the limits; prices replaced job by job (an illustration); what the AI is; the whole system, including a moneyless system; concentration of power is the danger; contribution records are feedback; legacy systems transformed from within.
  - **Pending:** the clarification that the gradual change is in people, not in UP, set out by UP's author in November 2026 and going through UP's method.
  - **Stages:** the early stage rests on today's evidence; the middle and completed stages are labelled as projections.

- **Rule of thumb:** For any job money does in your life, ask: what is it standing in for, can that now be known or done directly, what does the evidence show, and would you choose to rely on the new way?
- **What this is not:** abolition by decree; a plan for UP to run on money and slowly cut back; a claim that money is worthless or that abundance is guaranteed; rule by machines; or a plan to use unethical means during the transition.
- **Check yourself:**
    1. What five jobs does money do, and what does each stand in for?
    2. Why did destroying food in 1933 and 2020 make sense inside the money system, and what does UP put in its place?
    3. What did Neurath, Fuller and Fresco see, and what three things held their ideas back?
    4. Name the seven developments that could take over money's jobs, with one piece of evidence for each.
    5. How can demand be read without a price? Give two examples from the current system.
    6. Why does early effort go to basic needs, and what does the evidence say, for and against, about sharing widening from there?
    7. How are telescope time and supercomputer time shared today, and what does that suggest for the rare cases that remain?
    8. Why does UP's own system not run on money, and what do Mondragon, the kibbutzim and the building societies show?
    9. Who moves off money, and how? Describe the two curves.
    10. What future does the chapter set against a life without money, and what are the strongest arguments against that warning?
- **Open questions (for the wiki):**
    - Which of money's jobs are closest to being done directly today, and how should the evidence be gathered and compared?
    - How far can use data, physical accounts and AI coordination go in doing what prices do for complex production, and how will that be tested?
    - How can the records this depends on stay open enough to check and private enough to protect each person?
    - How should a community decide what counts as truly scarce, and how should the rare cases be shared?
    - How narrow can a node's edges with the money world become, and how is that measured?

(Improve this page.)

Chapter 9. Government: Why Its Jobs Can Be Done by People Deciding Together, and How People Move Off It

Ireland once handed one of the questions that divided it most to ninety-nine of its citizens. They were not politicians, campaigners or experts. According to a British government case study, they "were chosen at random, using census data", and the OECD's account of the body they formed, the Citizens' Assembly, records that "There were 99 citizen Members of the Assembly, in addition to the Chairperson".[1,2] Their subject was the country's constitutional law on abortion. They deliberated and they voted, and on one of their questions, the proposal to replace the Eighth Amendment, the constitutional article at issue, the OECD records that "The Assembly had voted for this by a majority of 64%."[2] Then the question went to the whole country. In the referendum of 2018, "1,429,981 people, or 66.4%, voted Yes", on a turnout that RTÉ News put at "64.1% of the electorate".[3]

UP takes no side on the question itself, and it does not need to. What matters here is what the story shows about who can decide. A group of ordinary people, picked by lot rather than by election, worked through a question that touched the deepest convictions of their neighbours, and the country, when it voted, gave a Yes vote of a similar size. How far the Assembly shaped that result is argued over and cannot be proved.[4] But the story also shows a limit, and it is the subject of this chapter. The Assembly existed because the Irish state created it. Its advice went into a referendum the state organised, and the state decided what happened next.[4] People deciding together did the hardest thinking; government held the pen.

Government deserves the first word, and it is a word of credit. Smallpox was one of the great killers of human history: "Over thousands of years, smallpox killed hundreds of millions of people." Then the World Health Organization, the shared health agency of the world's governments, declared it ended: "In 1980, WHO declared smallpox officially eradicated".[5] It is hard to picture a market doing that, because no one can sell the absence of a disease. The WHO is a body of states, so this chapter reads the eradication as states working together, and every person alive today who has never feared smallpox owes them that.

These two stories hold the argument of this chapter between them. Government did great things that nothing else in its time could do. And more and more of the work it does, from weighing a hard question to settling a dispute or meeting an emergency, can now be done well by the people a decision affects, deciding together, if they have the right tools.

That is the territory of UP's seventh tenet, *Reality over fiction*. It holds that shared fictions such as money, corporations, governments and borders made large-scale cooperation possible and served a great purpose; that decisions should rest on real resources, real needs and measured outcomes; and that UP keeps a fiction while it serves health, happiness and wellbeing, and replaces it gradually where technology can do its job without obvious

[1] UK Communications, case study on Ireland's citizens' assembly on abortion rights: "99 Assembly members were chosen at random, using census data,". https://www.communications.gov.uk/case-study/irelands-citizens-assembly-on-abortion-rights/ . Read through a web extract, 14 Nov 2026.
[2] OECD Observatory of Public Sector Innovation, "The Irish Citizens' Assembly" (case page, 17 December 2016): "There were 99 citizen Members of the Assembly, in addition to the Chairperson" (the sentence continues "chosen at random to represent the views of the people of Ireland."); "The Assembly had voted for this by a majority of 64%." Here "this" is the proposal to replace the Eighth Amendment. The same page elsewhere says "100 citizen Members"; the chapter uses 99, which a second source confirms. That the referendum's Yes vote was of a similar size to the Assembly's is this chapter's comparison, not the OECD's. https://oecd-opsi.org/innovations/the-irish-citizens-assembly/ . Re-checked through a web tool in the quote check of 14 Nov 2026.
[3] RTÉ News, results page for the referendum (26 May 2018): "1,429,981 people, or 66.4%, voted Yes."; "That is 64.1% of the electorate." https://www.rte.ie/news/newslens/2018/0526/966234-referendum-results-at-a-glance . Read through a web extract, 14 Nov 2026.
[4] The Assembly was set up by the Irish state, and its advice went into a referendum held by the state; it complemented government and did not replace it. How far it shaped the referendum's outcome is argued, not proven. Sources as in the two notes before; the limits are recorded in this chapter's research pack (G1, item C1).
[5] World Health Organization, "History of smallpox vaccination", WHO Spotlight on the history of vaccination (undated page): "Over thousands of years, smallpox killed hundreds of millions of people."; "In 1980, WHO declared smallpox officially eradicated" (the sentence continues after a colon). The page says that WHO declared the disease eradicated; because the WHO is an intergovernmental body, this chapter reads the eradication as the work of states acting together, which is its own reading. The page gives no total for deaths in the twentieth century, and the chapter gives none. https://www.who.int/news-room/spotlight/history-of-vaccination/history-of-smallpox-vaccination . Re-checked through a web tool in the quote check of 14 Nov 2026.

downsides.[6] Chapter 8 took money; this chapter takes government; Chapter 10 takes the corporation. Each gets the same treatment, because each deserves it.

Government comes second because it is a fiction many people fear to lose. Money's failures cost people their homes; government's failures cost them their lives, and so does its absence. This chapter makes the case that government's jobs can be done, one by one, by the people a decision affects, deciding together with evidence, and shows how. It begins with what government is and the jobs it does, and what running on it costs. It then turns to the long history of the idea that people might govern themselves without rulers, from Friedrich Engels to Elinor Ostrom, and to the heart of the matter: what could take over each of government's jobs, what already shows it can be done, and what still stands in the way. After that come three questions of direction: why UP itself is not, and never becomes, a government, and who it is that moves off government (in the reading UP's author has set out, now going through UP's method, it is people, one life at a time, not UP); and what future waits if powerful new technology arrives inside today's states instead. It ends with how the change could run stage by stage, and with the strongest objections.

A story millions agree to obey

Chapter 8 told how the idea that money is a kind of shared story came into its clearest modern form, in the historian Yuval Noah Harari's *Sapiens* and the philosopher John Searle's account of facts that exist only by human agreement. Government is the other half of Searle's list. Some facts, he wrote, "are only facts by human agreement", and he was "thinking of things like money, property, governments, and marriages."[7] Harari is blunter: "There are no gods in the universe, no nations, no money, no human rights, no laws, and no justice outside the common imagination of human beings."[8] A law is ink on paper, and a ministry is a building full of people, until enough people treat them as having authority. Then they do.

The thought is old. The philosopher David Hume was struck by "the easiness with which the many are governed by the few", and he saw why it was possible: "as Force is always on the side of the governed, the governors have nothing to support them but opinion. It is therefore, on opinion only that government is founded; and this maxim extends to the most despotic and most military governments, as well as to the most free and most popular."[9] Even the harshest ruler needs soldiers who obey, clerks who keep the records and a population that does not rise all at once. Government, in Hume's sense, is an agreement that most people keep most of the time.

Calling government a fiction does not make it weak or unimportant, and UP uses the word as Harari does. Imagined orders, he writes, "are not evil conspiracies or useless mirages. Rather, they are the only way large numbers of humans can cooperate effectively."[10] The agreement that holds a government up does real work. Thomas Hobbes asked what life would be without "a common Power to keep them all in awe", and answered that it would be a war "of every man, against every man", in which there would be "no place for Industry", and "the life of man, solitary, poore, nasty, brutish, and short."[11] Historians of crime have since measured a long fall in killing over the centuries in which European states grew stronger. The criminologist Manuel Eisner concluded in 2003 that "Serious

[6] Core tenet: *Reality over fiction*, in full: "Decisions rest on real resources, real needs and measured outcomes. Shared fictions (money, corporations, governments, borders) made large-scale cooperation possible and served a great purpose. UP keeps a fiction while it serves health, happiness and wellbeing, and replaces it gradually where technology can do its job without obvious downsides." Also in "The core of UP".

[7] John R. Searle, *The Construction of Social Reality* (New York: Free Press, 1995), chapter 1, opening paragraph: "there are portions of the real world, objective facts in the world, that are only facts by human agreement. In a sense there are things that exist only because we believe them to exist. I am thinking of things like money, property, governments, and marriages." Read in the UP library's text of the book (a scanned copy whose text has scanning errors, so it was read by eye). Checked 1 Nov 2026.

[8] Harari, *Sapiens* (2024), chapter 2: "Two lawyers who have never met can nevertheless combine efforts to defend a complete stranger because they both believe in the existence of laws, justice, human rights"; "Yet none of these things exists outside the stories that people invent and tell one another. There are no gods in the universe, no nations, no money, no human rights, no laws, and no justice outside the common imagination of human beings." Read in the UP library's text of the book. Checked 1 Nov 2026.

[9] David Hume, "Of the First Principles of Government", *Essays, Moral and Political*, essay V: "Nothing appears more surprizing to those, who consider human affairs with a philosophical eye, than the easiness with which the many are governed by the few"; "as Force is always on the side of the governed, the governors have nothing to support them but opinion. It is therefore, on opinion only that government is founded; and this maxim extends to the most despotic and most military governments, as well as to the most free and most popular." Hume Texts Online, https://davidhume.org/texts/emp/fp . Checked at source, 1 Nov 2026.

[10] Harari, *Sapiens* (2024), chapter 6, "Building Pyramids": "We believe in a particular order not because it is objectively true, but because believing in it enables us to cooperate effectively and forge a better society. Imagined orders are not evil conspiracies or useless mirages. Rather, they are the only way large numbers of humans can cooperate effectively." Read in the UP library's text of the book. Checked 1 Nov 2026.

[11] Thomas Hobbes, *Leviathan*, chapter XIII, "Of the Naturall Condition of Mankind, as Concerning Their Felicity, and Misery": "during the time men live without a common Power to keep them all in awe, they are in that condition which is called Warre; and such a warre, as is of every man, against every man."; "In such condition, there is no place for Industry; because the fruit thereof is uncertain"; "no Arts; no Letters; no Society; and which is worst of all, continuall feare, and danger of violent death; And the life of man, solitary, poore, nasty, brutish, and short." Project Gutenberg eBook #3207, https://www.gutenberg.org/cache/epub/3207/pg3207.txt . Checked at source, 1 Nov 2026.

interpersonal violence decreased remarkably in Europe between the mid-sixteenth and the early twentieth centuries" (on Ted Robert Gurr's synthesis of English records, from about twenty homicides per 100,000 people in the High and Late Middle Ages to about one in the twentieth century), while warning that most explanations offered for it, "strengthening state powers" among them, are "post hoc".[12]

That is why UP's tenet names governments among the fictions that "made large-scale cooperation possible and served a great purpose", and why UP's agreed position on useful fictions calls money, government and the company civilisational upgrades.[6,13] The same position adds the half this chapter is about: fictions are useful, but "reality is better wherever technology can replace a fiction without obvious downsides", and government is among those it names as "ripe to be reduced slowly, through ever more powerful coordination and shared problem solving with AI."[13] As with money, it will matter who does the reducing. In the reading UP's author has set out, now going through UP's method to become an agreed position, the answer is people: each person relying on government less as UP meets more of their needs, and more people taking part, with nothing shut down to hurry them.[14]

Three things follow, as they did for money. Because a government is an agreement, it can be changed by agreement, and in UP the people affected decide.[15] Because it does real work, each of its jobs has to be done some other way before anyone can safely rely on it less. And because it rests on belief, the people inside it can mistake the agreement for the world itself, and treat a rule written on paper as if it were a law of nature. UP's settlement record notes that its tenet rules out "Treating prices, profit or national lines as reality; abolishing institutions by decree."[16] Borders, which the tenet also names, appear in this chapter only as one example of a shared fiction that UP replaces gradually, part by part, as it meets a region's needs.[17]

Government, and the jobs it does

What government has achieved. Before asking what government stands in for, it is worth setting down fairly what it has done, because the record is long and much of it is good.

In Europe, killing fell sharply between the mid-sixteenth and early twentieth centuries, the centuries in which states grew stronger. Eisner warns that most explanations for the fall, state power among them, are post hoc, so this chapter claims a coincidence in time, not a proven cause.[12] It has given millions of strangers common rules, so that a contract signed in one city holds in another, a driver from the north knows which side of the road to drive on in the south, and a dispute can end in a courtroom instead of a fight.

It has built and maintained what no single buyer would pay for. Vaccination is the clearest case. Our World in Data, summarising a modelling study published in *The Lancet*, reports that "routine vaccinations prevented 154 million

[12] Manuel Eisner, "Long-Term Historical Trends in Violent Crime", *Crime and Justice* 30 (2003): "Serious interpersonal violence decreased remarkably in Europe between the mid-sixteenth and the early twentieth centuries."; "A range of theoretical explanations for the long-term decline have been offered, including the effects of the civilizing process, strengthening state powers, the Protestant Reformation, and modern individualism, but most theorizing has been post hoc."; of Ted Robert Gurr's 1981 synthesis, built on English records: "The curve suggested that typical rates may have been about twenty homicides per 100,000 population in the High and Late Middle Ages, dropping to ten around 1600, and ending after an extended downswing at about one per 100,000 in the twentieth century."; after studies of Kent, Scandinavia and the Netherlands: "there remains little doubt about the empirical cogency of the broad picture Gurr painted." https://www.vrc.crim.cam.ac.uk/system/files/documents/manuel-eisner-historical-trends-in-violence.pdf . Checked at source, 1 Nov 2026.

[13] UP's agreed position on useful fictions, in full: "Large-scale human cooperation was built on shared fictions: stories people agree to believe, such as money, government and the company. They were civilisational upgrades and served a great purpose. UP holds that fictions are useful, but that reality is better wherever technology can replace a fiction without obvious downsides. Some fictions will persist because the alternatives would harm health, happiness and wellbeing. Freedom is one, and UP keeps it, along with the protected freedoms and the commons, visible and open to change through the decision steps (#1). Others, money, government and corporations, are ripe to be reduced slowly, through ever more powerful coordination and shared problem solving with AI. A fiction is retired when technology can replace what it does without obvious downsides; until then it is reduced as far as possible." Also in UP's agreed positions (the Position Ledger).

[14] Clarification of the tenet *Reality over fiction* and of UP's agreed position on useful fictions, set out by UP's author on 14 November 2026 and going through UP's method; until the UP Moderator enters it in the Position Ledger, it is the author's stated reading, not yet an agreed position. In substance: the gradual change is in people, not in UP; UP's own system does not run on money, prices, a UP government or UP companies; each person relies on money, governments and corporations less as they use UP more, and the number of people doing so grows; where UP meets the current system (taxes, land title, the legal form needed to hold property, partnership with local governments), it uses only what the law requires, openly recorded and kept to a minimum, and that contact shrinks toward none as the people of an area move fully to UP. Record: LXW Shared Brain, decisions, "2026-11-14 1015 … Gradual change is people's" and "2026-11-14 1005 …".

[15] Core tenet: *The method: shared problem solving with evidence*: problems are named, measured and offered as work to anyone; the people a problem affects decide its outcome; solutions are proposed with their evidence, tested and compared, and "a better idea replaces a worse one"; "Every claim that guides shared action can be tested and is open to being proved wrong."; matters of taste are never made rules for others. Its last words are "Evidence proposes; people decide." Full wording in "The core of UP".

[16] UP's settlement record (the Position Ledger, the entry for the tenet *Reality over fiction*, settled in round 8, 23 Oct 2026): the tenet "Rules out: Treating prices, profit or national lines as reality; abolishing institutions by decree." Full wording in UP's agreed positions (the Position Ledger).

[17] UP's agreed position on borders, in full: "Borders are not part of UP's core. The book may mention them only as one example of a shared fiction that UP replaces gradually, part by part, as it meets a region's needs." The position adds that proposals for how regions might share the work of caring for their ecology are for the collective to consider later. Full wording in UP's agreed positions (the Position Ledger).

deaths worldwide in just the last fifty years", and that "Measles vaccination alone has saved 94 million lives".[18] National immunisation programmes are the likeliest route by which that vaccine reaches children (the sources do not say who delivers it, so this is this chapter's inference), and the work is not finished: the World Health Organization reports coverage of the three-dose diphtheria, tetanus and pertussis vaccine (DTP3) at "85% in 2025", with "13.5 million" children who received no dose at all.[18,19] Reading is another. "More than 4 out of 5 people are now able to read", and the growth "really climbed after the middle of the 20th century", when "the expansion of basic education became a global priority."[20] The source does not say who provided the schooling; that public schools were the main route is this chapter's inference. And beyond the roads, schools, water systems and sewers that people use every day, states pooled their efforts to end smallpox, as this chapter began by recalling.[5]

None of this is small, and UP does not pretend it is. Its tenet credits governments with making large-scale cooperation possible, and its agreed position on judging UP as a whole asks that UP's account of itself acknowledge "the great gains today's system brought over ancient ones".[6,21]

What government does. For UP the useful question is not what government is but what it is *for*: which jobs it does in people's lives, because those are the jobs that would have to be done some other way. Six stand out.

The first is **keeping the peace and settling disputes**. Police, courts and prisons stop violence, decide who is in the right, and give people a way to end a quarrel without a feud.

The second is **setting common rules**. Laws and standards let strangers rely on one another: on weights and measures, contracts, building codes and the rules of the road.

The third is **building and maintaining what no buyer would pay for**: roads, water and sewers, public health, basic research, and the shared systems everything else rests on.

The fourth is **pooling risk and caring for those in need**. Public health systems, pensions, unemployment insurance and help for people who cannot work spread the cost of misfortune across everyone, so that no one has to face illness, old age or bad luck alone.

The fifth is **responding to emergencies**. When a flood, a fire or an epidemic strikes, government can move people, money and equipment on a scale no household can.

The sixth is **representing millions and deciding for them**. Elections choose a few people to weigh the questions most people have no time to study, and a civil service carries out what they decide.

Each of these jobs stands in for something people could not do directly at scale. A representative stands in for the people affected by a decision, who could not all be in the room. A law stands in for an agreement among people who never met. A tax stands in for a decision about what to build together, made once for everyone instead of by each person. A court stands in for a fair hearing among neighbours who know the facts. And behind each of them, in the end, stands the power to compel. In Hobbes's words, it is "a common Power to keep them all in awe" that makes the rest possible.[11] When governments were invented there was no other way to do these things for millions of people at once, so the stand-in was the best tool for the job. The next section shows what the stand-ins cost, and the sections after it show why, for more and more of these jobs, they are no longer the only way.

[18] Our World in Data, "Vaccination" (topic page by Fiona Spooner, Saloni Dattani, Samantha Vanderslott and Max Roser; first published July 2015, revised August 2025), summarising a modelling study published in *The Lancet*: "routine vaccinations prevented 154 million deaths worldwide in just the last fifty years."; "Measles vaccination alone has saved 94 million lives, making it the most impactful vaccine." The 154 million figure is an estimate by "Researcher Andrew Shattock and his colleagues". The page does not itself say who delivered the vaccines; that national immunisation programmes deliver much of routine vaccination is this chapter's inference, labelled as such in the text. https://ourworldindata.org/vaccination . Re-checked through a web tool in the quote check of 14 Nov 2026.

[19] World Health Organization, fact sheet "Immunization coverage" (15 July 2026): "Coverage of a third dose of vaccine protecting against diphtheria, tetanus, and pertussis (DTP3) was 85% in 2025."; "there were 13.5 million children missing out on any vaccination". https://www.who.int/news-room/fact-sheets/detail/immunization-coverage . Re-checked through a web tool in the quote check of 14 Nov 2026.

[20] Our World in Data, "Literacy": "More than 4 out of 5 people are now able to read."; "The rate of growth really climbed after the middle of the 20th century,"; growth accelerated "when the expansion of basic education became a global priority." The page does not name governments as the actor; that basic education was expanded mainly through public schooling is this chapter's inference, labelled as such in the text. https://ourworldindata.org/literacy . Re-checked through a web tool in the quote check of 14 Nov 2026.

[21] UP's agreed position S, "Judge UP as a whole system, against today's system" (CANON, 22 Oct 2026): "The book acknowledges the great gains today's system brought over ancient ones, and argues that systems built thousands of years ago have limits we no longer need to accept: it is time for another grand experiment." Full wording in UP's agreed positions (the Position Ledger).

What running on government costs

A stand-in is never the thing it stands for. A representative is not the people affected; a budget line is not the road; a law is not the agreement it records. Most of the time the gap is small enough to live with. When it opens wide, the people inside the stand-in can do what makes sense by its rules and no sense at all in the real world. For government the gap has six shapes, and each has a record.

Capture by money. The first shape is the one Chapter 5 named as a failure of the current system: rules that come to serve those with the most money and access. In the United States, where the records are public, the sums are large and growing. "Spending on federal lobbying reached a record-breaking $4.4 billion" in 2024, "according to an analysis by OpenSecrets, a nonpartisan watchdog group", and the same group's chart for the next year reads: "Lobbying spending reached a record $5 billion in 2025", with "spending up 14 percent from 2024".[22,23] Another count, by Bloomberg Government, puts the 2025 total higher, at "approximately $5.3 billion".[23] Fairness requires two cautions. Lobbying is also how people and groups lawfully put their case to the people who govern them, and spending is not proof that a law changed because of it. The question is what the spending buys.[23]

A widely cited answer is a 2014 study by Gilens and Page, "Testing Theories of American Politics: Elites, Interest Groups, and Average Citizens". Comparing the influence of the groups in its title on American policy, it concluded that economic elites and "organized groups representing business interests have substantial independent impacts on U.S. government policy, while average citizens and mass-based interest groups have little or no independent influence."[24] The finding is widely quoted and also contested, and the contest matters. Omar Bashir, in a critique hosted by the Institute for Fiscal Studies, argued that "the wealthy and the average have highly correlated preferences", so that, on his reading, it is hard to tell whose preferences policy follows, and he judged that "The statistical approach employed in the study's central test seems too unreliable to gauge how much influence median-income citizens enjoy relative to elites and interest groups."[25] A reply by Enns in the same journal concluded that, according to Gilens's own data, the economic middle "does almost as well as the affluent."[26] UP takes the honest reading: the evidence that money buys outcomes is contested, and the spending itself shows only that very large sums are put into trying. A government that must raise money to win office, and that decides who gets public money, will be worth capturing.

Corruption. The second shape is cruder. Transparency International's Corruption Perceptions Index for 2025 found that "The global average has fallen to a new low of 42", and that "more than two-thirds of countries score below 50".[27] The index measures how corrupt the public sector is believed to be by experts and business people,

[22] *Washington Examiner*, "Federal lobbying hit record $4.4 billion in 2024": "Spending on federal lobbying reached a record-breaking $4.4 billion last year"; "according to an analysis by OpenSecrets, a nonpartisan watchdog group." A secondary report; OpenSecrets' own site could not be reached for this chapter. https://www.washingtonexaminer.com/politics/3320366/federal-lobbying-hit-record-4-4-billion-in-2024/ . Read through a web extract, 14 Nov 2026.

[23] OpenSecrets, chart published through Datawrapper: "Lobbying spending reached a record $5 billion in 2025"; "President Donald Trump's return to the White House ushered in a lobbying bonanza, with spending up 14 percent from 2024"; "Source: OpenSecrets analysis of federal disclosure reports". https://datawrapper.dwcdn.net/hkW9e/8/ . A second counter gives a higher total: *The Hill Online* (4 May 2026) reported that "federal lobbying spending reached approximately $5.3 billion, according to Bloomberg Government's annual analysis of Lobbying Disclosure Act filings." https://thehilltoponline.com/2026/05/04/2025-lobbying-spending-hit-5-3-billion-as-groups-eye-2026-midterms/ . Lobbying is also lawful petitioning, and spending is not proof of a policy result. Read through a web extract, 14 Nov 2026.

[24] M. Gilens and B. Page, "Testing Theories of American Politics: Elites, Interest Groups, and Average Citizens", *Perspectives on Politics* 12(3):564–581 (Cambridge University Press; online 18 September 2014): "Multivariate analysis indicates that economic elites and organized groups representing business interests have substantial independent impacts on U.S. government policy, while average citizens and mass-based interest groups have little or no independent influence." The study is of the United States only; the years its data cover were not checked for this chapter. https://www.cambridge.org/core/journals/perspectives-on-politics/article/testing-theories-of-american-politics-elites-interest-groups-and-average-citizens/62327F513959D0A304D4893B382B992B . Re-checked through a web tool in the quote check of 14 Nov 2026.

[25] Omar S. Bashir, "Testing Inferences about American Politics: A Review of the 'Oligarchy' Result", *Research and Politics* (October–December 2015), copy hosted by the Institute for Fiscal Studies: "The authors do not argue that policy outcomes correspond disproportionately to the preferences of the wealthy; in fact, their dataset reveals that the wealthy and the average have highly correlated preferences."; "The statistical approach employed in the study's central test seems too unreliable to gauge how much influence median-income citizens enjoy relative to elites and interest groups."; "the authors' claim to causal inference is based only on the fact that they perform multiple regression". That correlated preferences make it hard to tell whose preferences policy follows is this chapter's summary of his point. https://www.ifs.org/wp-content/uploads/2016/05/Bashir-2015-Gilens-Page-Critique.pdf . Re-checked through a web tool in the quote check of 14 Nov 2026.

[26] Enns, "Reconsidering the Middle: A Reply to Martin Gilens", *Perspectives on Politics* 13(4) (December 2015), p. 1073: "according to Gilens' data, the economic middle does almost as well as the affluent." This is Enns's own conclusion, drawn from Gilens's data. https://cambridge.org/core/services/aop-cambridge-core/content/view/E7F81CA9E682686316488FC3F488840D/S1537592715002339a.pdf/reconsidering-the-middle-a-reply-to-martin-gilens.pdf . Re-checked through a web tool in the quote check of 14 Nov 2026.

[27] Transparency International, *Corruption Perceptions Index 2025*: "The global average has fallen to a new low of 42, while more than two-thirds of countries score below 50."; "31 countries have significantly reduced their corruption levels since 2012." https://www.transparency.org/en/cpi/2025 . The 2024 edition: "The global average of 43 has also stood still for years, while over two-thirds of countries score below 50." https://www.transparency.org/en/cpi/2024 . The index measures perceived corruption in the public sector, drawn from surveys of experts and business people, not measured corruption; a rise in a country's score does not by itself show what caused it. Re-checked through a web tool in the quote check of 14 Nov 2026.

not corruption itself, and it has its own good news: "31 countries have significantly reduced their corruption levels since 2012."[27] Improvement is possible. But on this index more than two-thirds of countries score below 50, which suggests that in many countries the agreement that public office is held for the public is kept only in part.

Autocracy. The third shape is the oldest: the power to compel turned on the people it exists to protect. The V-Dem Institute, which tracks democracy around the world, reported in 2026 that "74% of the world population (6 billion) now live in autocracies", and that "The world has 92 autocracies and 87 democracies at the end of 2025."[28] Its count of autocracies includes countries that hold elections, its measures rest on the judgements of experts, and it reports a range of uncertainty for the countries in between.[28] But on its count, most of humanity now lives under governments that it classes as autocracies, where the power to compel is held by a few.

War. The fourth shape is the most costly. Only governments wage wars between nations, and they spend accordingly. The Stockholm International Peace Research Institute reports that "World military expenditure reached $2887 billion in 2025, an increase of 2.9 per cent in real terms over 2024", after a rise of 9.4 per cent the year before.[29] Much of that is defence against other governments, and deterrence has its defenders. It is still a measure of what the system of nation-states costs: close to three trillion dollars a year spent on armed forces and their equipment, by the institutions people rely on to keep them safe.

Failed delivery. The fifth shape is everyday. Governments sometimes take on large jobs and do them badly, and one possible cause is that the people who decide are far from the work and the people who do it are far from the need. Britain's National Programme for IT in the National Health Service is a well-documented example. Richard Bacon MP, a member of Parliament's Public Accounts Committee, called it, in the committee's own announcement, "one of the worst and most expensive contracting fiascos in the history of the public sector." He said that "The benefits flowing from the National Programme to date are extremely disappointing" and "We still don't know what the full cost of the National Programme will be", and the committee's announcement of its report records that "The Department estimates £3.7 billion of benefits to March 2012, just half of the costs incurred."[30] It is one case, reported in 2013, and large private projects fail too. It is consistent with the worry that a decision made at the top, for millions of people, by a body far from the work, is hard to correct, but one case cannot show that this is the pattern.

Coercion as the method of last resort. The sixth shape is not a failure but the foundation, and it is the reason UP treats government differently from every other tool. However gentle a government's daily work, its rules rest in the end on the power to compel. A tax is not a request; a law that no one can be made to obey is advice. Hobbes saw this as government's great gift, the "common Power to keep them all in awe".[11] It is also its great danger, because a power strong enough to keep everyone in awe is strong enough to be captured, and those who hold it can turn it on anyone. Every other cost in this section runs through that power. Lobbying is worth paying for because government can compel; corruption pays because office carries the power to grant and withhold; autocracy is the power to compel kept by a few; war is the same power turned outward. UP's agreed position on power warns that

[28] V-Dem Institute, *Democracy Report 2026: Unraveling The Democratic Era?*: "74% of the world population (6 billion) now live in autocracies."; "The world has 92 autocracies and 87 democracies at the end of 2025." V-Dem's autocracies include electoral autocracies, its measures rest on expert coding, which has its own critics, and the report itself gives a range of uncertainty for countries in the grey zone between the two. https://www.v-dem.net/documents/75/V-Dem_Institute_Democracy_Report_2026_lowres.pdf . Read through a web extract (the first part of the report), 14 Nov 2026.

[29] Stockholm International Peace Research Institute (SIPRI), press release, 27 April 2026: "World military expenditure reached $2887 billion in 2025, an increase of 2.9 per cent in real terms over 2024." https://www.sipri.org/media/press-release/2026/global-military-spending-rise-continues-european-asian-expenditures-surge . SIPRI, press release, 28 April 2025: "World military expenditure reached $2718 billion in 2024, an increase of 9.4 per cent in real terms from 2023" (the sentence continues "and the steepest year-on-year rise since at least the end of the cold war."). https://www.sipri.org/media/press-release/2025/unprecedented-rise-global-military-expenditure-european-and-middle-east-spending-surges . The figures are total military spending; military spending is also deterrence and defence, and the figure is a cost, not a measure of waste. Re-checked through a web tool in the quote check of 14 Nov 2026.

[30] UK Parliament, Committee of Public Accounts, "Dismantled National Programme for IT in NHS: report published" (news release, 18 September 2013). In a statement quoted in the release, Richard Bacon MP, a member of the committee, said: "one of the worst and most expensive contracting fiascos in the history of the public sector."; "The benefits flowing from the National Programme to date are extremely disappointing."; "We still don't know what the full cost of the National Programme will be." The release's account of the report: "The Department estimates £3.7 billion of benefits to March 2012, just half of the costs incurred."; and, in the committee's own words on cost, "The full cost of the National Programme is still not certain." One case, reported in 2013; large private IT projects also fail. https://webtest.parliament.uk/external/committees/committee-news-pre-oct-2020/2013/september/npfit-report . Re-checked through a web tool in the quote check of 14 Nov 2026.

"any concentration of power is dangerous", and that chasing each form one by one "becomes whack-a-mole."[31] Government is among the largest concentrations of the power to compel that people have built.

None of this means the people in government are wicked. Most public servants work hard, many at real cost to themselves, and much of what they do is done well. That is exactly the point. The trouble comes from the stand-in, not the people: from deciding for millions through a few, far from the need, with force behind the decision. Patching each failure with another rule laid over the same arrangement keeps falling behind, as Chapter 2 showed for the current system as a whole. UP's answer goes to the root. If the trouble comes from deciding by a stand-in, the lasting solution is to decide, more and more, by the real thing: by the people a problem affects, with the evidence in front of them, under floors no decision may cross.[15,32]

What UP holds: the people affected decide

UP's answer to the gap is written into its core, and, as with money, it has two parts that belong together.

The first is the aim. The tenet *Reality over fiction* begins with a standard for every decision: decisions rest on real resources, real needs and measured outcomes.[6] UP's agreed position on useful fictions names government among the fictions "ripe to be reduced slowly, through ever more powerful coordination and shared problem solving with AI", and holds that "reality is better wherever technology can replace a fiction without obvious downsides".[13] For government, the real thing is the people a decision affects. UP's fourth tenet says so in its first sentence: "Anyone may take part in any problem, and the people it affects decide its outcome." It adds what that rules out: "There are no offices to hold: work is shared out, not owned, so no one gathers power by holding a position."[33] UP's method describes how the deciding is done. Problems are named, measured and offered as work to anyone; solutions are proposed with their evidence, tested and compared; and the last words of the tenet are "Evidence proposes; people decide."[15]

Around that sit the guards that a government is meant to provide and too often does not. Concentration of power, in any form, "wealth, position, information, access, expertise or machines", is treated as a standing danger, and everyone in UP watches for it and spreads it out again.[34] Among the dangers settled alongside the core are "time and money earn recognition, never power" and "no forced adoption, no leader, no founder named in the core".[35] And some things no decision may touch at all. UP's sixth tenet sets floors: everyone's basic needs and protected freedoms, the living world's capacity to recover, the right to leave any group at any time, a truthful shared record, freedom of the mind, and "a fair hearing, so no one's freedom is restricted without a fair, evidence-based hearing, with the evidence open to them and a way to appeal."[32,36] The collective may clarify or raise the floors; no decision

[31] UP's agreed position that concentration of power is the danger: "Money is one form of power; any concentration of power is dangerous. Abolishing money does not abolish the pursuit of power: it can move to access, office, information or expertise, and chasing each form one by one becomes whack-a-mole. So UP watches for concentrations of power in any form and keeps spreading them out. The threat is never declared gone. Design helps: caps, public records of who approved what, rotation of anyone who allocates, random audits, public and versioned allocation rules." Also in UP's agreed positions (the Position Ledger).

[32] Core tenet: *Floors that are never crossed*: everyone's basic needs and protected freedoms, which no gain for others can buy; the living world's capacity to recover; the right to leave any group or community at any time, taking what is theirs; "a truthful shared record, so facts, measures and decisions are never falsified"; freedom of the mind; and "a fair hearing, so no one's freedom is restricted without a fair, evidence-based hearing, with the evidence open to them and a way to appeal." "UP guarantees needs, not every want." The collective may clarify or raise the floors, but no decision may lower them or push anyone below them; the tenet's starting example of freedoms is "thought, belief, speech, movement and privacy". "A protected freedom such as movement may be restricted only to protect others or the person, only through an evidence-based court process, for the shortest time needed, and never below the needs floor." Full wording in "The core of UP".

[33] Core tenet: *Open participation: anyone may take part; those affected decide*, in full: "Anyone may take part in any problem, and the people it affects decide its outcome. There are no offices to hold: work is shared out, not owned, so no one gathers power by holding a position. Where work needs skill, skill is shown by open, testable standards that anyone can work toward and anyone can propose to change, and education is open to everyone, at every age, so anyone can gain the skills any work requires." Also in "The core of UP".

[34] Core tenet: *Power kept spread out*: concentration of power in any form (wealth, position, information, access, expertise or machines) is treated as a standing danger; everyone in UP watches for it and spreads it out again; "The threat is never declared gone; it is watched and answered." Full wording in "The core of UP".

[35] Settled alongside the core, the dangers adopted in round 10, among them: "time and money earn recognition, never power"; "everyone is a watcher"; "no forced adoption, no leader, no founder named in the core; anyone acting outside the core stops being UP and bears the consequences". Full wording in "The core of UP".

[36] Core tenet: *Floors that are never crossed*, on the fair hearing: "a fair hearing, so no one's freedom is restricted without a fair, evidence-based hearing, with the evidence open to them and a way to appeal."; "A protected freedom such as movement may be restricted only to protect others or the person, only through an evidence-based court process, for the shortest time needed, and never below the needs floor."; "The hearing comes first, except briefly, to stop harm in progress, with a hearing promptly after."; "Leaving a group or community does not end a restriction set by a fair hearing."; "These limits are an open problem: they are the best that can be imagined now, and UP is built to find better and better solutions." The clarification of 1 Nov 2026 (CANON-CLARIFICATION) leaves the words unchanged and adds: "The substance of the evidence is always open to the person. Where a witness's safety is at risk, a court may protect the witness's identity, and that decision can be appealed." Full wording in "The core of UP" and UP's agreed positions (the Position Ledger).

may lower them.[32] Where a government protects these things well, UP's floors ask nothing new of it. Where a government crosses them, as the autocracies V-Dem counts do, the floors are what UP holds to.

UP does not aim only to run government a little better. Wherever the people affected, with the right tools, can do one of government's jobs without obvious downsides, it aims for that part of government to become unnecessary in their lives, job by job, as they choose, because deciding by the people affected goes to the root of the stand-in's distortions.

The second part is the method, which Chapter 8 set out and which applies here unchanged: a job is taken over before the old way of doing it is let go, only where technology can do it without obvious downsides, and whether a replacement is ready is decided by evidence, an open call for better ideas and the people affected, with splits where people disagree.[6,37,38,39]

Gradually needs the same care it needed for money. UP's settlement record rules out "abolishing institutions by decree".[16] But the gradual change is not UP slowly cutting back a government of its own. UP's author has set out how this is to be read, and the reading is going through UP's method to become an agreed position.[14] In that reading, UP's own system does not run on a UP government at any stage: inside UP there are no rulers and no offices to hold. That does not mean no one can ever be restrained, and UP should say exactly what power it keeps. Under its floors, a protected freedom such as movement "may be restricted only to protect others or the person, only through an evidence-based court process, for the shortest time needed, and never below the needs floor", and only after "a fair, evidence-based hearing, with the evidence open to them and a way to appeal".[32,36] UP's agreed positions on justice keep laws, courts that rest on evidence, and one layer of trained, professional law enforcement, the same single level of authority that UP's position on emergencies calls "like a parent's"; they allow confinement only to protect the person or others.[40,41] And "Leaving a group or community does not end a restriction set by a fair hearing."[36] That is a bounded power to restrict, used only after a fair hearing, and held by no one because of their position. What changes gradually, in the reading, is people. Each person relies on government less as UP meets more of their needs, and more people take part. Someone who joins UP still votes, pays taxes, obeys the law and calls the fire brigade when their house is on fire. Over the years, as more of what they need comes through UP, less of their life runs through government, and nobody is moved before they choose to be.

Where UP meets the world of governments, it has to deal with it. In the reading UP's author has set out, a node pays its taxes, holds the title to its land in a legal form the law recognises, and works within the law. UP's agreed position on legacy systems is explicit about why. Its nodes are farms, clinics, workshops and land "that states can tax, license or seize", so "UP's strategy is not to be an unfindable target but an indispensable partner": nodes are useful and embedded in their communities, and "work with local and regional governments on their hardest problems".[42,43] In the reading UP's author has set out, now going through UP's method, that contact is kept at the

[37] UP's settlement record (the Position Ledger, the entry on useful fictions, round 5, 22 Oct 2026): the settlement included "C replace before retiring". The UP Moderator checked the final wording. Full wording in UP's agreed positions (the Position Ledger).

[38] UP's agreed position on how UP decides when people disagree (DP-001, CANON): "Every decision starts with an evidence-based proposal, published with its data, and an open question: does anyone have a better idea?"; "Voting is a last resort, not a forbidden one."; "the stakeholders include everyone materially affected, including people downstream and future residents, while no vote may override the protected freedoms"; "Every vote records the losing side's case, and the decision reopens when new evidence or technology changes the options." Full wording in UP's agreed positions (the Position Ledger).

[39] UP's agreed position that splits are good: they test two, or a thousand, ways in the real world. Full wording in UP's agreed positions (the Position Ledger).

[40] UP's agreed positions on justice and enforcement (round 13, AGREED 28 Oct 2026; the UP Moderator found all nine faithful), in substance, as this chapter paraphrases them: laws remain, centred on the problems that remain, and are universal norms of right and wrong; there is one layer of trained professional law enforcement, the same single level of authority already agreed for emergencies, which UP's author compares to a parent's authority over a child; its whole work is open to everyone except in the most special circumstances, which are handled with extra care and made public on short timelines; authority over it belongs to the people and the process, and it is watched by many; courts rest on evidence, not public opinion; confinement is allowed only to protect the person or others, and is now bounded by the fair-hearing floor added in round 13b. The positions are recorded in UP's author's own words. Whether UP's hearings and law enforcement could ever bind people who have not joined UP is not settled by these positions. Full wording in UP's agreed positions (the Position Ledger).

[41] UP's agreed position on emergencies: "UP has no lasting authority and no emergency powers." Authority "belongs to the event, is one layer deep, like a parent's, and ends when the event ends"; a larger event creates more single-layer teams, never greater authority, all under the same public oversight. Full wording in UP's agreed positions (the Position Ledger).

[42] UP's agreed position that nodes survive as partners, not targets (card 25): "Legacy systems will not simply dissolve; they are transformed from within."; nodes are farms, clinics, workshops and land "that states can tax, license or seize", so UP's strategy is to be "an indispensable partner": nodes are useful and embedded in their communities, and "work with local and regional governments on their hardest problems"; "as nodes prove themselves, state functions are handed to the network or fade through people's choice." Round 11 set the book's wording for this position as "ethical", not "lawful". Full wording in UP's agreed positions (the Position Ledger).

[43] Card 25 also says: "Nodes are lawful, useful and embedded in their communities, and work with local and regional governments on their hardest problems, such as elder care, resilience and lifelong education." and "The full blueprint for a node is open, so a node that is lost can be rebuilt elsewhere. UP responds only by lawful, nonviolent means (#4b)." In round 11 the settlement set the book's wording for this card and for the position on protection (#4b) as "ethical", not "lawful" or "nonviolent". The chapter quotes the card exactly, uses "lawful" for the card only inside quotation marks, and uses "ethical" in its own words. Full wording in UP's agreed positions (the Position Ledger).

edges, openly recorded and kept to what the law requires, and it is meant to shrink as the people of an area move fully to UP.[14] UP is never imposed, no one is forced to join, to work or to give up what is theirs, and UP acts only by ethical means.[44]

As Chapter 8 noted, some fictions are not on the list at all: UP keeps freedom, the protected freedoms and the commons on purpose, visible and open to change through the decision steps.[13] Many of the freedoms today's best governments protect, of thought, belief, speech and movement, are on UP's own starting list of protected freedoms.[32] UP does not ask people to give any of them up. It asks only whether the jobs government does to protect them could, in time, be done by people deciding together, without anyone being forced.

Chapter 8's Figure 8.1, the fiction filter, applies here unchanged: shared fictions sit between people and the real world, each lets people cooperate at scale and each can hide part of what is real, and UP's rule keeps a fiction until technology can do its job without obvious downsides. For government, the question the rule raises is this one. What, doing which of government's jobs, and how? People have been asking it for a very long time.

The idea of people governing themselves, and why it had to wait

The thought that people might one day need no rulers is far older than the thought that they might need no money, and it has been held by people who agreed on almost nothing else.

Friedrich Engels gave it its most famous form. In *Anti-Dühring* he described a future in which "State interference in social relations becomes, in one domain after another, superfluous, and then dies out of itself", and he insisted on the difference between that and an act of abolition: "The state is not"abolished". *It dies out.*"[45] In its place, he wrote in *Socialism: Utopian and Scientific*, "the government of persons is replaced by the administration of things, and by the conduct of processes of production."[46]

Peter Kropotkin came at the same hope from biology and history. Against the view of nature as a war of each against all, he argued in 1902 that "mutual aid is as much a law of animal life as mutual struggle", and he blamed the rise of the modern state for destroying what people had built to help one another: "the growth of the State on the pattern of Imperial Rome had put a violent end to all medieval institutions for mutual support".[47] His biology is dated. But his point that people organise to help one another without being told to is close to the observation Chapter 1 began from: people often take on a problem simply because it is there and they can help. Murray Bookchin later proposed a practical design: face-to-face assemblies of citizens in each town, joined in confederations "not of nation-states but of municipalities", to "render politics ethical in character and grassroots in organization."[48]

Some of the most careful work came from someone who set out to describe, not to prescribe. Elinor Ostrom studied how people actually manage shared resources, and in 2009 she was awarded the Nobel prize in economics for it. The prize announcement said that "Elinor Ostrom has demonstrated how common property can be successfully managed by user associations"; "resource users frequently develop sophisticated mechanisms for decision-making and rule enforcement", and "the outcomes are, more often than not, better than predicted by standard theories."[49] From the commons that lasted she drew design principles that have been widely repeated,

[44] Core tenet: *Freely joined, ethically grown*, in full: "UP is never imposed. No one is forced to join, to work or to give up what is theirs. It grows by being useful, building on what people already do, and it acts only by ethical means. A means is ethical when it serves the health, happiness and wellbeing of all and crosses none of the floors; UP never starts harm against anyone. What counts as ethical is defined and refined by the collective through UP's method." Also in "The core of UP".

[45] Friedrich Engels, *Anti-Dühring* (1877), Part III, "Socialism", chapter II, "Theoretical", Marxists Internet Archive (no translator named on the page): "State interference in social relations becomes, in one domain after another, superfluous, and then dies out of itself;"; "The state is not"abolished". *It dies out.*" The familiar phrase "withers away" does not appear in this translation. https://www.marxists.org/archive/marx/works/1877/anti-duhring/ch24.htm . Re-checked through a web tool in the quote check of 14 Nov 2026.

[46] Friedrich Engels, *Socialism: Utopian and Scientific* (1880), chapter III, Marxists Internet Archive: "the government of persons is replaced by the administration of things, and by the conduct of processes of production." The page gives no date; 1880 is from the address. https://www.marxists.org/archive/marx/works/1880/soc-utop/ch03.htm . Re-checked through a web tool in the quote check of 14 Nov 2026.

[47] Peter Kropotkin, *Mutual Aid: A Factor of Evolution* (1902), The Anarchist Library: "mutual aid is as much a law of animal life as mutual struggle" (chapter I); and, in the Conclusion (chapter 9), within a clause that begins "although", "the growth of the State on the pattern of Imperial Rome had put a violent end to all medieval institutions for mutual support". Kropotkin's biology is dated. https://theanarchistlibrary.org/library/petr-kropotkin-mutual-aid-a-factor-of-evolution . Re-checked through a web tool in the quote check of 14 Nov 2026.

[48] Murray Bookchin, "Libertarian Municipalism: An Overview" (1991), The Anarchist Library: his aim was to "render politics ethical in character and grassroots in organization."; he proposed confederations "not of nation-states but of municipalities". That his assemblies would still be governments is this chapter's reading, not his. https://theanarchistlibrary.org/library/murray-bookchin-libertarian-municipalism-an-overview.html . Re-checked through a web tool in the quote check of 14 Nov 2026.

[49] The Nobel Prize, press release for the 2009 prize in economic sciences: "Elinor Ostrom has demonstrated how common property can be successfully managed by user associations."; "resource users frequently develop sophisticated mechanisms for decision-making and rule enforcement"; "the outcomes

among them “Clearly defined boundaries”, “Graduated sanctions” for those who break the rules, “Conflict resolution mechanisms that are cheap and rapidly accessed”, and, for large systems, “Nested enterprises”, “multiple layers” of self-governing bodies, each handling what it can.[50] It is a many-centred kind of self-government: no single authority runs everything, and each layer handles what it can. UP’s agreed positions credit Ostrom by name: cooperation lasts “where contributions are visible and limits are agreed together”, and the physical commons that already work are where UP’s central experiment begins.[51,52]

UP’s agreed positions credit this line of thought for what it saw, and are just as clear about where UP differs. Three differences matter, and each is a reason the idea had to wait.

The first is scale. Self-government has always worked best face to face. Harari notes that “the maximum ‘natural’ size of a group bonded by gossip is about 150 individuals”, and many of the commons Ostrom studied were local, among people who knew one another and the resource they shared.[53,50] Representation was the answer to scale: if millions cannot all be in the room, send a few. For most of history there was no other answer. What is different now is the tools. Millions of people can read the same evidence on the same day, put their views into a shared space, see what others think and where they agree, and check the record of what was decided and why. Some of those tools are already in use, and the next section shows them at work. UP’s agreed position on its own origins names the change plainly: these elements “have existed in isolation, and others saw that they could be coordinated”, and “What was missing was the technology.”[54]

The second is protection. Self-governing communities have usually lived inside states, and on the states’ terms. The widely cited list of Ostrom’s principles says so: a lasting commons needs the “Self-determination of the community recognized by higher-level authorities”.[50] In Kropotkin’s account, the growth of the State put “a violent end” to the medieval institutions for mutual support.[47] UP draws the lesson directly. It does not try to stand outside the state or against it. Its nodes, in the words of its agreed position, are “lawful, useful and embedded in their communities”, and they “work with local and regional governments on their hardest problems”; UP’s protection during the transition, in the words of another, is “to be everywhere and woven into the existing system, so that attacking it would cost far more than it could gain.”[42,43,55]

The third is the hardest: governance itself. Engels described an end point, a society in which the government of persons had given way to the administration of things, more than a way for people to decide together on the way there.[46] Chapter 3 told what happened in the Soviet Union, where the state grew instead and forced the peasants into collective farms. On this chapter’s reading, Bookchin’s assemblies would still be governments, smaller and closer to the people, but holding the power to make rules for everyone in a place. UP changes both. It does not wait for an end point, and, in the reading UP’s author has set out and UP’s method is now testing, it builds no government of its own, large or small.[14] In UP the people affected decide, problem by problem; there are no offices

are, more often than not, better than predicted by standard theories.” https://www.nobelprize.org/prizes/economic-sciences/2009/press-release/ . Read through a web extract, 14 Nov 2026.

[50] Ostrom’s design principles for long-lasting commons, as listed by the P2P Foundation wiki page on Elinor Ostrom’s eight commons governance design principles (a secondary list; Ostrom’s own book was not read for this chapter), among them: “Clearly defined boundaries, which define who has access to the CPR.”; “Graduated sanctions for resource appropriators who violate operational community rules.”; “Conflict resolution mechanisms that are cheap and rapidly accessed.”; “Self-determination of the community recognized by higher-level authorities.”; “Nested enterprises. Larger CPRs are organised in the form of multiple layers of nested enterprises,”. CPR stands for common-pool resource. https://wiki.p2pfoundation.net/Elinor_Ostrom’s_Eight_Commons_Governance_Design_Principles . Read through a web extract, 14 Nov 2026.

[51] UP’s agreed position “Cooperative by nature, cooperation kept visible” (card 13, as amended 31 Oct 2026, CANON): “People are cooperative by nature, and cooperation lasts where contributions are visible and limits are agreed together (Ostrom).”; “The commons Ostrom studied also used graduated sanctions, so whether feedback and support can do that work is measured, not assumed.” Full wording in UP’s agreed positions (the Position Ledger).

[52] UP’s agreed position on stewards (card 19, CANON): the claim is “heads that rotate, are watched and can be replaced, because the work belongs to everyone”: “many stewardship bodies, each with a defined scope, term limits, public audit and the right to fork.”; “providing food, housing and energy is UP’s central experiment, starting from Ostrom’s design principles and physical commons that already work”. Full wording in UP’s agreed positions (the Position Ledger).

[53] Yuval Noah Harari, *Sapiens: A Brief History of Humankind*, tenth anniversary edition (New York: Harper Perennial, 2024; first published in Hebrew 2011, in English 2014), chapter 2, “The Tree of Knowledge”: “Sociological research has shown that the maximum ‘natural’ size of a group bonded by gossip is about 150 individuals.”; below this threshold groups “can maintain themselves based mainly on intimate acquaintance and rumour-mongering”; “But once the threshold of 150 individuals is crossed, things can no longer work that way.” Read in the UP library’s text of the book. Checked 1 Nov 2026.

[54] UP’s agreed position F1, “UP names a system people already use” (CANON, 22 Oct 2026): “These elements have existed in isolation, and others saw that they could be coordinated: Jacque Fresco, Ward Cunningham with the wiki, Paolo Soleri, Maria Montessori. What was missing was the technology. Inside today’s framework, AI and robotics threaten to destroy the labour market and concentrate power in a few hands; inside a new framework they can coordinate the whole system for everyone’s benefit. The Venus Project imagined a central brain; AI can now be the pattern-finding and coordinating system it envisioned. The problem is not progress but the framework we run it in”. Full wording in UP’s agreed positions (the Position Ledger).

[55] UP’s agreed position on protection during the transition (DP-004b): “UP is not a nation-state and has no army. During the transition its protection is to be everywhere and woven into the existing system, so that attacking it would cost far more than it could gain. UP works within the law, delivers things its host societies value, and earns broad public support.” In round 11 the settlement set the book’s wording for this position and for card 25 as “ethical”, not “lawful” or “nonviolent”, which is the wording this chapter uses. Full wording in UP’s agreed positions (the Position Ledger).

to hold; the AI coordinates by proposing and never governs; and every decision sits on top of floors that no majority may cross.[33,56,32] Engels imagined the state dying out of itself. UP's agreed position on legacy systems describes something slower and more ordinary: legacy systems "will not simply dissolve; they are transformed from within", and "as nodes prove themselves, state functions are handed to the network or fade through people's choice."[42]

How government's jobs move to people deciding together

Government stands in for things millions of people could not do directly: weigh a question together, agree on rules, hear a dispute fairly, build what no one buyer would pay for, carry each other through bad luck, and act fast when disaster strikes. The case for moving off it rests on the same observation that Chapter 8 made about money: for more and more of what it stands in for, that is no longer true. For each of government's six jobs, something already exists in today's world that does part of the work with the people affected doing the deciding. None of these is enough alone, and most of them still lean on a government somewhere. This section takes the jobs one at a time, with the UP position each rests on, what each can already show, and what it cannot.

1. Representing millions and deciding for them. This is the job that defines government, and it is the one where the evidence has grown fastest.

Ireland's Citizens' Assembly, which opened this chapter, is one of a family. France tried the same idea on a larger subject. Its Citizens' Convention for Climate, a body of citizens, "proposed 149 measures" on climate policy, and the President promised that the proposals would be "transmitted without filter" to Parliament, though he later reserved the right to reject several.[57] The record of what happened next is mixed, and it is worth giving honestly, because the two main counts differ. One analysis found that the government took up only "10% of the CCC's recommendations" unchanged, that "37% were modified or watered down", and that "53% were rejected."[57] Another, from the London School of Economics, found that "Twenty percent of recommendations have been implemented, with another 51 percent implemented in a modified form."[58] This chapter gives both and does not try to reconcile them. Both tell the same story about the limit. The citizens did the work; the government decided what to keep. Advice with no power of its own was filtered by the people it was meant to guide.

Participatory budgeting goes one step further, because it gives citizens a direct say over real money. In Porto Alegre, in Brazil, the Workers' Party (PT), which had won several city governments in 1989, "began a creative experiment of engaging a wide spectrum of people to formulate city budgets", according to a World Bank report. Over its first years, "The number of participants rose from under 1000 in 1990 to over 14,000 in 1996", and between 1989 and 1996 "the number of households with access to water services rose from 80% to 98%" (the sources read for this chapter do not show that the budget process caused the water gains).[59] The idea spread across the globe, as the Open Government Partnership records.[60] In Paris, according to a 2019 article, the

[56] Core tenet: *Technology serves; people decide*, in full: "AI and automation coordinate, propose and do work. They never govern: people can always correct, pause or switch them off. No single AI system or operator controls coordination: the AI systems UP uses are open, more than one, checked against each other, and watched for concentrated power like everything else. Because an AI may one day be shown to have experiences of its own, UP studies the question carefully and would extend its aim to any being shown to feel." Also in "The core of UP".

[57] Public Deliberation (Deliberative Democracy Consortium), "The promises and disappointments of the French Citizens' Convention for Climate": its members "proposed 149 measures"; the government accepted "10% of the CCC's recommendations", "37% were modified or watered down" and "53% were rejected." (the 10 per cent counts the climate bill and executive directives); the President had promised that the proposals would be "transmitted without filter" to Parliament; the research behind this chapter records that he then reserved the right to reject several. Article by Dimitri Courant, 9 June 2021. Re-checked through a web tool in the quote check of 14 Nov 2026. https://www.publicdeliberation.net/the-promises-and-disappointments-of-the-french-citizens-convention-for-climate/ . Read through a web extract, 14 Nov 2026.

[58] Grantham Research Institute, London School of Economics, publication by Averchenkova, Koehl and Graham Smith (KNOCA, 30 June 2025) on the policy impact of the French Citizens' Convention for the Climate: "Twenty percent of recommendations have been implemented, with another 51 percent implemented in a modified form." The two counts use different categories that do not line up exactly; the chapter gives both and does not explain the difference. https://www.lse.ac.uk/granthaminstitute/publication/policy-impact-of-the-french-citizens-convention-for-the-climate-untangling-the-fate-of-the-citizens-recommendations/ . Read through a web extract, 14 Nov 2026.

[59] World Bank, Note No. 71, "Case Study 2 - Porto Alegre, Brazil: Participatory Approaches in Budgeting and Public Expenditure Management", by Swarnim Wagle and Parmesh Shah (March 2003): "the PT began a creative experiment of engaging a wide spectrum of people to formulate city budgets" (the PT is the Workers' Party; the sentence is about the PT winning several municipal elections in 1989); between 1989 and 1996, "the number of households with access to water services rose from 80% to 98%"; "The number of participants rose from under 1000 in 1990 to over 14,000 in 1996" (in a footnote, counting "the two rounds of assemblies"); and, on its limits, "it still is a mayoral initiative with no decisive power to set the agenda, timing, and debates." The sources read for this chapter do not show that the budget process caused the water gains.
https://documents1.worldbank.org/curated/en/741601468744101249/pdf/274620PAPER0snd71.pdf . Re-checked through a web tool in the quote check of 14 Nov 2026.

[60] Open Government Partnership, "Participatory Budgeting: Spreading Across the Globe" (story; no author or date on the page): "It is possible that some PB programs will produce very limited results." https://www.opengovpartnership.org/stories/participatory-budgeting-spreading-across-globe . Re-checked through a web tool in the quote check of 14 Nov 2026.

participatory budget took “5% du budget d’investissement de la ville”, about 100 million euros a year.[61] A study by Touchton and Wampler found that “PB programs are strongly associated with increases in health care spending, increases in civil society organizations”.[62] The limits are written into the sources themselves. The World Bank noted that in Porto Alegre “it still is a mayoral initiative with no decisive power to set the agenda, timing, and debates”, and the Open Government Partnership warns that “It is possible that some PB programs will produce very limited results.”[59,60] Citizens have a say over a share of the money; the city, in the end, decides the share.

Taiwan showed what software can add. vTaiwan, in the words of the group that documents it, “is an open consultation process that brings citizens and government together in online and offline spaces”. “The first test of vTaiwan was in August 2015 on how to regulate the ride sharing service Uber.”[63] The process was built to bring citizens and government together, online and in person. Here too the process was tied to government: the case page says that “Participation by staffers at agencies with the domain to change policy based on the results of the consultation is mandatory.”[63]

These cases show three things. Ordinary people, chosen at random and given the evidence and the time, can take on a hard public question and reach a view; in Ireland the country’s later vote went the same way as the Assembly’s, by a similar margin. Tools now exist that let far more people take part than any town hall could hold. And in every case read for this chapter, the deciding was done in the end by a government, which kept the power to filter, delay or ignore what the people said. UP takes the first two and changes the third. In UP the people affected decide, not advise.[33] Its agreed position on how it decides when people disagree sets out the steps: “Every decision starts with an evidence-based proposal, published with its data, and an open question: does anyone have a better idea?”; real trade-offs are first attacked with new design or technology; and “Voting is a last resort, not a forbidden one.”[38] The stakeholders “include everyone materially affected, including people downstream and future residents”, and “no vote may override the protected freedoms”.[38] In one way UP could run, those who cannot speak for themselves, future people, young children and other living things, “are represented by simulations: several independent ones, assumptions published, giving input but never a vote.”[64]

The steps also answer the weakness that worries people most about direct decision: that the loudest or best-organised few will decide for everyone. “Most decisions in UP are not made by voting”, and when a decision does reach a vote, three guards apply: “a minimum share of the affected must take part; a random sample of the affected who did not take part is asked to confirm it; and every decision publishes how many took part and how typical they were, with a decision made by a narrow group reopening automatically after a set time.”[65] The random sample is Ireland’s lesson built in: a check by people chosen by lot. Each account belongs to “one unique real person”, so that each person has one voice.[66] Decisions are made at the smallest scale that the problem allows, as one way UP could run.[67] And the AI’s part is fixed by UP’s core: it “coordinates by proposing, not by governing”, publishes its proposals “with their data and confidence”, and “any plan can be overridden through the decision steps.”[68] AI and automation “never govern: people can always correct, pause or switch them off.”[56]

[61] Banque des Territoires, article on the Paris participatory budget (12 November 2019): “affectation de 5% du budget d’investissement de la ville, le budget participatif représente 100 millions d’euros par an” (“with 5% of the city’s investment budget allocated to it, the participatory budget amounts to 100 million euros a year”). The share in other years was not confirmed. https://www.banquedesterritoires.fr/la-mairie-de-paris-debloque-100-millions-deuros-par-pour-son-budget-participatif . Re-checked through a web tool in the quote check of 14 Nov 2026.

[62] Touchton and Wampler, “Improving Social Well-Being Through New Democratic Institutions”, *Comparative Political Studies* 47(10):1442–1469 (2014): “We find PB programs are strongly associated with increases in health care spending, increases in civil society organizations, and decreases in infant mortality rates.” A study of association, not proof of cause. https://scholarworks.boisestate.edu/polsci_facpubs/146/ . Re-checked through a web tool in the quote check of 14 Nov 2026.

[63] Computational Democracy Project, case study, “vTaiwan”: “vTaiwan is an open consultation process that brings citizens and government together in online and offline spaces”; “The first test of vTaiwan was in August 2015 on how to regulate the ride sharing service Uber.”; “Participation by staffers at agencies with the domain to change policy based on the results of the consultation is mandatory.” The case page states no limits and does not say who decided the outcome. https://compdemocracy.org/case-studies/2014-vtaiwan/ . Re-checked through a web tool in the quote check of 14 Nov 2026.

[64] UP’s agreed position on voiceless stakeholders (round 12S, position 9; an illustration of one way UP could run): future people, young children and other living things “are represented by simulations: several independent ones, assumptions published, giving input but never a vote.” Full wording in UP’s agreed positions (the Position Ledger).

[65] UP’s agreed position on who decides and who counts as competent (DP-005 and DP-006, CANON): “Most decisions in UP are not made by voting.”; “a vote can ratify harm as easily as good, and often postpones a problem rather than solving it.”; “When a decision does reach the last step and goes to a vote, three guards apply: a minimum share of the affected must take part; a random sample of the affected who did not take part is asked to confirm it; and every decision publishes how many took part and how typical they were, with a decision made by a narrow group reopening automatically after a set time.” Full wording in UP’s agreed positions (the Position Ledger).

[66] Settled alongside the core, “One voice per person”: “every account belongs to one unique real person and carries that person’s identity, which the person owns and controls”; “The exact design is open work for the collective.” Full wording in “The core of UP”.

[67] UP’s agreed position (round 9): “M1 (test small, prove safe, then scale) and M2 (decisions at the smallest scale) are illustrations, not tenets.” Full wording in UP’s agreed positions (the Position Ledger).

[68] UP’s agreed position on what the AI is (card C46): “The AI is the coordinating system UP needs, and it coordinates by proposing, not by governing. It publishes evidence-based proposals with their data and confidence, marks what is still unknown as shared work for people and AI, and never rules on

2. Setting common rules. The second job is to make rules that strangers can rely on. Some of the world's most important rules are already made without any government, by communities that anyone can join.

The Internet Engineering Task Force writes technical standards for the internet. Its working method is stated in a long-standing credo that one of its own documents quotes: "We reject: kings, presidents and voting." In place of a vote it seeks rough consensus, which "is achieved when all issues are addressed, but not necessarily accommodated", and it is clear that a bare majority is not enough: "Note that 51% of the working group does not qualify as 'rough consensus' and 99% is better than rough."[69] The Debian project, which makes a free operating system, governs itself by a written constitution. "The Debian Project is an association of individuals who have made common cause to create a free operating system." Its leader "is elected by the Developers", and the developers keep the power to "Appoint or recall the Project Leader" and to "Make or override any decision authorised by the powers of the Project Leader or a Delegate."[70] On some Wikimedia projects, about ten Wikipedia language editions among them, the hardest disputes go to an Arbitration Committee, "a small group of trusted users who serve as the last step of dispute resolution on some individual Wikimedia Foundation projects".[71]

The limits are plain. These are narrow, voluntary, technical communities. The sources read for this chapter describe no power in them to tax or to jail. Wikipedia and Debian also lean on legal bodies inside a state, as Chapter 8 showed. What they show is narrower and firmer: rules that millions of people depend on every day can be made in the open, by those who do the work, with leaders who can be recalled and no one holding power the community cannot take back.

UP builds on exactly this. Its rules, code, records, decisions and reasons "are public, so anyone can check them."[72] Its agreed position on open code adds that "Every line of code and every allocation is public, so anyone can read, check, fork and simulate it", and is honest about the limit: open code "makes corruption much harder to hide, more visible and easier to contest", but "a patient, skilled bad actor can earn trust and hide for years."[73] In one way UP could run, its standards and platforms are "open, versioned and owned by no one."[74] And the rules that matter most are not open to any majority at all: they are the floors.[32]

3. Keeping the peace and settling disputes. This is the job people fear most to see done badly, and the one where UP's claims must be most modest. The evidence that communities can do part of it is real, and it is mixed.

Ostrom found that the commons that lasted had "Conflict resolution mechanisms that are cheap and rapidly accessed", and that they used "Graduated sanctions" for those who broke the rules.[50] In cities, programmes that send trained people from a neighbourhood to stop shootings before they happen have been evaluated more than once. An evaluation of CeaseFire in Chicago, published in 2008, found that "Six of the seven CeaseFire sites evaluated showed decreases in the size and intensity of shooting"hot spots."", that"the decreases in four of these areas were linked to the CeaseFire intervention", and that "In the other two areas, evidence that the decline was

matters of taste."; "People choose their work; the AI may not assign work or compel anyone, and any plan can be overridden through the decision steps." Full wording in UP's agreed positions (the Position Ledger).

[69] "On Consensus and Humming in the IETF", RFC 7282 (Internet Engineering Task Force, 2014), quoting a long-standing IETF credo: "We reject: kings, presidents and voting."; "Rough consensus is achieved when all issues are addressed, but not necessarily accommodated"; "Note that 51% of the working group does not qualify as 'rough consensus' and 99% is better than rough." https://www.rfc-editor.org/rfc/rfc7282.txt . Read through a web extract, 14 Nov 2026.

[70] Debian Constitution: "The Debian Project is an association of individuals who have made common cause to create a free operating system."; "The Project Leader is elected by the Developers."; among the powers of the Developers by general resolution: "Appoint or recall the Project Leader."; "Make or override any decision authorised by the powers of the Project Leader or a Delegate." https://www.debian.org/devel/constitution . Read through a web extract, 14 Nov 2026.

[71] Wikimedia Meta-Wiki, "Arbitration Committee": "An Arbitration Committee" ... "is a small group of trusted users who serve as the last step of dispute resolution on some individual Wikimedia Foundation projects." The page lists the projects that use one: about ten Wikipedia language editions and the English Wikinews. Wikipedia's own policy pages were not read for this chapter. https://meta.wikimedia.org/wiki/Arbitration_Committee . Re-checked through a web tool in the quote check of 14 Nov 2026.

[72] Core tenet: *Open systems, shared knowledge, private persons*: "The rules, code, records, decisions and reasons of UP are public, so anyone can check them. UP's technology (the knowledge, code, data and designs UP produces) stays only in UP: everyone taking part in UP may use, study and improve it, and no one may enclose it. Each person controls their own information and chooses what to share. Openness helps people find problems, but it will not find all of them, so UP also names the risks that openness alone cannot catch and keeps working on them." Full wording in "The core of UP".

[73] UP's agreed position "Open code: a tool, not a guarantee" (card 17, CANON): "Every line of code and every allocation is public, so anyone can read, check, fork and simulate it. Open code is a tool, not a guarantee: it makes corruption much harder to hide, more visible and easier to contest, and it is guarded against for good."; "UP says plainly what openness cannot catch: a patient, skilled bad actor can earn trust and hide for years." Full wording in UP's agreed positions (the Position Ledger).

[74] UP's agreed position on the trust layer (Round 12S, position 11, an illustration of one way UP could run): "Standards and platforms are used everywhere, so upgrades are fast, parts are interchangeable and nothing is wasted. They are open, versioned and owned by no one." The same position gives the data rule: "data is used only with permission, the question travels to the data, and only the answer leaves; nothing individual is passed on or kept." Full wording in UP's agreed positions (the Position Ledger).

linked to CeaseFire was inconclusive."[75] An evaluation of the same approach in New York found that in East New York "gun injuries fell 50 percent (from 44 to 22)", but that "shootings in East New York did not drop enough to reach statistical significance", and its authors warned that "other factors could have contributed to these changes".[76] Restorative justice, in which an offender meets the person they harmed, has a stronger base. A systematic review of trials found that the meetings "cause a modest but highly cost-effective reduction in repeat offending, with substantial benefits for victims", that the effect on property crime was far smaller than on violent crime ("RJCs have far less effect, on average, in these property crime experiments than in the violent crime experiments."), and that "Victims' satisfaction with the handling of their cases is consistently higher for victims assigned to RJCs".[77]

None of this replaces police and courts today. What the evidence suggests, with caution, is that some of the work of keeping the peace can be done well close to the people involved, and that a meeting that brings the harmed and the harmer together can modestly reduce repeat offending, with victims more satisfied.

UP's positions start from the fair hearing. No one's freedom may be restricted "without a fair, evidence-based hearing, with the evidence open to them and a way to appeal", and the hearing comes first, "except briefly, to stop harm in progress, with a hearing promptly after."[36] Where a witness's safety is at risk, a court may protect the witness's identity, but "The substance of the evidence is always open to the person", and that decision too can be appealed.[36] UP's agreed positions on justice keep one layer of trained, professional law enforcement, whose work is open to everyone except in rare and sensitive cases, which become public on short timelines; the people and the process hold authority over it, and many people watch it all the time. Courts rest on evidence, not public opinion, and confinement is allowed only to protect the person or others.[40] UP's agreed position on cooperation is candid about the open question: "The commons Ostrom studied also used graduated sanctions, so whether feedback and support can do that work is measured, not assumed."[51] Chapter 19 takes justice, safety and emergencies in full.

4. Building and maintaining what no buyer would pay for. The fourth job is the shared systems that everything else rests on. Here the evidence that people can do it together is strong in some kinds of work and thin in others.

Ostrom's prize was for work on a close cousin of this: user associations that manage shared resources, with outcomes that are, "more often than not, better than predicted by standard theories".[49] In the digital world, OpenStreetMap is a map of the world built by "more than a million volunteers around the globe", with a UK-registered not-for-profit foundation as "the custodian for the computer servers and services necessary to host the OpenStreetMap project."[78] Governments are learning the same lesson in their own work. Estonia's public services exchange data through a shared layer, X-Road, which provides "secure data exchange between private and public sector organisations".[79] Cybernetica says on its own news page that "The Estonian data exchange system, called X-Road, helped Estonia save 1407 years of working time last year alone"; the claim is its own, and the year is not given.[80] A study by University College London adds the caveats: "Estonia is a small country with a high population concentration in its capital city", and citizens' satisfaction with health care and education "has remained low".[81] One

[75] National Criminal Justice Reference Service, abstract of "Evaluation of CeaseFire-Chicago" by Skogan, Hartnett, Bump and Dubois (March 2008): "Six of the seven CeaseFire sites evaluated showed decreases in the size and intensity of shooting"hot spots.""";"The evaluation indicated that the decreases in four of these areas were linked to the CeaseFire intervention."; "In the other two areas, evidence that the decline was linked to CeaseFire was inconclusive." https://www.ojp.gov/ncjrs/virtual-library/abstracts/evaluation-ceasefire-chicago . Re-checked through a web tool in the quote check of 14 Nov 2026.

[76] John Jay College Research and Evaluation Center, "The Effects of Cure Violence in the South Bronx and East New York, Brooklyn" (2 October 2017): in East New York, "gun injuries fell 50 percent (from 44 to 22)."; "shootings in East New York did not drop enough to reach statistical significance."; on its limits, "because of the small sample size (i.e., N=4)." and "other factors could have contributed to these changes". https://johnjayrec.nyc/2017/10/02/cvinsobronxeastny/ . Re-checked through a web tool in the quote check of 14 Nov 2026.

[77] Heather Strang, Lawrence W. Sherman, Evan Mayo-Wilson, Daniel Woods and Barak Ariel, "Restorative Justice Conferencing (RJC) Using Face-to-Face Meetings of Offenders and Victims: Effects on Offender Recidivism and Victim Satisfaction. A Systematic Review", *Campbell Systematic Reviews* 2013:12, DOI 10.4073/csr.2013.12 (1 November 2013): "RJCs cause a modest but highly cost-effective reduction in repeat offending, with substantial benefits for victims."; "RJCs have far less effect, on average, in these property crime experiments than in the violent crime experiments."; "Victims' satisfaction with the handling of their cases is consistently higher for victims assigned to RJCs". Read in a copy of the full review hosted by the Alaska Judicial Council, https://www.ajc.state.ak.us/acjc/docs/resources/restorative/restor13.pdf ; the publisher's pages could not be opened. Re-checked through a web tool in the quote check of 14 Nov 2026.

[78] OpenStreetMap Foundation, "About": "The OpenStreetMap Foundation is a UK-registered not-for-profit organization that supports the OpenStreetMap Project."; it is "the custodian for the computer servers and services necessary to host the OpenStreetMap project."; the project is "the worldwide mapping effort that includes more than a million volunteers around the globe." https://osmfoundation.org/wiki/About . Re-checked through a web tool in the quote check of 14 Nov 2026.

[79] e-Estonia, "X-Road": it provides "unified and secure data exchange between private and public sector organisations". https://e-estonia.com/solutions/interoperability-services/x-road/ . Re-checked through a web tool in the quote check of 14 Nov 2026.

[80] Cybernetica, news item (undated page): "The Estonian data exchange system, called X-Road, helped Estonia save 1407 years of working time last year alone." The company's own claim; the page does not say which year. https://cyber.ee/resources/news/saving-1407-years-of-working-time-in-estonia/ . Re-checked through a web tool in the quote check of 14 Nov 2026.

[81] Kattel and Mergel, "Estonia's digital transformation: Mission mystique and the hiding hand", University College London, Institute for Innovation and Public Purpose, working paper 2018-09 (September 2018): "Estonia is a small country with a high population concentration in its capital city" (followed in the

line quoted in the study shows both the strength and the risk of a single shared system: "It's the x-road or no road."[81] Estonia shows technology doing government's work, with large savings claimed by the vendor, inside a government; it does not show the work leaving government.

UP's tools for this job are stewardship and open records. Its agreed position on stewards holds that open projects show what distributed stewards can build, and sets the rule for everything UP keeps running: "heads that rotate, are watched and can be replaced, because the work belongs to everyone", with "many stewardship bodies, each with a defined scope, term limits, public audit and the right to fork."[52] The same position is honest about the gap: open projects "make copyable information; providing food, housing and energy is UP's central experiment".[82] A node publishes a labour budget, "what is needed, by when, and what happens if it is not done", and any shortfall becomes a shared problem.[83] Choices between different needs, "such as a clinic or a cultural centre", are made openly by the people affected, inside the limits that physical accounting sets, "never by an efficiency score".[84] And the full blueprint for a node is open, so that "a node that is lost can be rebuilt elsewhere."[43]

5. Pooling risk and caring for those in need. The fifth job is the one most people meet most often: the health service, the pension, the help that comes when work stops. It is also the one where UP's design differs most from government's, because UP aims to meet basic needs as a floor rather than to pool risk.

A government insures people against misfortune by collecting from everyone and paying out to those in need, under rules that decide who qualifies. UP starts from a floor: everyone's basic needs and protected freedoms, "which no gain for others can buy".[32] Its agreed position on abundance states it plainly: "UP guarantees needs (food, shelter, health care, education, connection), not every want."[85] Its contribution records "inform, and they never decide whether anyone's needs are met."[86] Where a government decides whether a person qualifies, UP's floor is meant to make the question unnecessary for basic needs, so that no one has to prove bad luck to eat; whether it can is something UP's communities must show.

The evidence for this job is thinner than for any other, and UP should say so. People do care for one another without being made to. But a well-documented recent wave of it also shows how easily it fades. In the spring of 2020, people in Britain set up "over 4000 new groups" for mutual aid, and then "participation in mutual aid groups dropped, particularly after 'lockdown' restrictions eased".[87] In this case, care that rested on goodwill alone did not last. The lesson is the one Chapter 8 drew, in line with UP's agreed position on cooperation: sharing lasts where it is built into how needs are met, with a place, a record and people who keep it going.[51] Whether a network can carry the needs of the old, the ill and the unlucky as reliably as a health service or a pension is something UP's communities must show in their published records, and Chapters 13 and 16 take it up.[85]

6. Responding to emergencies. The sixth job shows people at their best, and it shows what UP's rule on authority is for.

After Hurricane Sandy, a network of volunteers that called itself Occupy Sandy organised relief. A report by the Homeland Security Studies and Analysis Institute, as summarised by the Episcopal News Service, found that "At its

source by a colon); "It's the x-road or no road."; "In Estonia, this is a principle, not a law."; and "citizen satisfaction with crucial services such as healthcare and education has remained low." https://discovery.ucl.ac.uk/10195776/1/Kattel_iipp-wp-2018-09_estonias_digital_transformation.pdf . Re-checked through a web tool in the quote check of 14 Nov 2026.

[82] UP's agreed position on stewards (card 19): open projects such as Linux and Wikipedia show that open peer production, run by distributed stewards, can build complex systems at global scale; the claim is not "no head to cut off" but "heads that rotate, are watched and can be replaced, because the work belongs to everyone", with defined scopes, term limits, public audit and the right to fork; "These examples make copyable information; providing food, housing and energy is UP's central experiment". Full wording in UP's agreed positions (the Position Ledger).

[83] UP's agreed position on the work nobody wants (card 23, CANON): a node "publishes a labour budget (what is needed, by when, and what happens if it is not done) and asks people directly. Any shortfall, and any task nobody wants, becomes a shared problem, met with visibility, recognition, fair rotas and automation." Full wording in UP's agreed positions (the Position Ledger).

[84] UP's agreed position that physical accounting sets the limits and people weigh the choices (card 21, CANON), in full: "Physical accounting (energy budgets, carbon caps, water footprints, materials and life-cycle assessment) sets the planet's hard limits. Inside them, several measures are used together, and choices between different needs, such as a clinic or a cultural centre, are made openly by the people affected, through the decision steps (#1), never by an efficiency score." Also in UP's agreed positions (the Position Ledger).

[85] UP's agreed position on abundance (card 22): "UP guarantees needs (food, shelter, health care, education, connection), not every want. What counts as enough is set together and rises as capacity grows."; "UP proves this in the open: every community that runs this way publishes its energy, materials and needs met, so abundance is a measured target shown in practice, not a promise." Full wording in UP's agreed positions (the Position Ledger).

[86] UP's agreed position on rewards and motivation: money that controls people crowds out the motivation they bring themselves, while feedback that informs, and the freedom to choose, keep it alive; "UP's contribution records are feedback: they inform, and they never decide whether anyone's needs are met." Moving from a money-driven system will bring friction, and UP meets those who find the change hard with compassion and kindness. Full wording in UP's agreed positions (the Position Ledger).

[87] University of Sussex, Crowds and Identities, "Case study: UK Covid mutual aid groups", 1 November 2022: "over 4000 new groups being set up in Spring of that year"; "participation in mutual aid groups dropped, particularly after 'lockdown' restrictions eased"; "activity in Covid mutual aid groups on Facebook dropped by 75% by June from the high point of March 2020." https://blogs.sussex.ac.uk/crowdsidentities/2022/11/01/case-study-uk-covid-mutual-aid-groups/

peak, it had grown to an estimated 60,000 volunteers", "more than four times the number deployed by the American Red Cross."[88] In the Louisiana floods of 2016, parish agencies "received over eleven thousand requests for rescue or assistance", and volunteers with boats came: "Some volunteer rescuers set up informal groups colloquially known as the"Cajun Navy," later formalizing into several volunteer rescue organizations by similar names after the flood."[89] Neither replaced the state's emergency services. And the British experience of 2020 is a warning that the surge of help in a crisis can fade when the crisis passes.[87]

What these cases show is that in an emergency, many people act quickly for everyone's benefit; whether the limit is coordination rather than willingness is something they do not settle. That is the shape of UP's agreed position on emergencies. "UP has no lasting authority and no emergency powers. In an emergency everyone acts quickly for everyone's benefit, with many trained responders ready." Authority "belongs to the event, is one layer deep, like a parent's, and ends when the event ends."[41,90] A larger disaster does not create a larger authority: "A larger event does not create greater authority, only more single-layer authority: many teams, each one layer deep, coordinated through shared information, all under the same public oversight." And "The best answer to emergencies is to prevent them, and that work comes first."[90] UP's rule is built so that emergency powers do not outlast the emergency: the authority belongs to the event and ends with it. In one way UP could run, where nations choose to join, the people and equipment they keep for war would in time be converted "into law enforcement, emergency aid groups and rapid response."[91]

How the pieces work together

None of these replaces government on its own, and most of them, as they exist today, work inside a government or lean on one. The case for UP rests on what they do together, and on the order in which they act. The steps by which UP decides, with the people affected deciding and a guarded vote only as the last resort, are designed to take over the job of deciding for millions. Open records and rules made in the open, by those who do the work, take over much of the job of setting common rules. Fair hearings close to the people involved, with a way to appeal and one layer of open, watched law enforcement, take over parts of keeping the peace. Stewards who rotate and can be replaced, with a published labour budget, keep shared systems running. Floors that guarantee basic needs turn the pooling of risk into a guarantee of needs that does not depend on qualifying, shown in published records, not promised. And single-layer authority that ends with the event lets many people act fast in a disaster without anyone gathering powers that outlast it.

UP expects each step to make the next one easier, and this is to be measured, not assumed. People who have decided well together on one question may trust the process with the next. A record that shows who decided what, and why, makes capture harder to hide. Needs that are met as a floor take away much of what makes people easy to buy or frighten. And under every step sit the floors, which no decision may cross, and the rule that the AI proposes and people decide.[32,56] UP's agreed position on power gives the reason the pieces have to work together: abolishing money, one form of power, "does not abolish the pursuit of power", which "can move to access, office, information or expertise", so "UP watches for concentrations of power in any form and keeps spreading them out."[31] Figure 9.1 draws the argument.

[88] Rev. Mary Frances Schjonberg, Episcopal News Service (18 March 2014), reporting the Homeland Security Studies and Analysis Institute's report *The Resilient Social Network*: Occupy Sandy "At its peak, it had grown to an estimated 60,000 volunteers", "more than four times the number deployed by the American Red Cross." (the two parts are joined in the source by a dash) A secondary report of an estimate; the report itself was not read. https://www.episcopalnewsservice.org/2014/03/18/federal-government-studies-occupy-sandy-movement/ . Re-checked through a web tool in the quote check of 14 Nov 2026.

[89] Liz Skilton, "2016 Floods", 64 Parishes (Louisiana Endowment for the Humanities, 3 October 2022): "Some volunteer rescuers set up informal groups colloquially known as the"Cajun Navy," later formalizing into several volunteer rescue organizations by similar names after the flood."; parish agencies "received over eleven thousand requests for rescue or assistance." The page gives no count of people rescued by volunteers. https://64parishes.org/entry/2016-floods . Re-checked through a web tool in the quote check of 14 Nov 2026.

[90] UP's agreed position "One layer of authority, however large the event" (DP-004a, CANON): "UP has no lasting authority and no emergency powers. In an emergency everyone acts quickly for everyone's benefit, with many trained responders ready."; "A larger event does not create greater authority, only more single-layer authority: many teams, each one layer deep, coordinated through shared information, all under the same public oversight."; "The best answer to emergencies is to prevent them, and that work comes first." Full wording in UP's agreed positions (the Position Ledger).

[91] UP's agreed position on weapons and armies (round 12S, position 6, in the UP Moderator's wording; an illustration of one way UP could run, never a directive): "Nuclear weapons dismantled and converted to power plants as soon as possible. Weapons and standing armies dismantled and converted into law enforcement, emergency aid groups and rapid response. Resources go to the transition." Full wording in UP's agreed positions (the Position Ledger).

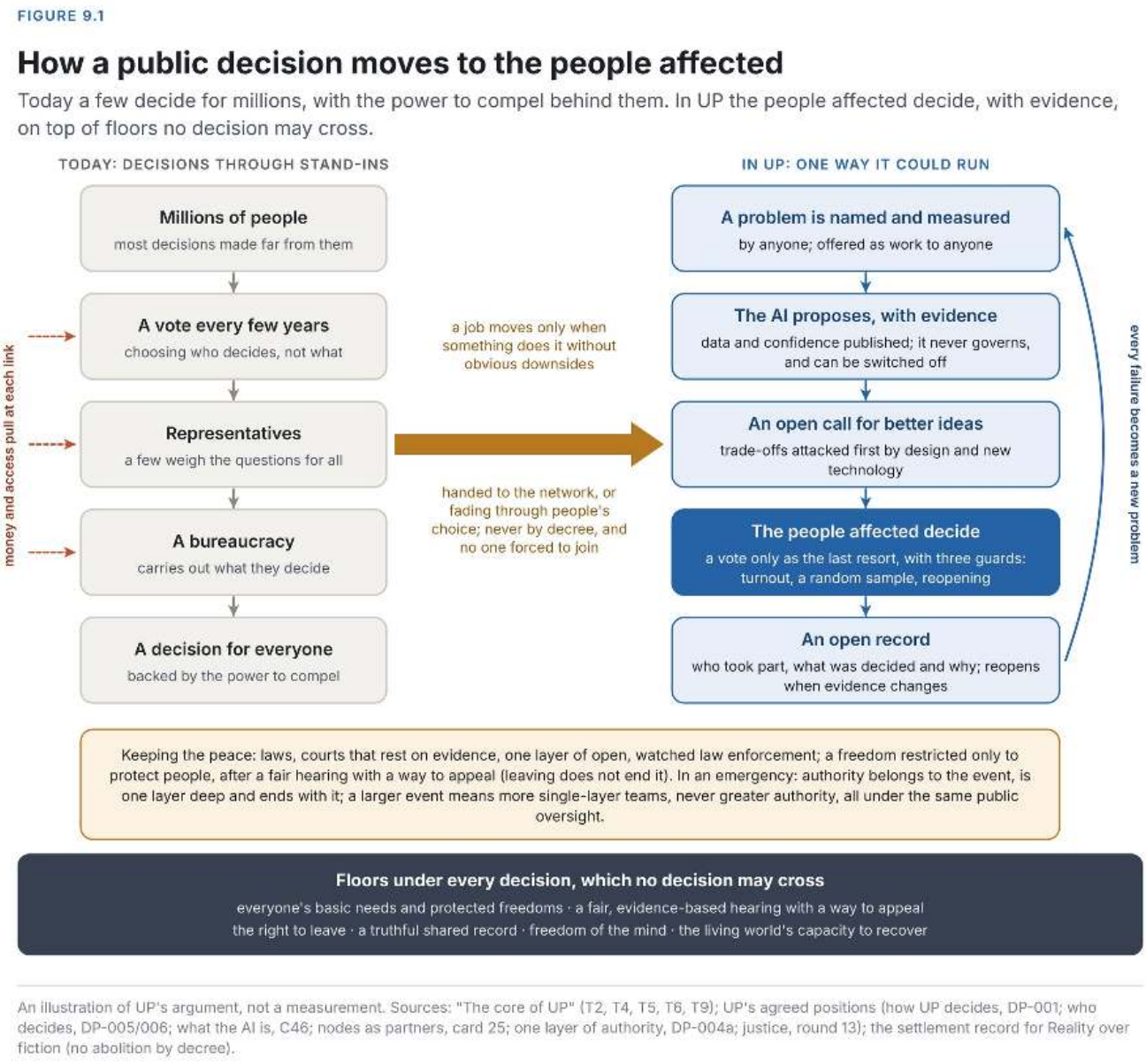


Figure 9.1. Left: today's chain, in which people choose representatives every few years and a bureaucracy carries out what they decide, with the power to compel behind it and money pulling at every link. Right: one way UP could run, in which a problem is named, the AI proposes with evidence, anyone may offer a better idea, the people affected decide (with a guarded vote only as the last resort), and the record stays open so the decision can be reopened. A band below shows UP's bounded power to restrict (laws, courts on evidence, one layer of open, watched law enforcement, and restriction only to protect people, after a fair hearing with a way to appeal) and its rule for emergencies. Floors run under both, and, in card 25's words, "as nodes prove themselves, state functions are handed to the network or fade through people's choice"; UP's settlement record rules out doing it by decree. An illustration of UP's argument, not a measurement. Sources: "The core of UP" (T2, T4, T5, T6, T9); UP's agreed positions (DP-001, DP-005/006, C46, card 25, DP-004a, round 13 on justice) and the settlement record for Reality over fiction.

Table 9.1 takes government apart into the six jobs named earlier in this chapter and shows what could take each one over, what already shows it can be done, and what still stands in the way. The second column is the illustration; the third is the evidence; the last is the honest part. What is settled sits underneath it: the floors, including a fair hearing with a way to appeal; the people affected decide; authority in an emergency is one layer

deep and ends with the event; stewards rotate, are watched and can be replaced; the AI proposes and never governs; and state functions are handed to the network or fade through people's choice, and, by the settlement record for *Reality over fiction*, never by decree.[32,33,41,82,68,42,16]

Table 9.1. The jobs government does, and what could take each over. The second column is an illustration of one way UP could run, never a directive, except where it names a settled line (the floors and the fair hearing, decisions by the people affected, one-layer authority in emergencies, stewards who rotate, the AI proposing, state functions handed to the network or fading through people's choice).

Job government does	What could take it over in UP	What shows it can be done	What still stands in the way
Representing millions and deciding for them	The decision steps: an evidence-based proposal, an open call for better ideas, the people affected deciding, a guarded vote only as the last resort (minimum turnout, a random sample confirming, automatic reopening); simulations giving input for those who cannot speak; the AI proposing, never governing	Ireland's Citizens' Assembly; France's Citizens' Convention for Climate (mixed); participatory budgeting in Porto Alegre and Paris (limited decision power); vTaiwan (advisory)	Every example so far advises a government that decides; time and attention; whether turnout and samples can keep decisions typical at very large scale
Setting common rules	Rules, code and records made and kept in the open by those who do the work; open, versioned standards owned by no one; the floors, which no rule may cross	The IETF's rough consensus; Debian's constitution, with a leader the developers can recall; the Arbitration Committees of some Wikimedia projects (dispute resolution)	These communities are voluntary and narrow, can only expel, and lean on legal bodies inside states
Keeping the peace and settling disputes	A fair, evidence-based hearing with the evidence open and a way to appeal; one layer of trained, open, watched law enforcement under the people and the process; restorative meetings; conflict resolution that is cheap and close to the people involved	Ostrom's commons; CeaseFire and Cure Violence (mixed); restorative justice conferencing (modest, cost-effective)	Serious violence; enforcement across large areas; the evidence is modest and mixed
Building and maintaining what no buyer would pay for	Stewards who rotate, are watched and can be replaced; a published labour budget; open blueprints; choices between needs made openly by the people affected, inside physical limits	Ostrom's commons; OpenStreetMap; Estonia's X-Road (run by a state)	Large physical systems such as grids, ports and water networks; open projects have so far made mostly copyable information
Pooling risk and caring for those in need	Basic needs held as a floor no decision may cross; contribution records that never decide needs; care built into how needs are met	Mutual aid in crises (routine vaccination and public health are run by states today, so they show the job can be done, not that others can do it)	Mutual aid fades after a crisis; long-term care and health care at scale are UP's central experiment
Responding to emergencies	Authority that belongs to the event, is one layer deep and ends with it; many trained responders; prevention first; in one way UP could run, armies converted into emergency aid and rapid response	Occupy Sandy; the Cajun Navy	Neither group replaced public emergency services; coordination at the scale of a large disaster

The table makes one thing plain. For some jobs, such as setting technical rules for a worldwide network, people deciding together already do the work with no government in charge. For others, such as weighing hard public questions or responding to a flood, the evidence is encouraging that the people affected can contribute to much of the work, and in every case read for this chapter what is missing is the power to decide rather than advise. For the hardest, such as keeping the peace against serious violence or carrying the risks of illness and old age for millions, UP has a direction and some evidence, and the rest is work to be done in the open. That is where UP's rule wants the line drawn: a government's job is relied on less only where something else does it without obvious downsides, and, in the reading UP's author has set out and UP's method is now testing, by the people who choose to.[13,14]

Why UP itself is not, and never becomes, a government

There is an obvious shortcut here too, and UP declines it. A network that wanted to replace government fast could become one: take over a town council, write its own laws, raise its own taxes, and enforce its decisions with its own force, for good ends. Many movements have tried something like it. The record shows two traps, one on each side of the shortcut, and UP is built to stay out of both.

The first trap is the vacuum. If a government's jobs stop being done before anything else can do them, people do not get freedom; they get whoever is strongest. Somalia is the case most argued over, and it deserves to be told fairly, because the evidence is more interesting than either side's slogan. Somalia's national government collapsed in 1991, and the country went years without one.[92] Peter Leeson studied what happened and reached a striking conclusion: "on nearly all of 18 key indicators" that allow a comparison before and after, "Somalis are better off under anarchy" "than they were under government."[93] A second study by Powell, Ford and Nowrasteh found that "although Somalia is poor, its relative economic performance has improved during its period of statelessness."[92] The point is serious. The government that collapsed, Leeson argues, did "more harm to its citizens than good", and, as he put it, "If state predation goes unchecked government may not only fail to add to social welfare".[93]

But the comparison is with a government that, on Leeson's own account, did more harm than good, not with a working one, and both abstracts are hosted on the same research centre's site.[93,92] Ken Menkhaus, who studied governance in the same country, tells a richer story. "Zones of state failure are assumed to be anarchic", he wrote, but "In reality, communities facing the absence of an effective state authority forge systems of governance".[94] The same work describes a shift "from warlord to landlord", and its own title refers to "Spoilers".[94] The sources read for this chapter include no direct critique of Leeson's reading of the later years, and the chapter does not claim there is none.[95]

UP takes two lessons from Somalia, and neither is the one either camp would like. The first is that people do not stop governing themselves when a state disappears; they build what they can, as Menkhaus found in Somalia and as Ostrom's commons show, inside states, on a smaller scale. The second is that what they build in a hurry, after a collapse, is built under pressures no one would choose. Somalia shows what UP must never cause or rely on: a sudden gap where a government's jobs used to be. That is why UP's rule is replace before retiring, why nothing is abolished by decree, and why its strategy is to work with governments rather than against them.[37,16,42] UP's agreed positions say it in words that rule out the vacuum: legacy systems "will not simply dissolve; they are transformed from within."[42]

[92] B. Powell, R. Ford and A. Nowrasteh, "Somalia after state collapse: Chaos or improvement?", *Journal of Economic Behavior and Organization* 67(3–4):657–670 (2008), abstract on the Mercatus Center's site: "Many people believe that Somalia's economy has been in chaos since the collapse of its national government in 1991."; "It finds that although Somalia is poor, its relative economic performance has improved during its period of statelessness." The same research centre as Leeson's paper, not an independent check. https://www.mercatus.org/students/research/journal-articles/somalia-after-state-collapse-chaos-or-improvement . Read through a web extract, 14 Nov 2026.

[93] Peter T. Leeson, "Better off stateless: Somalia before and after government collapse", *Journal of Comparative Economics* 35(4):689–710 (2007), abstract on the Mercatus Center's site (author and year are not shown on the page): "The data suggest that while the state of this development remains low, on nearly all of 18 key indicators" … "that allow pre- and post-stateless welfare comparisons, Somalis are better off under anarchy" … "than they were under government."; "If state predation goes unchecked government may not only fail to add to social welfare"; the abstract also says the government before 1991 did "more harm to its citizens than good". The comparison is with that government, not with a working state. https://mercatus.org/hayekprogram/research/journal-articles/better-stateless . Read through a web extract (the abstract only), 14 Nov 2026; Re-checked through a web tool in the quote check of 14 Nov 2026.

[94] Ken Menkhaus, "Governance without Government in Somalia: Spoilers, State Building, and the Politics of Coping", *International Security* 31(3):74–106 (Winter 2006/07), Belfer Center summary: "Zones of state failure are assumed to be anarchic."; "In reality, communities facing the absence of an effective state authority forge systems of governance"; a shift "from warlord to landlord". https://www.belfercenter.org/publication/governance-without-government-somalia-spoilers-state-building-and-politics-coping . Re-checked through a web tool in the quote check of 14 Nov 2026.

[95] The sources read for this chapter include no direct critique of Leeson's reading of the years after 2006; the research behind this chapter looked for one and could not confirm one at source (G1, "COULD NOT CONFIRM"). The chapter states no such critic's findings.

The second trap is becoming what one set out to replace. Some of the movements that set out to end rule by the few have built new rulers. Engels's state was supposed to die out of itself; Chapter 3 told what happened instead in the Soviet Union.[45] It is the same pull that Chapter 8 traced for money, in a stronger form, because a government holds the power to compel. A network that took over a town council would hold that power over everyone in the town, including the people who had not joined it, and it would at once become worth capturing, by money, by ambition, by the loudest faction. UP's agreed position on power describes the trap exactly: the pursuit of power "can move to access, office, information or expertise", and so UP "watches for concentrations of power in any form and keeps spreading them out."[31]

So UP's author has set out how this is to be read, and the reading is going through UP's method to become an agreed position: UP's own system is not run as a government at any stage, and UP does not become one.[14] The core and the agreed positions already say much of it. "There are no offices to hold: work is shared out, not owned, so no one gathers power by holding a position."[33] There is "no leader".[35] "UP has no lasting authority and no emergency powers."[90] "UP is not a nation-state and has no army."[55] And "No one is forced to join, to work or to give up what is theirs."[44] Where people in UP need someone to look after a shared system, they choose stewards who rotate, are watched and can be replaced, with the right to fork if the stewards go wrong.[52] Where they need to settle a dispute, they hold a fair hearing with a way to appeal, under floors no decision may cross.[36] And where they need the one thing every society needs, someone trained to stop violence, UP's agreed positions allow one layer of trained, professional law enforcement, open, watched by many, and answerable to the people and the process.[40]

UP is not without power, and it should say so plainly. As this chapter set out earlier, its agreed positions also keep laws, as norms of right and wrong, and courts that rest on evidence, not public opinion, and they allow confinement, but only to protect the person or others.[40] Under the floors, a freedom such as movement may be restricted "only through an evidence-based court process", after a fair hearing with a way to appeal, and "Leaving a group or community does not end a restriction set by a fair hearing."[32,36] That is a real power to restrict. What keeps it from being a government is how it is bounded. No one holds any of it by position. It raises no taxes: in the reading UP's author has set out, UP's own system does not run on money at all.[14] UP "is not a nation-state and has no army", and it claims no territory of its own.[55] No one is made to join it.[44] And every part of it is limited and watched: the one layer of law enforcement is open to everyone and answerable to the people and the process, emergency authority "ends when the event ends", stewards serve under term limits and can be replaced, and UP's position on power lists rotation of anyone who allocates among the designs that help.[40,41,52,31]

The right to leave is the last guard. Among UP's floors is "the right to leave any group or community at any time, taking what is theirs".[32] A government's citizens cannot leave its laws without leaving its land. A person in UP can leave any part of it at any time, taking what is theirs. Leaving does not end a restriction set by a fair hearing, but no one has to stay in order to be governed, which is a strong sign that what they belonged to was not a government.[36]

The edges. UP still has to meet the world of governments, and it does so on the law's terms. In the reading UP's author has set out, now going through UP's method, a node pays its taxes.[14] It holds the title to its land in a legal form the law recognises, as Debian's assets are held by a non-profit and Wikipedia's servers by a foundation.[96,97] It obeys the law where it stands. UP's agreed position on legacy systems sets the strategy: because its nodes are farms, clinics, workshops and land "that states can tax, license or seize", UP's strategy is "not to be an unfindable target but an indispensable partner".[42] Nodes "work with local and regional governments on their hardest problems, such as elder care, resilience and lifelong education".[43] That is not a tactic for hiding; it is the point. A town council that cannot afford to care for its older residents, or to make its streets safe in a flood, gains a partner that can help, and the people of the town gain both. UP's agreed position on protection adds the reason this keeps UP safe: during the transition its protection is "to be everywhere and woven into the existing system, so that attacking it would cost far more than it could gain", and it "works within the law, delivers things its host societies value, and earns broad public support."[55] And, in the words of its core, UP "acts only by ethical means".[44,43]

[96] Debian, "Donations": "Various organizations hold assets in trust for Debian and receive donations on Debian's behalf"; "Software in the Public Interest, a non-profit organization that holds assets in trust for Debian." https://www.debian.org/donations

[97] Wikimedia Foundation, "About": "The Wikimedia Foundation is the nonprofit that hosts Wikipedia and our other free knowledge projects"; the projects are built by "the communities of volunteers around the world who edit, improve, and add knowledge across Wikimedia projects"; "As a nonprofit, Wikipedia and our related free knowledge projects are powered primarily through donations." Its audited revenue in 2023–24 was $185.4 million. https://wikimediafoundation.org/about/ ; https://meta.wikimedia.org/wiki/Wikimedia_Foundation_reports/Financial/Audits/2023-2024_-_frequently_asked_questions

In the reading UP's author has set out, now going through UP's method, that contact is kept at the edges, openly recorded and kept to what the law requires, and it is meant to shrink as the people of an area move fully to UP.[14] A node in a town where few have moved deals with the council every week. In a town where most people have moved, there is less and less left for the council to do for them, and the contact shrinks toward none. Nobody closes the council. It simply has less to do, for the people who chose.

Who moves: people, not UP

That leads to the most important point in this chapter about how the change happens, and it is the same point Chapter 8 made about money. It would be easy to read the tenet's *gradually* as a plan for UP to take over government's functions one by one, or to run a government of its own and slowly hand it back. That is not how UP's author reads it, and his reading is now going through UP's method: UP does not govern at any stage, and what moves gradually is people.[14]

Think of it again as two curves. The first is inside each life. A person who joins UP keeps their citizenship, their vote, their rights and their duties under the law, because nobody is forced to give up what is theirs.[44] At first UP does little of what government does for them: perhaps a dispute between neighbours settled by a hearing they both trust, or a say, with their neighbours, in what the local node builds next. As UP grows, it does more: much of their care in old age, their help in an emergency, the shared systems their street depends on. Year by year, less of their life runs through government. Whether they ever stop relying on it for anything at all is their choice, made when they are ready, and many may keep a foot in both for good. They still vote, and they still pay their taxes, for as long as they live under a government that asks them to.

The second curve is the number of people. Each person who finds that UP meets their needs better than the old way is one more person relying less on government, and one more person adding to what UP can do. As more people in a place move, more of what that place needs can be done inside UP, which makes the next move easier for everyone else. And that is where government's functions go. UP's agreed position on legacy systems describes it: nodes "work with local and regional governments on their hardest problems", and "as nodes prove themselves, state functions are handed to the network or fade through people's choice."[42] Each half of that sentence matters, and in the reading UP's author has set out, now going through UP's method, each is done by choice. *Handed to the network* can mean a government, seeing that something works better, chooses to pass a job on, as a council might pass on the care of its older residents to a node that already does it well. *Fade through people's choice* can mean that a service nobody needs any more shrinks because people stopped needing it, not because anyone shut it down. On that reading, neither is done by UP to a government; both are done by people and their governments, by choice.[14]

Neither curve is pushed. On that reading, nobody is moved before they choose, no public service is closed to hurry things along, and no one has to wait for everyone else before they can go further. UP's settlement record for its tenet *Reality over fiction* rules out "abolishing institutions by decree", and its core rules out forcing anyone to join, to work or to give up what is theirs: UP "never starts harm against anyone".[16,44] Chapter 8 told what happened when Russia and Cambodia tried to tear down an institution people depended on before anything could do its jobs. For government the danger is greater, because the job left undone is often the job of keeping people alive. That is the difference between UP and every attempt in this chapter's history to end government from above or from outside: in UP, a government's job is relied on less only when something else does it without obvious downsides and the people affected choose.[13]

The other future: powerful machines inside today's states

A world in which people rely less and less on government can be an unsettling thing to imagine. It is fair to set beside it the future that waits if nothing like UP is built, because that future is not standing still either. Chapter 8 described one half of it: AI, robotics and new sources of energy arriving inside a money system that pays their owners first, with the United Nations' advisory body warning of "an associated concentration of wealth and

decision-making among a handful of private AI developers and deployers".[98] This section takes the other half: the same machines arriving inside today's states.

The state of governments is already worrying. On V-Dem's count, "74% of the world population (6 billion) now live in autocracies."[28] On Transparency International's, the world's average score for perceived corruption "has fallen to a new low".[27] Military spending has risen two years running, to "$2887 billion in 2025".[29] And the last limits that the two largest nuclear powers had agreed are gone: "The last remaining treaty between the United States and Russia limiting nuclear weapons expired on February 5, 2026", which, in the words of the Council on Foreign Relations, "marks the end of an era of arms control".[99]

Now add the machines. A government has always needed the cooperation of many people to rule: soldiers who obey, clerks who keep the records, police who watch. Hume's point was that "Force is always on the side of the governed", so even the harshest ruler depends on opinion.[9] Machines that can watch, record, sort and act could weaken that dependence. A state that no longer needs many people to watch its citizens, because cameras and software can do it, or to enforce its orders, because machines can do much of that too, has less reason to care what its people think. Chapter 8 noted the researchers who describe a quieter version of the same danger: a gradual loss of people's influence over the economy, culture and states as AI takes over human work.[100] This picture of machine-backed rule is this chapter's own inference, not a measured result, and it is a possibility, not a prediction. The evidence read for this chapter measures how many people live under autocracies and how concentrated AI is; it does not measure the use of AI for surveillance, and this chapter does not put a number on it. But the parts are real, and they point the same way.

The strongest counter-arguments deserve their full weight. Democracy is not in free fall everywhere, and V-Dem's own figures carry a wide band of uncertainty for the countries in between.[28] Some countries have improved: "31 countries have significantly reduced their corruption levels since 2012."[27] Governments still restrain concentrated power when they choose to, as when the European Commission fined Apple and Meta "€500 million and €200 million respectively" under its Digital Markets Act in 2025.[101] One of the voices in the same Council on Foreign Relations piece says plainly: "I do not believe arms control is dead."[99] The best open AI models "have lagged frontier closed models by an average of four months", so capability is spreading as well as gathering.[102] And the economist Tyler Cowen, answering the warnings about disempowerment, asked: "When were humans ever in control to begin with?"[103]

UP's answer does not depend on the worst case. It depends on a simpler point, the same one Chapter 8 made: the outcome is decided by the framework the technology runs in. Inside a system where a few people decide for millions and hold the power to compel, every gain in the power to watch and to act is also a gain in the power of whoever holds those few seats. Inside a system where the people affected decide, where there are no offices to hold, where the AI coordinates and proposes but never governs, and no single AI system or operator controls coordination, where every record of decisions is public and each person controls their own information, and where every form of power is watched, the same gains can go to everyone.[33,56,68,72,34] UP's agreed position names the choice: "Inside today's framework, AI and robotics threaten to destroy the labour market and concentrate power in a few hands; inside a new framework they can coordinate the whole system for everyone's benefit."[54] Seen this

[98] United Nations, High-level Advisory Body on Artificial Intelligence, *Governing AI for Humanity: Final Report*, September 2024: "The accelerating development of AI concentrates power and wealth on a global scale"; "an associated concentration of wealth and decision-making among a handful of private AI developers and deployers". https://www.un.org/sites/un2.un.org/files/governing_ai_for_humanity_final_report_en.pdf

[99] Council on Foreign Relations, "Nukes Without Limits? A New Era After the End of New START" (9 February 2026): "The last remaining treaty between the United States and Russia limiting nuclear weapons expired on February 5, 2026."; the treaty had limited "the number of nuclear warheads the United States and Russia could deploy to 1,550 each"; "It marks the end of an era of arms control and limits on both the size and status of U.S. and Russian nuclear weapons."; and, from one of the voices in the same piece, "I do not believe arms control is dead." https://cfr.org/articles/nukes-without-limits-a-new-era-after-the-end-of-new-start . Re-checked through a web tool in the quote check of 14 Nov 2026.

[100] Jan Kulveit, Raymond Douglas, Nora Ammann, Deger Turan, David Krueger and David Duvenaud, "Position: Humanity Faces Existential Risk from Gradual Disempowerment", *Proceedings of the 42nd International Conference on Machine Learning*, PMLR 267 (2025); preprint arXiv:2501.16946 (January 2025): "As AI increasingly replaces human labor and cognition in these domains," human influence over the economy, culture and states could erode. A position paper and argument, not a measured finding. https://proceedings.mlr.press/v267/kulveit25a.html

[101] European Commission, "Commission finds Apple and Meta in breach of the Digital Markets Act", 23 April 2025: "the Commission has fined Apple and Meta with €500 million and €200 million respectively." https://digital-strategy.ec.europa.eu/en/news/commission-finds-apple-and-meta-breach-digital-markets-act

[102] Epoch AI, data insight on the gap between open and closed models (2026): "the most capable open-weight models have lagged frontier closed models by an average of four months". Open weights spread the use of models, not the ability to train the next frontier model. https://epoch.ai/data-insights/open-closed-eci-gap

[103] Tyler Cowen, "Gradual Empowerment?", *Marginal Revolution*, February 2025, replying to the gradual-disempowerment paper: "When were humans ever in control to begin with?" An opinion piece. https://marginalrevolution.com/marginalrevolution/2025/02/gradual-empowerment.html

way, the question is not whether people can bear to rely less on government. It is whether they can afford to meet the most powerful technology in history with the power to compel still held by a few.

How it could run, stage by stage

As in Chapter 8, UP is judged by stage: only the early stage rests on today's evidence, and the middle and completed stages are projections.[104,105] At every stage the two curves described earlier are what move: how much of each member's life runs through government, and how many people are members. In the reading UP's author has set out, now going through UP's method, UP itself governs no one at any stage; what changes is how wide its edges with governments are.[14]

In the early stage, people take part while keeping their citizenship, their vote and their duties under the law, and no one is forced to give up what is theirs.[44] UP's nodes are, in card 25's words, "lawful, useful and embedded in their communities", and they "work with local and regional governments on their hardest problems, such as elder care, resilience and lifelong education"; in the reading UP's author has set out, now going through UP's method, they also pay their taxes and hold their land in legal forms, as far as the law requires.[42,43,14] Inside the network, people practise deciding together: on what the node builds, how its shared systems are kept, and how its disputes are heard. They use the decision steps, with the guards on any vote, and they publish what they decide and why, so that anyone can check.[38,65,72] The tools already exist, from citizens' assemblies and participatory budgets to open consultations like vTaiwan and the open governance of projects like Debian, and an early network can use and test them.[2,59,63,70] What matters at this stage is that the network shows it can do some of government's jobs well, in the open, so that people and their governments can see the results.

The middle stage, a projection, is where much less of members' lives would run through government. With most of their needs met from what UP produces, as a floor no decision may cross, they would rely on it far less for the pooling of risk; with fair hearings and open, watched law enforcement among themselves, less for settling their disputes; with stewards who rotate and can be replaced, less for the shared systems their communities depend on.[32,85,36,40,52] As nodes prove themselves, some state functions would, on UP's agreed position, be "handed to the network or fade through people's choice".[42] Governments would still do everything their citizens still need them for, including for UP's members in their dealings with the world outside. In one way UP could run, where whole cities or regions choose to join, they would redirect their resources, and the people and equipment kept for war would in time be converted "into law enforcement, emergency aid groups and rapid response."[106,91]

The completed stage, if it comes, is a projection. By then, on the same projection, most people would live mainly in UP: their decisions made by the people affected, with evidence; their disputes heard fairly, with a way to appeal; their shared systems kept by stewards who rotate; their emergencies met by many single-layer teams that stand down when the event ends; and their basic needs met as a floor.[33,36,82,90,32] In the reading UP's author has set out, now going through UP's method, where the people of an area have moved fully to UP, its contact with governments could shrink toward none.[14] Even there, nothing is abolished by decree: a person or a community that still wants a government of its own keeps it, and freedom and the protected freedoms stay at every stage.[16,13] UP's agreed overall claim, in summary, adds one more point that matters here: force from outside shrinks as nations join and convert their armies.[107]

The household from Chapter 1 shows how this could feel from inside: the care worker, her teenage son and his grandfather, who left school at fourteen and has diabetes. As always, it illustrates one way UP could run and is never used as evidence.

Illustration: one way it could run. The early stage.

[104] UP's agreed position on the twelve failures (Round 12c, position 1): "The early stage rests on today's evidence; the middle and completed stages are labelled as projection." The definitions of the three stages used in this book (early, a minority network inside the current system; middle, its own productive base, with most members' needs met from what UP produces; completed, most people living mainly in UP) follow UP's study lessons (lesson 13), which guide how the book is written and are not agreed positions. Full wording in UP's agreed positions (the Position Ledger) and study lessons.
[105] The definitions of the three stages used in this chapter follow UP's study lessons (lesson 13), which guide how UP's text is written and are not agreed positions; the labelling of the middle and completed stages as projection is agreed (round 12c, item 1: "The early stage rests on today's evidence; the middle and completed stages are labelled as projection."). Full wording in UP's agreed positions (the Position Ledger) and study lessons.
[106] UP's agreed position on growth and assets (round 12S, position 5, as updated in round 12c): whole cities, states and nations that join redirect their resources; assets owned or controlled by people who join convert by their owners' choice; members' money is best used early to buy and convert more. The growth figures once attached to this position were withdrawn as a thought experiment. Full wording in UP's agreed positions (the Position Ledger).
[107] UP's agreed overall claim (round 12c, item 2, "OV: B,"Updated, force answered by conversion""), summarised in UP's study lessons as"force from outside shrinks as nations join and convert their armies". Full wording in UP's agreed positions (the Position Ledger) and study lessons.

The care worker votes in council elections and pays her taxes like everyone else, and the grandfather's diabetes care comes through the public health service. The town's UP network is small. The council admits that it cannot afford to check on its older residents through the winter, and the network offers to take the problem on, working within the council's rules and reporting what it does. The grandfather is one of the first it visits. Inside the network, its members decide together what to build first, using the decision steps; the son, who has never voted in his life, finds himself arguing for a repair workshop at an open meeting, and loses, and the record of the meeting shows his case. When two members fall out over noise from the workshop, they do not go to court. A small hearing, with the evidence open to both and a way to appeal, settles it.

Illustration: the middle stage (a projection).

Later, the network looks after most of the town's older residents, and the council, seeing the published results, asks residents whether they want the network to take the service on, and most say yes. The grandfather's care now comes mostly through the network's clinic node, though he keeps his place with the public health service, because he chooses to. When the river floods, the town's response is many small teams, each with a trained lead whose authority ends when the water goes down; the son works on one of them. A dispute about where to rebuild goes to the people affected, with simulations giving the future residents of the riverbank a voice but not a vote. The family still votes in national elections, and still pays taxes on the care worker's wages from the hospital shifts she keeps.

Illustration: the completed stage (a projection).

In the completed stage most of what the town once asked of its council is done by its people, deciding together. The son, grown now, takes a turn as one of the stewards of the town's water system, for a fixed term, with his work published and open to audit; when his term ends someone else takes over, and anyone who thinks the stewards are wrong can propose a better way. The town still has a council, much smaller, for the few residents who chose to keep relying on it and for its dealings with places that have not changed. Nobody closed it. People still disagree, sometimes sharply, about which of its remaining jobs the network is ready to take on.

Table 9.2 sums up the stages.

Table 9.2. Government, by stage, as an illustration. The early stage rests on today's evidence; the middle and completed stages are reasoned projections from cited mechanisms, labelled as such.

Stage	What could change	Real precedent	Why it could work	What persists
Early	Members keep their citizenship, vote and duties; nodes work within the law, pay taxes (the author's reading, going through UP's method) and partner with local governments on their hardest problems; members practise deciding together, with guards and open records	Ireland's Citizens' Assembly;[2] participatory budgeting in Porto Alegre and Paris;[59,61] vTaiwan;[63] the IETF and Debian;[69,70] Ostrom's commons[49]	Each grew alongside government and within the law, and each shows people deciding together	Members rely on government for most of what it does; almost every example still advises or depends on a government; partnership depends on governments' goodwill
Middle (projection)	Much less of members' lives runs through government: needs held as a floor; fair hearings with appeal and one layer of open, watched law enforcement; stewards who rotate; some state functions handed to the network or fading	Restorative justice conferencing;[77] Occupy Sandy and the Cajun Navy;[88,89] Estonia's shared data layer[79]	A function moves only when something already does it without obvious downsides and people choose, so each step rests on the one before; the two curves reinforce each other	Serious violence; the pull of power toward access, office, information and expertise; governments that resist; the risk of a member relying on UP before it is ready

Stage	What could change	Real precedent	Why it could work	What persists
	through people's choice			
Completed (projection)	Most people live mainly in UP; decisions by the people affected; contact with governments shrinks toward none where people have fully moved (the author's reading, going through UP's method); freedom and the protected freedoms kept	None yet at this scale	The parts strengthen one another (Chapter 21); force from outside shrinks as nations join and convert their armies	Disagreement over which jobs are ready to move; places and people that keep their governments; the work of watching power in every form

The strongest objections

A fair reader will have objections, and the strongest deserve to be met in their strongest form.

"Who keeps the peace?" This is the oldest objection and the most serious, and Hobbes put it best: without "a common Power to keep them all in awe", life is "solitary, poore, nasty, brutish, and short."[11] The long fall in killing in Europe, over the centuries in which states grew strong, is real, even if Eisner warns that its causes are not settled.[12] UP's answer has four parts, and none of them is "nobody". First, UP does not take the peace-keeping job from governments; it relies on them for it wherever nothing else yet does it without obvious downsides, and its nodes obey the law where they stand.[13,43] Second, inside UP, no one's freedom may be restricted without "a fair, evidence-based hearing, with the evidence open to them and a way to appeal", and a restriction to stop harm in progress must be followed promptly by a hearing.[36] Third, UP's agreed positions keep one layer of trained, professional law enforcement, open to everyone, watched by many and answerable to the people and the process, with courts that rest on evidence, not public opinion.[40] Fourth, UP works on the causes. Its agreed position on the whole system names "a moneyless system that removes the motive for much of today's crime" among the parts that strengthen each other, and the evidence on restorative meetings and violence interruption, modest and mixed as it is, suggests that some of the work can be done well close to the people involved.[108,77,75] Chapter 19 takes this up in full. UP does not claim that serious violence goes away. It claims that a bounded power to restrict, used only after a fair hearing with a way to appeal, held by no one by position, and open, watched and answerable, can keep the peace without that power being held by a few; that claim is for Chapter 19 and the published record to test.

"Majorities will oppress minorities." A system in which the people affected decide could become a system in which the many decide against the few. That is a real danger in every democracy, and UP's answer is the floors. UP's agreed position on oppression says so without hedging: "UP does not make oppression impossible; it puts two floors in its way that cannot be crossed. Everyone's basic needs and protected freedoms form a floor that no gain for others can buy, and irreversible damage is never traded."[109] No vote may override the protected freedoms.[38] Above the floors, "no one is made worse off without being asked first: those who would lose out are consulted and helped".[110] Every vote "records the losing side's case", and the decision reopens when new evidence changes the options.[38] Anyone may leave any group at any time, taking what is theirs.[32] And where

[108] UP's agreed position S, "Judge UP as a whole system, against today's system" (CANON, 22 Oct 2026): "Problems are linked in trees that show their common roots, so the work goes to solutions that solve many problems at once. The bigger a problem, the more people it affects and the more attention and effort it draws, so the system works like a marketplace of problems, biggest first, and any area where UP does not yet do better than today's system gets attention first. UP is a system whose parts strengthen each other: education open to everyone and improving quickly; a moneyless system that removes the motive for much of today's crime; automation that supplies basic needs at ever lower cost; health care backed by robotics and AI; and a society that works on its problems every day." The same position says: "Its starting point will not be great; it is built to improve much faster than today's systems." Full wording in UP's agreed positions (the Position Ledger).

[109] UP's agreed position "Two floors in the way of oppression" (card C27, CANON), in full: "UP does not make oppression impossible; it puts two floors in its way that cannot be crossed. Everyone's basic needs and protected freedoms form a floor that no gain for others can buy, and irreversible damage is never traded. Above the floors, decisions follow the decision steps: evidence proposes and people decide, with a vote only as the last resort and three guards on it (a minimum share of the affected taking part, a random sample confirming, and automatic reopening). Those who would lose out are asked first and helped; no single person can block a change that meets everyone's needs." Also in UP's agreed positions (the Position Ledger).

[110] UP's agreed position "Never below the floor" (DP-010, CANON): "Everyone's basic needs and protected freedoms form a floor that no gain for others can buy."; "Above the floor, no one is made worse off without being asked first: those who would lose out are consulted and helped, though no single person can block a change that meets everyone's needs." Full wording in UP's agreed positions (the Position Ledger).

people disagree deeply, splits let more than one way be tried and compared, rather than one way being forced on everyone.[39] The protected freedoms and the right to leave are floors that no decision may lower.[32]

"Assemblies are slow, unrepresentative or easy to capture." Each part has force. Deliberation takes time, and people have lives to lead. Participation can be small: Porto Alegre's participatory budget drew "under 1000" participants in 1990, and by 1996 "over 14,000".[59] And a body that only advises can be ignored or filtered, as France's climate convention found.[57,58] UP's design meets each. On time: in one way UP could run, most decisions are made at the smallest scale the problem allows, by the people it affects, so no one has to weigh everything; "Most decisions in UP are not made by voting", and people "focus on what affects them most", which UP's agreed position calls fine.[67,65,111] On representation: when a decision goes to a vote, "a minimum share of the affected must take part; a random sample of the affected who did not take part is asked to confirm it", and every decision publishes "how many took part and how typical they were", reopening automatically if a narrow group decided.[65] On capture: there are no offices to hold, records of who decided what are public, and UP's agreed position on power lists the design that helps: "caps, public records of who approved what, rotation of anyone who allocates, random audits, public and versioned allocation rules."[33,31] On being ignored: in UP the people affected decide; they do not advise someone else who decides.[33] None of this makes deciding together fast or easy. Whether the guards keep decisions typical at very large scale is work to be measured in the open.[112]

"Without states come warlords." Somalia is the case people cite, and the record is more mixed than the slogan, as this chapter showed: on Leeson's measures, many things improved after a predatory government collapsed, and Menkhaus found communities forging "systems of governance" without a state, but also the spoilers his title refers to.[93,94] UP accepts the core of the objection. A sudden gap where a government's jobs used to be is dangerous, and UP's rules are built so that it does not create one. A job is replaced before it is retired; nothing is abolished by decree; UP's nodes partner with governments rather than replacing them by force; and, in the words of the agreed position, "as nodes prove themselves, state functions are handed to the network or fade through people's choice."[37,16,42] Somalia's gap came from a collapse. UP's change, if it comes, comes from people choosing, one job and one life at a time, with the government still there for everything not yet done better. UP's agreed position says the same: legacy systems "will not simply dissolve; they are transformed from within."[42]

"Only states can do some things." The strongest examples are real. Smallpox was declared eradicated by the World Health Organization, the shared health body of the world's states, and routine vaccination, which national programmes probably deliver in large part (this chapter's inference), has prevented, on one estimate, "154 million deaths worldwide in just the last fifty years."[5,18] Nuclear arms are made by states, and so far only states have limited them; the last treaty limiting American and Russian warheads, at "1,550 each", "expired on February 5, 2026".[99] UP's answer is that these jobs stay with states for as long as nothing else does them without obvious downsides, which may be a very long time.[13] UP does not ask anyone to rely on it for vaccination campaigns or arms control before it can carry them, and its nodes work with governments on such problems rather than around them.[42] Two further points belong here. Much of what states do best, they do together, through bodies like the WHO, which is already a kind of coordination among many rather than rule by one.[5] And in one way UP could run, the weapons themselves are the problem to solve: "Nuclear weapons dismantled and converted to power plants as soon as possible", as nations that join choose to.[91,107] That is a direction, not a forecast, and it depends on nations choosing it.

"This is anarchism by another name." It shares the anarchists' hope that people can govern themselves, and it parts company on the method. UP does not oppose government, try to overthrow it or wait for it to collapse. Its settlement record rules out abolishing institutions by decree; it never starts harm against anyone; it "works within the law", as a partner to governments on their hardest problems; and it keeps the parts of government's work that protect people, the fair hearing and the floors, as rules no decision may lower.[16,44,55,42,32] The change UP describes is the slow one: a job leaves government when something does it better and the people affected choose.

[111] UP's agreed position (round 12S, position 10, in the UP Moderator's wording): splits are good: "they test two or a thousand ways in the real world."; and, on attention, "people focus on what affects them most, which is fine." Full wording in UP's agreed positions (the Position Ledger).
[112] UP's agreed position that workload is not a danger: a problem counts as an issue of UP itself only if it cannot be fed back into UP's loop with a good chance of beating the current system, if the current system has a far better solution, or if it is endemic to UP; everything else is work to identify, measure, test and solve together. Full wording in UP's agreed positions (the Position Ledger) and study lessons (lesson 16).

“There is no way out of government.” Harari’s version of this objection applies here too: “There is no way out of the imagined order.”[113] UP agrees that it is not an exit from shared agreements. It keeps some on purpose, freedom first among them, and its floors are agreements that no decision may lower.[13,32] What it claims is narrower. Its agreements are written down, public and open to change through its own method; no one holds power by holding a position in them; and anyone may leave.[72,114,33,32]

What persists. Two risks stay with this tenet at every stage, and they pull in opposite directions. The first is relying on UP too early, before it can do a job government does, which at the scale of a country is how vacuums form and at the scale of one household is how a family loses care it needed. UP’s defences are the order of events (replace before retiring), the test (no obvious downsides), the evidence published with every proposal, and the right of each person and the people affected to decide.[37,38] The second is relying on government too long, because some of the people it serves well, and some who hold its power, will resist any change, and because the current system sometimes earns from a problem’s persistence.[115,31] Neither risk is ever declared gone. Both are watched and answered as standing work.[34]

Back to the ninety-nine

Ninety-nine Irish citizens, chosen by lot, took on one of the hardest questions their country had, and the country, when it voted, gave a Yes vote of a similar size.[2,3] The state that created them kept the pen. Both halves of that story are true, and UP gives both their due. Government did what nothing else in its time could do. In the centuries in which European states grew strong, killing in Europe fell sharply, though its cause is not settled. Government gave millions of strangers common rules, built what no buyer would pay for, and, working together through the WHO, saw smallpox declared eradicated.[12,5] That is what useful fictions are.

[113] Harari, *Sapiens* (2024), chapter 6, “Building Pyramids”: “It follows that in order to change an existing imagined order, we must first believe in an alternative imagined order.”; “There is no way out of the imagined order. When we break down our prison walls and run towards freedom, we are in fact running into the more spacious exercise yard of a bigger prison.” Read in the UP library’s text of the book. Checked 1 Nov 2026.

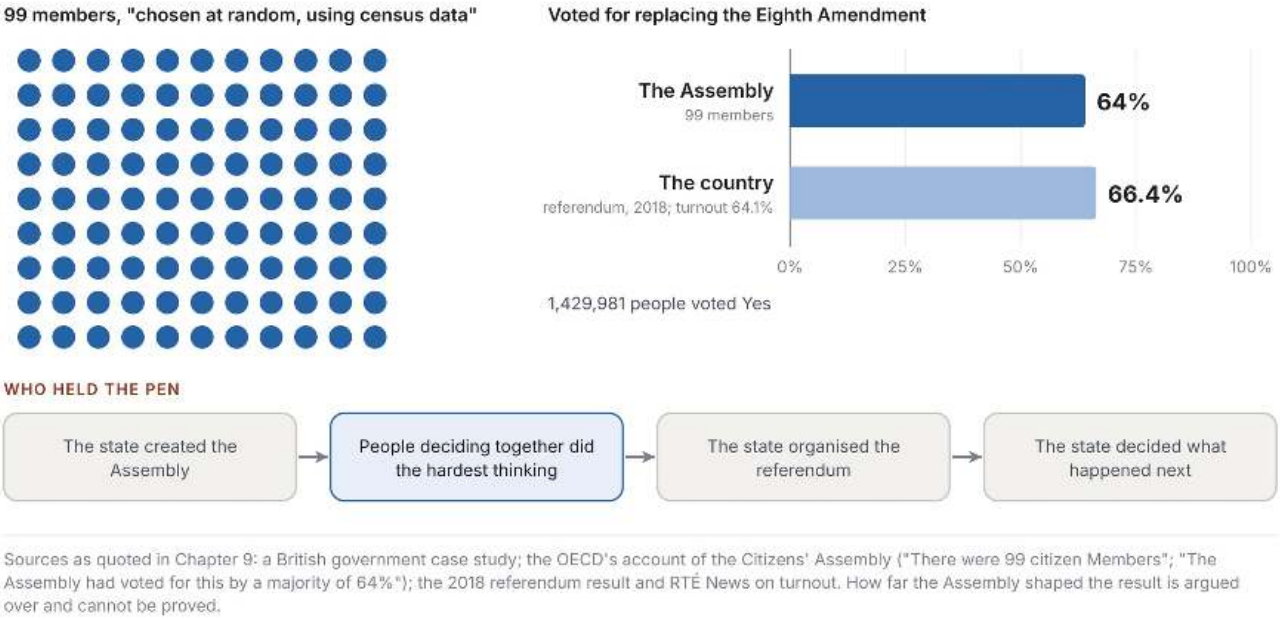
[114] Core tenet: *Self-correction: nothing is final, including this*: “Every part of UP, these tenets included, can be improved through its own method. UP is judged against both today’s system and the ideal it aims at: the ideal shows the direction and the gap still to close, and today’s record shows whether UP is already doing better.” Full wording in “The core of UP”.

[115] UP’s agreed position that the comparison with the current system is not symmetric: the current system often monetises a problem instead of solving it, and sometimes the problem’s persistence is what pays. Full wording in UP’s agreed positions (the Position Ledger).

CHAPTER 9

Ninety-nine citizens, chosen by lot, and the country

Ireland's Citizens' Assembly and the 2018 referendum. UP takes no side on the question itself; the figure is about who decided.



Sources as quoted in Chapter 9: a British government case study; the OECD's account of the Citizens' Assembly ("There were 99 citizen Members"; "The Assembly had voted for this by a majority of 64%"); the 2018 referendum result and RTÉ News on turnout. How far the Assembly shaped the result is argued over and cannot be proved.

Ninety-nine citizens, chosen by lot, and the country: who did the thinking, and who held the pen.

But the stand-in has costs, and they add up. Very large sums are spent to reach the people who decide; on Transparency International's index, the global average for perceived corruption has fallen to a new low; three people in four live under governments V-Dem classes as autocracies; close to three trillion dollars a year goes on armed forces and their equipment; and one large programme decided far from the need failed at great expense.[23,27,28,29,30] Behind each of them is the power to compel, held by a few.

UP's answer is to close the gap from the real side. For government the real thing is the people a decision affects, deciding together, with the evidence in front of them, on top of floors that no decision may cross.[33,15,32] More and more of government's jobs can now be done that way. Citizens chosen by lot took on a hard question and the country's vote later went the same way as theirs; residents can have a say over real budgets; open communities make rules that millions rely on; meetings that bring the harmed and the harmer together can modestly cut repeat offending; stewards who rotate can keep shared systems running; and many people act fast in an emergency when authority belongs to the event and ends with it.[2,3,59,69,77,52,90] The thinkers who hoped for this, from Engels to Kropotkin, Bookchin and Ostrom, lacked the tools for millions to decide together; the tools are arriving, and UP's agreed position names the missing piece plainly: "What was missing was the technology."[54]

And UP's answer is to close the gap in the right order, and by the right hands. In the reading UP's author has set out, now going through UP's method, UP is not a government and does not become one. At its edges it pays its taxes, holds its land in a legal form and works with local and regional governments as an indispensable partner, and that contact shrinks as people move.[14,42] What moves gradually is people: each person relying on government less as UP meets more of their needs, and more people taking part, each at their own pace. State functions are handed to the network or fade through people's choice as nodes prove themselves; never, as UP's settlement record has it, by decree, and with no one forced to join.[42,16,44] Somalia shows the risks of a sudden gap, and the record there is mixed. The other future, in which the most powerful machines in history arrive inside states where a few hold the power to compel, shows what happens if nothing changes at all. UP's agreed position on its own

nature describes the alternative: because every problem with UP is fed back into it as work, "it keeps upgrading itself without revolution or violence."[116]

Money and government have one more companion in the tenet, and it is the one that most of today's work runs through. Chapter 10 asks the same questions of the corporation: what it does, what running on it costs, and how its jobs could be done by people working together, without anyone being forced.[6,44]

Chapter card: Chapter 9

- **Claim:** Government is a shared fiction that made large-scale cooperation possible and served a great purpose. This chapter groups its work into six jobs (an analysis, not a UP position): keeping the peace and settling disputes, setting common rules, building and maintaining what no buyer would pay for, pooling risk and caring for those in need, responding to emergencies, and representing millions and deciding for them. Each stands in for the people affected deciding together, which could not be done directly at scale, and each rests in the end on the power to compel. The costs of the stand-in show in capture by money, corruption, autocracy, war and failed delivery. UP's decisions are made by the people affected, with evidence, on top of floors no decision may cross.
  - **What could take over each job:** the decision steps with guarded votes; rules and records made in the open; fair hearings with appeal and one layer of open, watched law enforcement; stewards who rotate and can be replaced; needs held as a floor; single-layer authority that ends with the event; and AI that proposes and never governs.
  - **UP is not a government** and does not become one (the author's reading, going through UP's method; see Pending): no offices, no leader, no army, no emergency powers, no taxes of its own, and the right to leave. Its one power to restrict is bounded: only to protect people, only through an evidence-based court process after a fair hearing with a way to appeal, with one layer of open, watched law enforcement; leaving does not end a restriction set by a fair hearing.
  - **Who moves:** people, not UP (the author's reading, going through UP's method). State functions are handed to the network or fade through people's choice as nodes prove themselves; never by decree (UP's settlement record), and no one is forced to join.
- **Core lines:**
  - **Tenets:** *Reality over fiction* and its settlement record (it rules out abolishing institutions by decree); *The method*; *Open participation: anyone may take part; those affected decide*; *Power kept spread out*; *Floors that are never crossed*, including the fair hearing with a way to appeal; *Technology serves; people decide*; *Freely joined, ethically grown*.
  - **Agreed positions:** useful fictions; replace before retiring; how UP decides when people disagree; who decides, with the three guards; two floors in the way of oppression; never below the floor; one layer of authority, however large the event; protection during the transition; nodes survive as partners, not targets; stewards who rotate; concentration of power is the danger; open code; what the AI is; justice and enforcement; splits are good; weapons and armies converted (an illustration).
  - **Pending:** the clarification that UP is not a government and that the gradual change is in people, not in UP, set out by UP's author in November 2026 and going through UP's method.
  - **Stages:** the early stage rests on today's evidence; the middle and completed stages are labelled as projections.
- **Rule of thumb:** For any job government does in your life, ask: who is it standing in for, could the people affected now do it themselves, with evidence and under the floors, what does the evidence show, and would you choose to rely on the new way?
- **What this is not:** abolishing government by decree or by force; UP becoming a government, a state or a ruler of anyone; a call to break the law or stop paying taxes; a claim that the peace keeps itself, or that UP has no power to restrict anyone; rule by machines; or rule by majority over the floors.
- **Check yourself:**
  1. What six jobs does government do, and what does each stand in for?
  2. What did government achieve that nothing else in its time could, and what does the record of smallpox and vaccination show?
  3. What does running on government cost? Give the evidence for capture, corruption, autocracy, war and failed delivery, and the strongest caution about each.
  4. What did Engels, Kropotkin, Bookchin and Ostrom see, and what three things held their ideas back?
  5. What do Ireland's and France's citizens' bodies show, for and against, about people deciding together?
  6. How do UP's decision steps and their three guards answer the fear that the loud few will decide for everyone?
  7. How does UP keep the peace and settle disputes, and what does the evidence on violence interruption and restorative justice show?

[116] UP's agreed position "A self-improving paradigm" (F3, CANON): "UP asks only that people solve problems together, and because every problem with UP is fed back into it as work, it keeps upgrading itself without revolution or violence." Full wording in UP's agreed positions (the Position Ledger).

8. Why, in the reading UP's author has set out, is UP not a government, what bounded power to restrict does it keep, and what do Somalia's years without a state teach, on both sides?
9. Who moves off government, and how? What does "handed to the network or fade through people's choice" mean?
10. What future does the chapter set against a world that relies less on government, and what are the strongest arguments against that warning?

- **Open questions (for the wiki):**
  - Which of government's jobs are closest to being done by the people affected today, and how should the evidence be gathered and compared?
  - How can decisions by the people affected stay typical and fair at the scale of a city, a region or more, and how will that be measured?
  - How should serious violence be met by a way of keeping the peace that is open, watched and answerable, and what is the evidence?
  - How can a node's partnership with a local government be set up so that it helps both and leaves no gap when a function moves?
  - How narrow can a node's edges with governments become, and how is that measured?

(Improve this page.)

Chapter 10. Corporations: Why Their Jobs Can Be Done Without Them, and How People Move Off Them

Henry Ford had a plan for his company's profits, and he said it out loud. Instead of paying the shareholders of the Ford Motor Company large special dividends, he would put the money back into the business: more plants, more workers and cheaper cars. "My ambition," he said, "is to employ still more men, to spread the benefits of this industrial system to the greatest possible number, to help them build up their lives and their homes. To do this we are putting the greatest share of our profits back in the business."[1] Two of his shareholders saw it differently. John and Horace Dodge, who together owned a tenth of the company's stock, went to court to make him pay out the money, and in February 1919 the Michigan Supreme Court decided the case.

On Ford's plans for new plants, the judges declined to second-guess him: "The judges are not business experts." On the dividend they were firm. They upheld the order to pay the shareholders more than nineteen million dollars, and they explained why in words that have framed a century of argument: "A business corporation is organized and carried on primarily for the profit of the stockholders. The powers of the directors are to be employed for that end. The discretion of directors is to be exercised in the choice of means to attain that end and does not extend to a change in the end itself, to the reduction of profits or to the nondistribution of profits among stockholders in order to devote them to other purposes."[1]

The thing the court was describing does not exist in the way a factory exists. The historian Yuval Noah Harari makes the point with another carmaker, Peugeot. His point is that Peugeot is none of its factories or workers: "Peugeot is a figment of our collective imagination. Lawyers call this a 'legal fiction'. It can't be pointed at; it is not a physical object. But it exists as a legal entity." It "can open a bank account and own property. It pays taxes, and it can be sued and even prosecuted separately from any of the people who own or work for it." Harari does not say this to sneer. Peugeot belongs to the genre of "limited liability companies", and "The idea behind such companies is among humanity's most ingenious inventions."[2]

Three things in this story matter for UP. The corporation works: the form that let Ford gather the money and the men for the plants he wanted is one of the great tools of the modern world. What makes the corporation work is not its plants or its people but an agreement, written into law, that a company is a person with its own accounts and its own aim. And that aim is part of the agreement. The court did not say Ford's ambition was wrong. It said it was not the company's ambition. Workers, customers and cheaper cars were means; the end was the stockholders' profit, and a director who changed the end was outside his powers. The record decided what the company was for.

That gap between the agreement and the people it serves is the subject of UP's seventh tenet, *Reality over fiction*. It holds that shared fictions such as money, corporations, governments and borders made large-scale cooperation possible and served a great purpose; that decisions should rest on real resources, real needs and measured outcomes; and that UP keeps a fiction while it serves health, happiness and wellbeing, and replaces it gradually where technology can do its job without obvious downsides.[3] UP's agreed position on useful fictions names the

[1] *Dodge v. Ford Motor Co.*, 204 Mich. 459 (Michigan Supreme Court, decided 7 Feb 1919), opinion of Ostrander, J.: the plaintiffs, John F. Dodge and Horace E. Dodge, "who together own 2,000 shares, or one-tenth of the entire capital stock"; ""My ambition," said Mr. Ford, "is to employ still more men, to spread the benefits of this industrial system to the greatest possible number, to help them build up their lives and their homes. To do this we are putting the greatest share of our profits back in the business.""; "A business corporation is organized and carried on primarily for the profit of the stockholders. The powers of the directors are to be employed for that end. The discretion of directors is to be exercised in the choice of means to attain that end and does not extend to a change in the end itself, to the reduction of profits or to the nondistribution of profits among stockholders in order to devote them to other purposes."; on the plant expansion, "The judges are not business experts."; "The decree of the court below fixing and determining the specific amount to be distributed to stockholders is affirmed." The lower court's decree set the extra dividend at $19,275,385.96. Read in the Caselaw Access Project's text, https://static.case.law/mich/204/cases/0459-01.json . Checked at source, 1 Nov 2026.

[2] Harari, *Sapiens* (2024), chapter 2: "Peugeot is a figment of our collective imagination. Lawyers call this a 'legal fiction'. It can't be pointed at; it is not a physical object. But it exists as a legal entity."; "It can open a bank account and own property. It pays taxes, and it can be sued and even prosecuted separately from any of the people who own or work for it."; "Peugeot belongs to a particular genre of legal fictions called 'limited liability companies'. The idea behind such companies is among humanity's most ingenious inventions." Read in the UP library's text of the book. Checked 1 Nov 2026.

[3] Core tenet: *Reality over fiction*, in full: "Decisions rest on real resources, real needs and measured outcomes. Shared fictions (money, corporations, governments, borders) made large-scale cooperation possible and served a great purpose. UP keeps a fiction while it serves health, happiness and wellbeing, and replaces it gradually where technology can do its job without obvious downsides." Also in "The core of UP".

corporation, with money and government, as one of the fictions "ripe to be reduced slowly, through ever more powerful coordination and shared problem solving with AI"; UP's author has set out how that is to be read, and the reading, taken up below, is going through UP's method.[4,5] Chapter 8 took money; Chapter 9, government; this chapter takes the corporation. Each gets the same treatment, because each deserves it.[6,7]

This chapter makes the case that the corporation's jobs can be done without it, and shows how. It begins with what the corporation does well, which is a great deal, and names the six jobs it does and what each one stands in for. It follows the idea from the Dutch East India Company to the economist Ronald Coase, who asked why firms exist at all, and to the legal scholar Yochai Benkler, who asked what happens to them when working together becomes cheap. It sets out what running on corporations costs, with the evidence and with the limits of the evidence. Then it makes the positive case, job by job: open-source software, commons-based peer production, co-operatives at scale, open science, big science paid for in common, platform co-operatives, and the tools UP adds of its own. After that come two questions of direction, both answered by a reading UP's author has set out and UP's method is now testing: why UP itself is not and never becomes a company, and who it is that moves away from companies (as with money, people, one life at a time). The chapter is honest about where firms still do better, and it ends with how the change could run stage by stage and the strongest objections to it.

What the corporation does well

The fairest place to start is with what the corporation has done, and the fairest witnesses are its critics. Lucian Bebchuk and Roberto Tallarita, two legal scholars whose work this chapter returns to below, are sceptical of most of what companies now say about their own purpose. They begin from a plain statement of fact: "The business corporation has proven itself to be a powerful and adaptive mechanism for producing economic growth and prosperity."[8] UP agrees, and its tenet says so in its own terms: the corporation is one of the shared fictions that "made large-scale cooperation possible and served a great purpose".[3] UP's agreed position on useful fictions goes further and calls these fictions "civilisational upgrades".[4]

A recent demonstration came in the pandemic. The Covid-19 vaccines made by Pfizer with its German partner BioNTech, and by Moderna, were corporate products: companies developed and manufactured them. The full story is also a story about public money, and UP should tell it as fairly as the sources do. The United States government signed contracts to buy the vaccines: $5.97 billion for 300 million doses from Pfizer and BioNTech, and $4.94 billion for 300 million doses from Moderna, according to the Congressional Research Service, which records that Pfizer "participated in OWS through federal purchase of doses only".[9] Pfizer, as the business magazine *Fortune* reported at the time, "didn't receive any funding from Operation Warp Speed for the development"; its partner did, from another state: "Berlin gave the German company $445 million in an agreement

[4] UP's agreed position on useful fictions, in full: "Large-scale human cooperation was built on shared fictions: stories people agree to believe, such as money, government and the company. They were civilisational upgrades and served a great purpose. UP holds that fictions are useful, but that reality is better wherever technology can replace a fiction without obvious downsides. Some fictions will persist because the alternatives would harm health, happiness and wellbeing. Freedom is one, and UP keeps it, along with the protected freedoms and the commons, visible and open to change through the decision steps (#1). Others, money, government and corporations, are ripe to be reduced slowly, through ever more powerful coordination and shared problem solving with AI. A fiction is retired when technology can replace what it does without obvious downsides; until then it is reduced as far as possible." Also in UP's agreed positions (the Position Ledger).

[5] Clarification of the tenet *Reality over fiction* and of UP's agreed position on useful fictions, set out by UP's author on 14 November 2026 and going through UP's method; until the UP Moderator enters it in the Position Ledger, it is the author's stated reading, not yet an agreed position. In substance: the gradual change is in people, not in UP; UP's own system does not run on money, prices, a UP government or UP companies; each person relies on money, governments and corporations less as they use UP more, and the number of people doing so grows; where UP meets the current system (taxes, land title, the legal form needed to hold property, partnership with local governments), it uses only what the law requires, openly recorded and kept to a minimum, and that contact shrinks toward none as the people of an area move fully to UP. Record: LXW Shared Brain, decisions, "2026-11-14 1015 … Gradual change is people's" and "2026-11-14 1005 …".

[6] See Chapter 8, "Money, and the jobs it does", and Table 8.1, where money is taken apart into five jobs in the same way.

[7] See Chapter 9 for government, the second of the three fictions these chapters take apart, taken apart in the same way; the capture of government by money, failure F4, has its home in Chapter 5.

[8] Lucian Bebchuk and Roberto Tallarita, "The Illusory Promise of Stakeholder Governance", summary posted on the Harvard Law School Forum on Corporate Governance, 2 March 2020 (the full study is in *Cornell Law Review* 106 (2020)): the BRT statement "is largely a rhetorical public relations move rather than the harbinger of meaningful change"; "corporate leaders (directors and CEOs alike) have strong incentives to enhance shareholder value but little incentive to treat stakeholder interests as an independent end."; "The business corporation has proven itself to be a powerful and adaptive mechanism for producing economic growth and prosperity."; stakeholderism "would likely weaken pressures for stakeholder-oriented policy reforms". https://corpgov.law.harvard.edu/2020/03/02/the-illusory-promise-of-stakeholder-governance/ . Checked at source, 1 Nov 2026.

[9] Congressional Research Service, "Operation Warp Speed Contracts for COVID-19 Vaccines and Ancillary Vaccination Materials" (IN11560, updated 1 March 2021), Table 1: the Pfizer/BioNTech contract, "$5.97B" for 300 million doses, with the note that Pfizer "participated in OWS through federal purchase of doses only"; the Moderna contract, "$4.94B" for 300 million doses. The table row on Moderna's development funding could not be read cleanly, so no development figure for Moderna is given in this chapter. https://www.everycrsreport.com/reports/IN11560.html . Checked at source, 14 Nov 2026.

in September".[10] The companies carried real risk. States carried part of the risk too: Germany paid BioNTech towards its development, and the United States contracted to buy doses from both companies (whether Moderna's development was also paid for with public money is not established here). The corporate form was the vehicle; public money was part of the fuel.

The wider record includes gains in productivity. In the United States, the Bureau of Labor Statistics reports that labour productivity in the nonfarm business sector rose by 3.2 per cent in 2024 and 2.3 per cent in 2025.[11] The figures cover all businesses, not only corporations, and they do not show that the corporate form caused the growth. What they show is that, in those two years, the business system the corporation sits at the centre of produced more for each hour worked.

Some of what companies do, few other bodies in today's world do at the same scale. The Taiwanese chipmaker TSMC, according to a trade report of its earnings call, raised its capital spending budget for 2026 to "60-64 billion dollars", "up from the previously indicated 52-56 billion dollars".[12] That is money gathered and committed to building factories, by an organisation that can promise its investors a share of whatever the factories earn. States can pool sums like that, and a few do. Few other kinds of body can.

The corporation also outlives the people who start it. From its beginning, as the next sections show, the joint-stock company was built so that the money put into it stayed put: in the Dutch East India Company of 1602, "the capital would be permanent during the lifetime of the company", in the words of one account.[13] A legal person can sign contracts that run for decades, own land and machines that no single owner could, and carry its knowledge and commitments from one generation of managers to the next. And at its best a company is a good place to work. UP's agreed position on psychological needs says so: "Good employers and schools already meet them inside today's system", though "there it is the exception, and the same wage that supports it can withdraw it."[14]

Finally, the corporate form is not one thing. The same legal machinery that serves shareholders can serve members instead. The International Cooperative Alliance counts "the 3 million cooperatives in the world" and reports that they provide "jobs or work opportunities to 280 million people across the globe, in other words, 10% of the world's employed population."[15] A co-operative is, in the Alliance's definition, an "autonomous association of persons united voluntarily to meet their common economic, social and cultural needs and aspirations through a jointly owned and democratically-controlled enterprise."[16] UP's agreed position on what it builds on names "co-operatives and employee-owned firms" first among the parts of a system people already use.[17] Whatever this chapter says about the costs of running on corporations, it says against that background: the corporation is a tool that has done great work, and some of its forms already point beyond it.

[10] *Fortune*, 9 Nov 2020 (a news report, secondary): "Pfizer didn't receive any funding from Operation Warp Speed for the development"; "Rather, its partner, BioNTech SE, has received money — from the German government."; "Berlin gave the German company $445 million in an agreement in September". The figure is the newspaper's; it was not checked against a German government document. https://fortune.com/2020/11/09/pfizer-vaccine-funding-warp-speed-germany/ . Checked at source, 14 Nov 2026.

[11] US Bureau of Labor Statistics, Productivity and Costs release: "Annual average productivity in the nonfarm business sector was revised up 0.2 percentage point in both 2025 and 2024" "to increases of 2.3 percent and 3.2 percent, respectively." The sector covers all businesses, not only corporations, and the figures show what the business system produced, not that the corporate form caused it. The release is Productivity and Costs: Third Quarter 2026, Preliminary, of 5 Nov 2026. https://www.bls.gov/news.release/prod2.nr0.htm . Checked at source, 14 Nov 2026.

[12] Bits&Chips, "TSMC raises 2026 capex to as much as $64B", 27 Jul 2026 (trade news, a secondary source reporting TSMC's earnings call): "TSMC has increased its 2026 capital expenditure budget to 60-64 billion dollars", "up from the previously indicated 52-56 billion dollars". TSMC's own release could not be read for this chapter. https://bits-chips.com/article/tsmc-raises-2026-capex-to-as-much-as-64b/ . Checked at source, 14 Nov 2026.

[13] Wikipedia, "Dutch East India Company" (a secondary source; no other source read for this chapter covers the VOC's shares): "one of the first joint-stock companies in the world."; its shares were "bought and sold in open-air secondary markets, one of which became the Amsterdam Stock Exchange."; "Also, the capital would be permanent during the lifetime of the company."; "The VOC therefore was a limited liability company." Gelderblom, de Jong and Jonker, cited in this chapter, find that managerial limited liability emerged only after years of experiment. https://en.wikipedia.org/wiki/Dutch_East_India_Company . Checked at source, 14 Nov 2026.

[14] UP's agreed position on psychological needs (card 16, CANON): "Autonomy, competence and relatedness are universal psychological needs (Self-Determination Theory). Good employers and schools already meet them inside today's system"; "But there it is the exception, and the same wage that supports it can withdraw it." Full wording in UP's agreed positions (the Position Ledger).

[15] International Cooperative Alliance, "Facts and figures": "More than 12% of humanity is part of any of the 3 million cooperatives in the world!"; cooperatives provide "jobs or work opportunities to 280 million people across the globe, in other words, 10% of the world's employed population." These are the Alliance's own figures. https://ica.coop/en/cooperatives/facts-and-figures . Checked at source, 1 Nov 2026.

[16] International Cooperative Alliance, "Cooperative identity, values & principles": a cooperative is an "autonomous association of persons united voluntarily to meet their common economic, social and cultural needs and aspirations through a jointly owned and democratically-controlled enterprise." https://ica.coop/en/cooperatives/cooperative-identity . Checked at source, 1 Nov 2026.

[17] UP's agreed position F1, "UP names a system people already use" (CANON, 22 Oct 2026): "UP is not an invention from nothing. Much of it already exists and is used every day by millions of people: co-operatives and employee-owned firms, non-profits, wikis and open-source software, public libraries, Montessori schools, commons that communities manage themselves, and the everyday ways people help one another." Full wording in UP's agreed positions (the Position Ledger).

The corporation, and the jobs it does

Chapter 8 asked what money is *for*, because those are the jobs that would have to be done some other way.[6] The same question opens up the corporation. A company is a bundle of jobs held together by one legal person, and six of them stand out.

Pooling money and effort for long, risky work. A company lets many people put money into something too large, too slow or too uncertain for any one of them, and lets it hire the people to do the work before any of it pays. It stands in for something people could not otherwise arrange among strangers: a way to commit resources and years of effort to a shared project whose results come later, without each contributor having to know and trust every other.

Organising many people's work. Inside a firm, work is fitted together by direction and by contract: someone decides who does what, and everyone is paid for their part. This stands in for knowing what needs doing, who can do it and how the pieces fit, in a world where finding that out by asking and bargaining, job by job, was slow and expensive.

Carrying risk. Limited liability caps what an owner can lose at what they put in. It stands in for a way to try something that may fail without the failure ruining the people who tried. In a world where failure can cost a family its home, the cap is what makes it reasonable to take a chance at all.

Keeping going beyond its founders. A legal person does not die. It stands in for a durable record of the work, its knowledge, its commitments and its tools, so that a project can carry on when the people who began it are gone.

Deciding what to make, and investing in it. A company chooses what to produce and where to put its money, and its success in selling tells it whether it chose well. Profit stands in for usefulness: for knowing what people need, which bets are worth making and when to stop.

Owning what it makes. Patents, copyrights, trade secrets and plain property let a company keep what its work produces and charge others for its use. This is enclosure, and it stands in for a way to make sure that the people who put effort and money into making something are able to benefit from it.

Each of these jobs stands in for something people could not see or do directly at scale. When the corporation was invented there was, as far as UP knows, no better way to gather strangers' money for a voyage of years, to fit the work of thousands of people together, or to keep a project's knowledge alive across generations. The stand-in was the best tool for the job, and for many jobs it still is. But the corporation does something money alone does not: it ties all six jobs to a single aim. The Michigan court named it in 1919, for one company under Michigan law. On that rule, the pooling, the organising, the risk-taking, the continuity, the choices and the ownership all serve the profit of whoever owns the shares.[1] Most of the time that aim lines up well enough with what people need. The sections that follow show where it does not, and then show, job by job, what is already doing each job another way.

Where the corporation came from, and why firms exist

The corporation, on one detailed study of its Dutch pioneer, was patched together rather than designed. The Dutch East India Company, the VOC, was founded in the Dutch Republic in 1602, according to the *Encyclopaedia Britannica*, "to protect that state's trade in the Indian Ocean and to assist in the Dutch war of independence from Spain".[18] Wikipedia counts it as "one of the first joint-stock companies in the world": its shares were "bought and sold in open-air secondary markets, one of which became the Amsterdam Stock Exchange", and "the capital would be permanent during the lifetime of the company".[13] Those features solved real problems. A voyage to Asia and back took years, and permanent capital let the company plan on that scale, and a market in shares let an investor who needed the money back sell to someone else instead of asking the company to return it.

Little of this was foreseen. The economic historians Oscar Gelderblom, Abe de Jong and Joost Jonker, who studied the VOC's first two decades, found that "its novel corporate form owed less to foresight than to piecemeal

[18] *Encyclopaedia Britannica*, "Dutch East India Company" (Britannica Editors): "trading company founded in the Dutch Republic (present-day Netherlands) in 1602 to protect that state's trade in the Indian Ocean and to assist in the Dutch war of independence from Spain"; "The Dutch government granted the company a trade monopoly in the waters between the Cape of Good Hope at the southern tip of Africa and the Straits of Magellan between the Atlantic and Pacific oceans with the right to conclude treaties with native princes, to build forts and maintain armed forces"; "Toward the end of the 18th century the company became corrupt and seriously in debt. The Dutch government eventually revoked the company's charter and in 1799 took over its debts and possessions." https://www.britannica.com/money/Dutch-East-India-Company ; read in the browser as shown with the article on Jan Pieterszoon Coen, https://www.britannica.com/biography/Jan-Pieterszoon-Coen . Checked at source, 1 Nov 2026.

engineering to remedy design flaws". Even limited liability for its managers "was not, as previously thought, integral to that design, but emerged only after protracted experiments with various solutions to the company's financial bottlenecks. Legal form followed economic function, not the other way around."[19] UP takes that seriously. The corporation is a tool people built, one problem at a time, to do jobs that needed doing; another tool can be built the same way.

The VOC also shows how far the agreement could drift from the people it touched. The Dutch government granted it a trade monopoly in the waters between the Cape of Good Hope and the Straits of Magellan, "with the right to conclude treaties with native princes, to build forts and maintain armed forces".[18] In 1621 the company's man Jan Pieterszoon Coen "headed an all-Dutch fleet to the Banda Islands on a campaign of conquest", and his "wholesale slaughter and enslavement of the natives shocked contemporaries as unusually severe and even drew a reprimand from the company's directors."[20] The company was not immortal either. "Toward the end of the 18th century the company became corrupt and seriously in debt", and in 1799 the Dutch government "took over its debts and possessions."[18] Most companies are nothing like the VOC. But it is worth remembering that one of the earliest great corporations was also an armed power, with the right to make treaties, build forts and keep armed forces.

In Britain, limited liability was extended to companies formed by the public by the Limited Liability Act of 1855, which, according to a secondary account (Wikipedia), "first expressly allowed limited liability for corporations that could be established by the general public", for "companies of more than 25 members (shareholders)", though "shareholders were still liable directly to creditors for the unpaid portion of their shares."[21] From then on, a company formed by members of the public, with enough of them, could cap what its shareholders stood to lose.

Why firms exist at all is a real question. A market, after all, is supposed to coordinate people through prices without anyone in charge; why should so much of the economy be organised instead inside firms, by direction? In 1937 the economist Ronald Coase gave the answer that became part of the work for which he later won the 1991 Nobel prize in economics, awarded "for his discovery and clarification of the significance of transaction costs and property rights".[22] Using the market has costs: in one secondary summary of his paper, "search and information costs, bargaining costs" and the like.[23] Finding a supplier, agreeing a price and writing a contract for every task is expensive, and a firm saves those costs by bringing the work inside, under a manager, on long contracts. The prize committee put the conclusion in one sentence: "If transaction costs were zero, no firms would arise."[22] Coase had also asked the opposite question: "Why is not all production carried on by one big firm?"[23] A firm has limits as well as reasons, and the line between what it does inside and what it buys outside depends on the costs on each side. In a footnote, as Wikipedia relays it, he put the supposition that "if production is regulated by price movements, production could be carried on without any organisation at all" (the rest of the sentence was not read).[23] In the committee's summary of his view, "The firm in fact consists of this array of contracts".[22]

[19] Oscar Gelderblom, Abe de Jong and Joost Jonker, "The Formative Years of the Modern Corporation: The Dutch East India Company VOC, 1602–1623", *Journal of Economic History* 73(4):1050–1076 (2013), abstract: "With their legal personhood, permanent capital, transferable shares, separation of ownership and management, and limited liability, the Dutch and English colonial trading companies VOC and EIC are considered institutional breakthroughs."; "its novel corporate form owed less to foresight than to piecemeal engineering to remedy design flaws. The crucial feature of managerial limited liability was not, as previously thought, integral to that design, but emerged only after protracted experiments with various solutions to the company's financial bottlenecks. Legal form followed economic function, not the other way around." Abstract read at https://ideas.repec.org/a/cup/jechis/v73y2013i04p1050-1076_00.html . Checked at source, 1 Nov 2026.

[20] *Encyclopaedia Britannica*, "Jan Pieterszoon Coen" (W. Ph. Coolhaas and Britannica Editors): "In January 1621, after inviting the English to participate, Coen headed an all-Dutch fleet to the Banda Islands on a campaign of conquest, on the pretext of punishing the Bandanese for disregarding previous commercial agreements. His wholesale slaughter and enslavement of the natives shocked contemporaries as unusually severe and even drew a reprimand from the company's directors." https://www.britannica.com/biography/Jan-Pieterszoon-Coen . Checked at source, 1 Nov 2026.

[21] Wikipedia, "Limited Liability Act 1855" (a secondary source; the statute itself was not read): the Act "first expressly allowed limited liability for corporations that could be established by the general public"; "The act allowed limited liability to companies of more than 25 members (shareholders)."; "Under the act, shareholders were still liable directly to creditors for the unpaid portion of their shares." https://en.wikipedia.org/wiki/Limited_Liability_Act_1855 . Checked at source, 14 Nov 2026.

[22] The Nobel Prize, Prize in Economic Sciences 1991, Ronald H. Coase, "Facts": awarded "for his discovery and clarification of the significance of transaction costs and property rights". Press release (15 Oct 1991): "Such costs are commonly known as transaction costs" (the sentence goes on "and they account for a considerable share of the total use of resources in the economy."); "If transaction costs were zero, no firms would arise."; "The firm in fact consists of this array of contracts" (the sentence goes on, describing the firm's open contracts, such as employment contracts). These are the prize committee's words summarising Coase, not Coase's own. https://www.nobelprize.org/prizes/economic-sciences/1991/coase/facts/ ; https://www.nobelprize.org/prizes/economic-sciences/1991/press-release/ . Checked at source, 14 Nov 2026.

[23] Ronald H. Coase, "The Nature of the Firm", *Economica* (1937). The article itself could not be read for this chapter; it is known here through secondary sources. Wikipedia's article "The Nature of the Firm" names among the costs of using the market "Other costs, including search and information costs, bargaining costs", and relays a footnote of Coase's (p. 388): "if production is regulated by price movements, production could be carried on without any organisation at all". Eli Dourado's summary, "The Nature of the Firm" (8 Apr 2010, secondary; the 1937 text was not checked against it), gives Coase's question: "Why is not all production carried on by one big firm?" https://en.wikipedia.org/wiki/The_Nature_of_the_Firm ; https://www.elidourado.com/p/the-nature-of-the-firm . Checked at source, 14 Nov 2026.

Coase's answer contains a prediction he did not make. If firms exist because coordinating people through the market is costly, then anything that makes coordination cheap changes the reason for the firm. Around 2001 the legal scholar Yochai Benkler drew that conclusion in an article called "Coase's Penguin, or, Linux and the Nature of the Firm" (the early version this chapter read is dated October 2001). His subject was the way the Linux operating system and other shared projects were being built by people working together in the open, outside the direction of any one firm. Benkler argued that this was no accident. "As rapid advances in computation lower the physical capital cost of information production, and as the cost of communications decline, human capital becomes the salient economic good involved in information production, and the relative advantage of peer production increases in importance."[24] He called it peer production: many people working together on something no one owns, each choosing their own part, coordinated neither by a manager nor by a price. He was careful about its limits. His argument concerns information and culture, where "The physical capital costs of sophisticated information and cultural production are declining dramatically", and he made no claim for "traditional economic goods".[24]

UP stands at the end of this line. Its agreed position on what it builds on holds that the elements of a different way of working "have existed in isolation", that others saw they could be coordinated, and that "What was missing was the technology."[25] Coase explained why firms exist; Benkler argued that when the costs Coase named fall far enough, some of the work moves out of firms on its own. This chapter's argument is that those costs are still falling, now with AI, open records and cheap machines, and that more of the corporation's jobs can follow.

What running on corporations costs

A stand-in is never the thing it stands for, and the gap between them is where the trouble starts. For the corporation the gap has a particular shape, because the stand-in is an account book. A company keeps accounts of what it pays for and what it earns, and it is run to make the difference as large as it can. What it does not pay for falls outside its books: the river it fouls, the health of the people who breathe its air, the work of the communities it leaves. Economists call these costs externalities, and the name says where they sit: outside. UP's agreed position on why reform keeps losing the race names the pattern directly: reform inside the current system has worked in bounded cases, but it "stalls most where it runs against profit from extraction, externalised harm and concentrated power."[26] This section takes the costs in turn, with the evidence for each and the limits of that evidence.

Costs outside the books. An estimate of what prices leave out comes from the International Monetary Fund, and it concerns fossil fuels. The IMF separates two things. Explicit subsidies "occur when the retail price is below a fuel's supply cost": the fuel is sold for less than it costs to supply. In 2024 they came to "$0.73 trillion, or 0.6 percent of global GDP". Implicit subsidies are the IMF's estimate of the costs that fuel prices do not cover at all, such as damage to the climate and to people's health; for 2024 the IMF puts them at "$6.7 trillion, or 5.8 percent of global GDP".[27] The two figures are different kinds of number. The first is the gap between a fuel's retail price and its supply cost; the second is a modelled estimate of harm. Nor are these the costs of companies alone: the figures concern the price of fuel, whoever sells it and whoever burns it.[27] But the order of magnitude is the point. On the IMF's figures, the costs that the price of fossil fuels left out in 2024 ran to trillions of dollars, and they are carried

[24] Yochai Benkler, "Coase's Penguin, or, Linux and the Nature of the Firm", *Yale Law Journal*, read in the arXiv copy dated October 2001 (the journal year was not confirmed at the source): "As rapid advances in computation lower the physical capital cost of information production, and as the cost of communications decline, human capital becomes the salient economic good involved in information production, and the relative advantage of peer production increases in importance."; "The physical capital costs of sophisticated information and cultural production are declining dramatically." The arXiv copy is an early version, and its wording may differ from the published article. Benkler's argument concerns information and cultural goods; he writes that "I make no claim about the applicability of these observations to traditional economic goods" (sentence read at source by the quote check of 14 Nov 2026). https://arxiv.org/pdf/cs/0109077 . Checked at source, 14 Nov 2026.

[25] UP's agreed position F1, "UP names a system people already use" (CANON, 22 Oct 2026): "These elements have existed in isolation, and others saw that they could be coordinated: Jacque Fresco, Ward Cunningham with the wiki, Paolo Soleri, Maria Montessori. What was missing was the technology. Inside today's framework, AI and robotics threaten to destroy the labour market and concentrate power in a few hands; inside a new framework they can coordinate the whole system for everyone's benefit. The Venus Project imagined a central brain; AI can now be the pattern-finding and coordinating system it envisioned. The problem is not progress but the framework we run it in". Full wording in UP's agreed positions (the Position Ledger).

[26] UP's agreed position that reform is losing the race (DP-003, CANON): "Reform inside today's system has worked in bounded cases — the ozone layer, acid rain, leaded fuel, smoking — and human development has improved on many measures."; "Reform stalls most where it runs against profit from extraction, externalised harm and concentrated power. UP does not claim reform is impossible; it is built for the gap between the speed of reform and the speed of the problems." Full wording in UP's agreed positions (the Position Ledger).

[27] International Monetary Fund, "Energy subsidies" (topic page, citing "Underpriced and Overused: Fossil Fuel Subsidies Data 2025 Update"): "Explicit subsidies in 2024: $0.73 trillion, or 0.6 percent of global GDP"; "Implicit subsidies in 2024: $6.7 trillion, or 5.8 percent of global GDP"; "Explicit subsidies: occur when the retail price is below a fuel's supply cost." The page gives no combined total, and this chapter adds none. Implicit subsidies are modelled estimates of costs that fuel prices leave out, not payments. The figures concern the price of fuel, whoever sells or burns it, not the costs of companies alone. https://www.imf.org/en/Topics/climate-change/energy-subsidies . Checked at source, 14 Nov 2026.

by people and places that never appear in anyone's accounts. Figure 10.1, later in this chapter, shows the two figures side by side.

Profit shifting. A company's books can also be arranged so that its profits appear where they are taxed least. The EU Tax Observatory, a research centre whose report proposes new minimum taxes on billionaires and corporations, estimates that "A persistently large amount of profits is shifted to tax havens: $1 trillion in 2022", and that "This is the equivalent of 35% of all the profits booked by multinational companies outside of their headquarter country." The global minimum tax on multinationals, which the report says "raised high hopes in 2021", "has been dramatically weakened": "a growing list of loopholes has reduced its expected revenues by a factor of 2".[28] An earlier estimate by the economists Tørsløv, Wier and Zucman uses a different base, all multinational profits rather than those booked abroad, and puts the share for 2019 at "close to 40%"; on their figures, "This shifting reduces corporate income tax revenue by more than $200 billion, or 10% of global corporate tax receipts."[29] The two estimates measure different things and are not added together here. What both describe is, for the most part, legal: avoidance, not evasion. That is the point. A company that shifts its profits is doing what its books reward, and the cost, in lost tax revenue, falls on the public.

Market power. A corporation that faces little competition can charge more than its costs. One study by the economists De Loecker, Eeckhout and Unger, which this chapter could read only through secondary summaries, documents "the evolution of market power based on firm-level data for the US economy since 1955" and, in the words of a Harvard dissertation summary of it, "In 1980, average markups start to rise from 21% above marginal cost to 61% now" (the summary does not say which year "now" is, and this chapter did not confirm the study's end date).[30] The rise is not spread evenly: "the upper percentiles have increased sharply, while the median is unchanged."[30] Economists dispute how markups should be measured, and the figures should be read with that in mind. What the study suggests, if it holds, is that the rise in markups is concentrated in the firms with the highest markups, which fits the warning in UP's core that concentration of power in any form, wealth and machines included, is a standing danger.[31]

Buybacks. A company with spare cash can pay it to its shareholders by buying back its own shares. In the twelve months to September 2025, according to S&P Dow Jones Indices, companies in the S&P 500 spent "a record $1.020 trillion" on buybacks, and total shareholder returns, buybacks and dividends together, came in the release's words to "a record $1.685 trillion".[32] Buybacks are not theft: the money goes to the people who own the companies, and they can invest it elsewhere. Economists disagree about whether buybacks crowd out investment, and the figures here do not settle it, because the source does not compare them with what the companies invested.[32] What the figures do show is how much cash S&P 500 companies return to their shareholders. That is

[28] EU Tax Observatory, *Global Tax Evasion Report 2024*, Executive Summary (English): "A persistently large amount of profits is shifted to tax havens: $1 trillion in 2022."; "This is the equivalent of 35% of all the profits booked by multinational companies outside of their headquarter country."; on the global minimum tax, "the global minimum tax of 15% on multinationals, which raised high hopes in 2021, has been dramatically weakened." and "a growing list of loopholes has reduced its expected revenues by a factor of 2" (the sentence goes on: "(and by a factor of 3 relative to a comprehensive minimum tax of 20%)."). The minimum-tax sentences were read at source by the quote check of 14 Nov 2026 (the PDF text has encoding glitches). Profit shifting is mostly legal tax avoidance, though the report's title speaks of evasion. The report proposes a 2% minimum tax on billionaires' wealth and a 25% corporate minimum rate. https://www.taxobservatory.eu//www-site/uploads/2023/10/Executive_Summary_English.pdf . Checked at source, 14 Nov 2026.

[29] Tørsløv, Wier and Zucman, "The Missing Profits of Nations", project site: "close to 40% of multinational profits (close to $1 trillion in 2019) are shifted to tax havens each year."; "This shifting reduces corporate income tax revenue by more than $200 billion, or 10% of global corporate tax receipts." This estimate uses a different base from the EU Tax Observatory's 35% (all multinational profits in 2019, against profits booked outside the headquarter country in 2022), so the two are reported separately and never combined. https://missingprofits.world/ . Checked at source, 14 Nov 2026.

[30] De Loecker, Eeckhout and Unger, "The Rise of Market Power and the Macroeconomic Implications", *Quarterly Journal of Economics* (2020). The journal's abstract could not be read in full, so the figures are taken from secondary summaries: Gabriel Unger's Harvard dissertation (2023), whose chapter written with De Loecker and Eeckhout summarises the paper (the three-author attribution rests on the dissertation; the Barcelona page lists Eeckhout and Unger; *QJE* 135(2), May 2020), "In 1980, average markups start to rise from 21% above marginal cost to 61% now."; "the upper percentiles have increased sharply, while the median is unchanged."; and the Barcelona School of Economics abstract page: "We document the evolution of market power based on firm-level data for the US economy since 1955." The way the paper measures markups is debated by other economists. https://dash.harvard.edu/server/api/core/bitstreams/4d7c4517-7b10-487a-a815-49eeccafe292/content ; https://bse.eu/research/publications/rise-market-power-and-macroeconomic-implications . Checked at source, 14 Nov 2026.

[31] Core tenet: *Power kept spread out*: concentration of power in any form (wealth, position, information, access, expertise or machines) is treated as a standing danger; everyone in UP watches for it and spreads it out again; "The threat is never declared gone; it is watched and answered." Full wording in "The core of UP".

[32] S&P Dow Jones Indices, press release by Howard Silverblatt, 18 Dec 2025: "The 12-month September 2025 expenditure was a record $1.020 trillion"; "Total shareholder returns for the 12-month September 2025 period increased 9.8% to a record $1.685 trillion."; 2025 was "expected to easily set a record expenditure, posting a near double-digit gain for buybacks." An earlier release (Q1 2025): "Q1 2025 share repurchases set a quarterly record at $293.5 billion". The final figure for the whole of 2025 was not confirmed, and neither release compares buybacks with investment. https://press.spglobal.com/2025-12-18-S-P-500-Q3-2025-Buybacks-Post-Modest-6-2-Gain-to-249-0-Billion-After-Declining-20-1-Amidst-Uncertainty-in-Q2-Q4-2025-Expenditures-Expected-to-Post-Similar-Growth%2C-As-2025-Anticipates-a-Record-1-Trillion ; https://www.spglobal.com/spdji/en/corporate-news/article/sp-500-q1-2025-buybacks-set-quarterly-record-at-293-billion-up-206-helping-eps-growth . Checked at source, 14 Nov 2026.

consistent with the rule the Michigan court stated in 1919, that a company is carried on primarily for its shareholders' profit, but the figures do not show that the rule caused it.

Harm hidden inside the product. Sometimes the pull of the books leads people inside a company to break the law. The opioid manufacturer Purdue Pharma agreed, according to the US Department of Justice, to plead guilty to "one count of dual-object conspiracy to defraud the United States and to violate the Food, Drug, and Cosmetic Act" and to "two counts of conspiracy to violate the Federal Anti-Kickback Statute"; the department's release states that "from May 2007 through at least March 2017, it conspired to defraud the United States", and the agreement included "a criminal fine of $3.544 billion and an additional $2 billion in criminal forfeiture".[33] The US Attorney Christina Nolan summed up the case in a sentence: "Purdue put opioid profits ahead of people and corrupted the sacred doctor-patient relationship".[34] That is an official's characterisation, and the release describes an agreement, not a court's judgment. In January 2017 the department announced that Volkswagen had "agreed to plead guilty to three criminal felony counts and pay a $2.8 billion criminal penalty" over cars fitted with "a software function to cheat standard U.S. emissions tests", cars that could "emit NOx up to 40 times higher than U.S. standards"; it also agreed to pay "$1.45 billion to resolve EPA's civil penalty claims".[35] Both cases need to be told fairly. They were crimes, not the ordinary business of companies, and they were found out and prosecuted under the law that companies operate under. The wrongdoing was done by people, not by a legal abstraction. But neither the form nor the books stopped it. In both cases the harm was carried by people outside the company (for Purdue, patients, as the US Attorney put it; for Volkswagen, the people breathing the air), while the gains appeared, for years, inside it.

The pressure against a cure. The gap has one more shape, and UP's agreed positions name it directly. The current system "often monetises a problem instead of solving it, and sometimes the problem's persistence is what pays."[36] Chapter 8 told how, in 2018, analysts at Goldman Sachs asked investors whether curing patients was "a sustainable business model", using the hepatitis C cures whose sales fell as they cured the people who needed them. The analysts were describing a pressure, not a plot, and companies do still develop cures. But for a firm that sells replacements, a product that lasts is a lost sale.[37]

The aim itself. Behind all of these lies the rule the Michigan court stated in 1919, and the argument about it has never stopped. In August 2019, 181 chief executives belonging to the Business Roundtable signed a new statement of a corporation's purpose. Every version since 1997, the Roundtable acknowledged, had "endorsed principles of shareholder primacy – that corporations exist principally to serve shareholders"; the new one said, "Each of our stakeholders is essential. We commit to deliver value to all of them, for the future success of our companies, our communities and our country."[38] It was a real change of words. Bebchuk and Tallarita studied what it changed in

[33] US Department of Justice, Office of Public Affairs, press release, 24 Nov 2020, "Opioid Manufacturer Purdue Pharma Pleads Guilty to Fraud and Kickback Conspiracies" (the agreement was first announced in October 2020): the counts were "one count of dual-object conspiracy to defraud the United States and to violate the Food, Drug, and Cosmetic Act" and "two counts of conspiracy to violate the Federal Anti-Kickback Statute"; the release states that "from May 2007 through at least March 2017, it conspired to defraud the United States"; the agreed penalties included "a criminal fine of $3.544 billion and an additional $2 billion in criminal forfeiture". The release describes a plea agreement, not the court's judgment; this chapter keeps to the agreement ("agreed to plead guilty"), because the plea hearing itself was not checked. The date of the plea hearing and how much of these sums was collected, given Purdue's bankruptcy, were not checked for this chapter. https://www.justice.gov/opa/pr/opioid-manufacturer-purdue-pharma-pleads-guilty-fraud-and-kickback-conspiracies . Checked at source, 14 Nov 2026.

[34] The same release, quoting the US Attorney Christina Nolan: "Purdue put opioid profits ahead of people and corrupted the sacred doctor-patient relationship". An official's characterisation. https://www.justice.gov/opa/pr/opioid-manufacturer-purdue-pharma-pleads-guilty-fraud-and-kickback-conspiracies . Checked at source, 14 Nov 2026.

[35] US Department of Justice, press release, 11 Jan 2017, "Volkswagen AG Agrees to Plead Guilty and Pay $4.3 Billion in Criminal and Civil Penalties; Six Volkswagen Executives and Employees Are Indicted …" (headline shortened here): "Volkswagen AG (VW) has agreed to plead guilty to three criminal felony counts and pay a $2.8 billion criminal penalty."; the cars used "a software function to cheat standard U.S. emissions tests."; they could "emit NOx up to 40 times higher than U.S. standards."; "VW has agreed to pay $1.45 billion to resolve EPA's civil penalty claims". An agreement announced before the court's sentencing. https://www.justice.gov/opa/pr/volkswagen-ag-agrees-plead-guilty-and-pay-43-billion-criminal-and-civil-penalties-six . Checked at source, 14 Nov 2026.

[36] UP's agreed position that the comparison with the current system is not symmetric: the current system often monetises a problem instead of solving it, and sometimes the problem's persistence is what pays. Full wording in UP's agreed positions (the Position Ledger).

[37] CNBC (11 Apr 2018), "Goldman Sachs asks in biotech research report: 'Is curing patients a sustainable business model?'", reporting the Goldman Sachs note "The Genome Revolution" (April 10) by the analyst Salveen Richter: "Is curing patients a sustainable business model?"; Gilead's hepatitis C treatments "achieved cure rates of more than 90 percent"; "The company's U.S. sales for these hepatitis C treatments peaked at $12.5 billion in 2015, but have been falling ever since."; "GILD is a case in point, where the success of its hepatitis C franchise has gradually exhausted the available pool of treatable patients"; "While this proposition carries tremendous value for patients and society, it could represent a challenge for genome medicine developers looking for sustained cash flow." https://www.cnbc.com/2018/04/11/goldman-asks-is-curing-patients-a-sustainable-business-model.html . Checked at source, 13 Nov 2026.

[38] Business Roundtable, "Business Roundtable Redefines the Purpose of a Corporation to Promote 'An Economy That Serves All Americans'", 19 Aug 2019: "a new Statement on the Purpose of a Corporation signed by 181 CEOs who commit to lead their companies for the benefit of all stakeholders — customers, employees, suppliers, communities and shareholders."; "Each version of the document issued since 1997 has endorsed principles of shareholder primacy – that corporations exist principally to serve shareholders."; from the statement: "Each of our stakeholders is essential. We commit to deliver value to all of them, for the future success of our companies, our communities and our country." https://www.businessroundtable.org/business-roundtable-redefines-the-

practice and judged it “largely a rhetorical public relations move rather than the harbinger of meaningful change”, because “corporate leaders (directors and CEOs alike) have strong incentives to enhance shareholder value but little incentive to treat stakeholder interests as an independent end.”[8] They added a warning: talk of stakeholders “would likely weaken pressures for stakeholder-oriented policy reforms”.[8]

None of this means the people inside companies are wicked. Most of them are doing what the books reward, and many of them do much more. That is exactly the problem. When the record a company keeps leaves out what it costs others, and its rules point all of its jobs at one end, good people inside it will keep being pulled the same way, and each patch, a tax rule here, an emissions test there, is another rule laid over the same books. UP’s settlement record for the tenet *Reality over fiction* rules out “Treating prices, profit or national lines as reality”.[39] Its aim rules out “aims set by profit, growth, power or any one group”.[40] And its agreed position on power warns that chasing each distortion one by one “becomes whack-a-mole”.[41] UP’s answer goes to the root: decide, more and more, by the real thing, by what there is, what people need and what happened the last time, measured directly and in the open.[3]

What UP holds: run on reality, and let people move at their own pace

UP’s answer is written into its core, and, as with money, it has two parts that belong together.

The first part is the aim. Decisions rest on real resources, real needs and measured outcomes, not on what a set of accounts says will pay.[3] UP’s agreed position on useful fictions credits the corporation as a civilisational upgrade, and then draws the line: fictions are useful, but “reality is better wherever technology can replace a fiction without obvious downsides”.[4] The corporation is named among the fictions “ripe to be reduced slowly”.[4] UP’s aim itself is the health, happiness and wellbeing of all living things, measured person by person, and its settlement record rules out “aims set by profit, growth, power or any one group”.[42,40] In the 1919 Michigan ruling a company’s aim was stated as one group’s profit. UP’s aim is not.

The second part is the method, set out in Chapter 8 and applied here unchanged: a job is taken over before the old way of doing it is let go, only where technology can do it without obvious downsides, and whether a replacement is ready is decided by evidence and the people affected; “Evidence proposes; people decide.” Where people disagree, splits let more than one way be tried and compared.[3,43,44,45,46]

The word *gradually* needs the same care here that it needed for money. It does not mean that UP runs on companies and slowly winds them down. UP’s author has set out how the tenet is to be read, and the reading is going through UP’s method to become an agreed position: UP’s own system is not a company and does not become one, at any stage.[5] What changes gradually is people. Each person relies on companies less as UP meets more of their needs: they buy less from companies and work less for them. And more people take part. Nobody is moved before they choose to be. Where UP meets the world of companies, it does so at its edges, and only as far as the law requires: a legal form to hold land or sign a contract, taxes and land title, and partnership with local governments. That contact is openly recorded, kept to a minimum, and meant to shrink toward none as the people

purpose-of-a-corporation-to-promote-an-economy-that-serves-all-americans . Checked at source, 1 Nov 2026.

[39] UP’s settlement record (the Position Ledger, the entry for the tenet *Reality over fiction*, settled in round 8, 23 Oct 2026): the tenet “Rules out: Treating prices, profit or national lines as reality; abolishing institutions by decree.” Full wording in UP’s agreed positions (the Position Ledger).

[40] UP’s settlement record (the Position Ledger, the entry for the tenet *The aim*, settled in round 8, 23 Oct 2026): the tenet “Rules out: Maximising a total or an average (utilitarian planning); aims set by profit, growth, power or any one group.” Full wording in UP’s agreed positions (the Position Ledger).

[41] UP’s agreed position that concentration of power is the danger: “Money is one form of power; any concentration of power is dangerous. Abolishing money does not abolish the pursuit of power: it can move to access, office, information or expertise, and chasing each form one by one becomes whack-a-mole. So UP watches for concentrations of power in any form and keeps spreading them out. The threat is never declared gone. Design helps: caps, public records of who approved what, rotation of anyone who allocates, random audits, public and versioned allocation rules.” Also in UP’s agreed positions (the Position Ledger).

[42] Core tenet: *The aim: the health, happiness and wellbeing of all living things*. The aim is a chosen direction, never fully reached, and for people it is measured person by person, so no one’s wellbeing is traded away to raise an average. Full wording in “The core of UP”.

[43] UP’s settlement record (the Position Ledger, the entry on useful fictions, round 5, 22 Oct 2026): the settlement included “C replace before retiring”. The UP Moderator checked the final wording. Full wording in UP’s agreed positions (the Position Ledger).

[44] Core tenet: *The method: shared problem solving with evidence*: problems are named, measured and offered as work to anyone; the people a problem affects decide its outcome; solutions are proposed with their evidence, tested and compared, and “a better idea replaces a worse one”; “Every claim that guides shared action can be tested and is open to being proved wrong.”; matters of taste are never made rules for others. Its last words are “Evidence proposes; people decide.” Full wording in “The core of UP”.

[45] UP’s agreed position on how UP decides when people disagree: every decision starts with an evidence-based proposal, published with its data, and an open question, “does anyone have a better idea?”; real trade-offs are first attacked with new design or technology; only when none of that works do the stakeholders vote, with guards, and no vote may override the protected freedoms; the decision reopens when new evidence or technology changes the options. Full wording in UP’s agreed positions (the Position Ledger).

[46] UP’s agreed position that splits are good: they test two, or a thousand, ways in the real world. Full wording in UP’s agreed positions (the Position Ledger).

of an area move fully to UP.[5] Members are a different matter: their money is their own, and early on many will choose to spend some of it on what UP cannot yet make, and bring it into UP by their own choice.[47]

Four more settled lines bear directly on the corporation's jobs.

UP's technology cannot be enclosed. Its rules, code, records, decisions and reasons are public, so anyone can check them, and its technology, "the knowledge, code, data and designs UP produces", stays only in UP, where "everyone taking part in UP may use, study and improve it, and no one may enclose it."[48] The corporation's sixth job, owning what it makes, has no place in UP's technology, and UP's physical goods are shared within the communities that make them.[49]

No one holds power by holding a position. In UP "There are no offices to hold: work is shared out, not owned, so no one gathers power by holding a position."[50] Where something has to be looked after, the people who look after it are stewards who rotate, are watched and can be replaced, with the right to fork.[51]

Power in every form is watched. Concentration of power, "in any form (wealth, position, information, access, expertise or machines)", is a standing danger in UP's core, and its settlement record rules out "Any arrangement that lets power pool and stay pooled", naming among them "a platform".[31,52] Among the dangers UP adopted alongside its core: "time and money earn recognition, never power".[53] And UP's agreed position on power warns that abolishing money "does not abolish the pursuit of power", which can move to access, office, information or expertise; this chapter applies the same reasoning to companies.[41]

No one is forced. UP is never imposed: "No one is forced to join, to work or to give up what is theirs."[54] In the reading UP's author has set out, now going through UP's method, companies are not shut down to hurry things along, and UP's core rules out seizing them.[5,54] Their owners keep them, nobody is forced to leave a job to take part in UP, and assets join UP only by their owners' choice.[54,47]

Read together, these lines give the shape of what follows. UP does not try to build a better corporation. It takes the corporation's jobs one at a time and asks what can now do each of them, in the open, with nothing to enclose and no one to answer to but the people affected, and it lets each person decide when that is good enough to rely on.

How the corporation's jobs could be done without it

Coase's answer explains why this section is possible. Firms exist because coordinating people through the market costs something, and much of what those costs once bought, finding people, agreeing who does what, keeping track of who has done it, may now be done in part by open records and cheap communication (Benkler's

[47] UP's agreed position on growth and assets (Round 12S, position 5, a projection, as updated in round 12c, which withdrew its growth figures and kept the rest): "Assets owned or controlled by people who join (including single-person and family-owned companies) convert by their owners' choice; members' money is best used early to buy and convert more." Round 12c restates what stands: "whole cities, states and nations that join redirect their resources; owned assets convert by their owners' choice; members' money is best used early". Full wording in UP's agreed positions (the Position Ledger).

[48] Core tenet: *Open systems, shared knowledge, private persons*: "The rules, code, records, decisions and reasons of UP are public, so anyone can check them. UP's technology (the knowledge, code, data and designs UP produces) stays only in UP: everyone taking part in UP may use, study and improve it, and no one may enclose it. Each person controls their own information and chooses what to share. Openness helps people find problems, but it will not find all of them, so UP also names the risks that openness alone cannot catch and keeps working on them." Full wording in "The core of UP".

[49] "The core of UP", settled alongside the core, "What UP makes" (round 11; amended round 13b): "software, AI and tools, which stay in UP (T8). Physical goods such as food, water and durable goods are shared within the communities that make them." The same entry adds that "these are illustrations, not tenets". Full wording in "The core of UP".

[50] Core tenet: *Open participation: anyone may take part; those affected decide*, in full: "Anyone may take part in any problem, and the people it affects decide its outcome. There are no offices to hold: work is shared out, not owned, so no one gathers power by holding a position. Where work needs skill, skill is shown by open, testable standards that anyone can work toward and anyone can propose to change, and education is open to everyone, at every age, so anyone can gain the skills any work requires." Also in "The core of UP".

[51] UP's agreed position on stewards (card 19, CANON), in full: "Linux and Wikipedia do not prove that leaderless coordination scales to any problem. They prove that open peer production, run by distributed stewards, can build and run complex systems at global scale. Linux has a founder and trusted lieutenants, but anyone can fork the code and the project survives its founder; Wikipedia has a foundation and staff, but volunteers built the content. The claim is not"no head to cut off" but "heads that rotate, are watched and can be replaced, because the work belongs to everyone": many stewardship bodies, each with a defined scope, term limits, public audit and the right to fork. These examples make copyable information; providing food, housing and energy is UP's central experiment, starting from Ostrom's design principles and physical commons that already work, such as Mondragon, the Valencia water courts, Kerala's People's Plan and Twin Oaks." Also in UP's agreed positions (the Position Ledger).

[52] UP's settlement record (the Position Ledger, the entry for the tenet *Power kept spread out*, settled in round 8, 23 Oct 2026): the tenet "Rules out: Any arrangement that lets power pool and stay pooled: a ruling class, a central planner, a party, a platform, an AI." Full wording in UP's agreed positions (the Position Ledger).

[53] Settled alongside the core, the dangers adopted in round 10, among them: "time and money earn recognition, never power"; "everyone is a watcher"; "no forced adoption, no leader, no founder named in the core; anyone acting outside the core stops being UP and bears the consequences". Full wording in "The core of UP".

[54] Core tenet: *Freely joined, ethically grown*, in full: "UP is never imposed. No one is forced to join, to work or to give up what is theirs. It grows by being useful, building on what people already do, and it acts only by ethical means. A means is ethical when it serves the health, happiness and wellbeing of all and crosses none of the floors; UP never starts harm against anyone. What counts as ethical is defined and refined by the collective through UP's method." Also in "The core of UP".

argument), and, UP argues, increasingly by AI.[22,24] Each of the corporation's six jobs is already being done, somewhere, by people who are not organised as a company or not working for a company's profit. None of these examples is enough on its own, and each has limits that this section names. Together they are the evidence that much of the corporation's work can be done another way, and they show the tools UP would combine: open designs that no one may enclose, stewards who rotate and can be replaced, a published labour budget, contribution records as feedback, physical accounting, the people affected deciding, and AI that proposes and never governs.

Pooling money and effort for long, risky work. Some of the biggest and riskiest research on Earth is not done by companies. In 1953, twelve European states signed the convention that founded CERN, and today "CERN is governed and primarily funded by its 25 Member States."[55] It is a pooling by states, not by volunteers, and it is paid for with public money; in the reading UP's author has set out, now going through UP's method, UP's own system does not run on money or on a government.[5] What CERN shows is narrower and still important: long, costly and uncertain research, whose results could not be sold in advance, has been sustained since CERN's founding convention of 1953 by pooling, with no shareholders.

Biology has its own versions. When the international effort to sequence the human genome agreed its rules, known as the Bermuda Principles, they called, in the words of the US National Human Genome Research Institute, for "the automatic, rapid release of sequence assemblies of 1-2 kb or greater to the public domain"; a secondary account gives the rule as "Automatic release of sequence assemblies larger than 1 kb (preferably within 24 hours)."[56] The rule called for the sequence to go into the public domain, automatically and rapidly, owned by no one. The Structural Genomics Consortium, a public-private partnership whose funders include pharmaceutical companies, works on a similar principle today. "Embracing an open science, 'never-patent' paradigm," it says, "SGC generates unencumbered knowledge, data and reagents", and its outputs "must be made publicly available (deposited into public databases) without any restrictions on their use."[57]

None of these is a UP institution, and none runs without money. What they show is that long, risky work can be pooled without owners and without enclosing what it produces. In UP, one way the pooling could run is through the tools its agreed positions already set out. A node publishes a labour budget, "what is needed, by when, and what happens if it is not done", and asks people directly; any shortfall becomes a shared problem, "met with visibility, recognition, fair rotas and automation."[58] Chapter 14 follows the labour budget in full.[59] Necessary work could be shared through a published, fair rota, with every able member expected to take a small share; "it is an expectation, not a law, and it never affects whether anyone's needs are met", and the whole arrangement is "one possible way".[60] The effort comes from people who choose their work; the AI may propose, but it "may not assign work or compel anyone".[61] What a corporation gathers as capital, UP would gather as a shared productive base, energy, machines, land and open designs, built up as members bring in what they choose, with members' money, on UP's projection, "best used early to buy and convert more."[47] And instead of a board picking which bets to fund, the

[55] CERN, "Member States": "CERN is governed and primarily funded by its 25 Member States."; "The CERN Convention was signed in 1953 by 12 founding European Member States". CERN is funded by its member states, that is, with public money; its budget was not checked for this chapter. https://home.cern/about/who-we-are/our-governance/member-states . Checked at source, 14 Nov 2026.

[56] Wikipedia, "Bermuda Principles" (a secondary source): "Automatic release of sequence assemblies larger than 1 kb (preferably within 24 hours)." The National Human Genome Research Institute's page "Reaffirmation and Extension of NHGRI Rapid Data Release Policies" says that in 1996 the international consortium adopted the Bermuda Principles "that expressly called for the automatic, rapid release of sequence assemblies of 1-2 kb or greater to the public domain." The 24-hour wording was seen only in the secondary source. https://en.wikipedia.org/wiki/Bermuda_Principles ; https://www.genome.gov/10506537 . Checked at source, 14 Nov 2026.

[57] Structural Genomics Consortium, "About": "Embracing an open science, 'never-patent' paradigm, SGC generates unencumbered knowledge, data and reagents"; its outputs "must be made publicly available (deposited into public databases) without any restrictions on their use." The consortium's own description. The research pack records, without a quotation, that the SGC is a public-private partnership whose funders include pharmaceutical companies; its funding figures were not checked for this chapter. https://www.thesgc.org/about . Checked at source, 14 Nov 2026.

[58] UP's agreed position on the work nobody wants (card 23, CANON): a node "publishes a labour budget (what is needed, by when, and what happens if it is not done) and asks people directly. Any shortfall, and any task nobody wants, becomes a shared problem, met with visibility, recognition, fair rotas and automation." Full wording in UP's agreed positions (the Position Ledger).

[59] Chapter 14 follows work and contribution in full, including the labour budget and how necessary work is shared.

[60] UP's agreed position on sharing necessary work (card 23b, CANON): "Necessary work is shared through a published, fair rota that people sign up for, with recognition and example doing the rest. Every able member is expected to take a small share, but it is an expectation, not a law, and it never affects whether anyone's needs are met. This is one possible way; better ideas for better outcomes with less friction are always welcome." Also in UP's agreed positions (the Position Ledger).

[61] UP's agreed position on what the AI is (card C46): "The AI is the coordinating system UP needs, and it coordinates by proposing, not by governing. It publishes evidence-based proposals with their data and confidence, marks what is still unknown as shared work for people and AI, and never rules on matters of taste."; "People choose their work; the AI may not assign work or compel anyone, and any plan can be overridden through the decision steps." Full wording in UP's agreed positions (the Position Ledger).

biggest problems draw the most attention: “the system works like a marketplace of problems, biggest first”.[62] In UP, unpopular ideas that work rise “because of their results, not because a funder chose them.”[63]

Organising many people’s work. Open-source software is a leading example of complex work fitted together without any one firm owning or directing it, though many of its contributors are paid by companies (this chapter’s sources do not measure how many). In 2024 researchers at Harvard Business School estimated what the most widely used open-source software is worth. Its supply-side value they put at “$4.15 billion”; but “the demand-side value is much larger at $8.8 trillion”, and “firms would need to spend 3.5 times more on software than they currently do if OSS did not exist.”[64] The $8.8 trillion is a modelled figure for what firms would have to spend to replace the software, not revenue and not a price, and the study counts the value of the code, not who paid for its writing. Read honestly, it shows above all that a vast commons that firms rely on is maintained and shared outside the ownership of any one of them. Linux, the operating system Benkler wrote about, is a well-known case. Since November 2017, according to a secondary account of the TOP500 list of supercomputers, “all the listed supercomputers use an operating system based on the Linux kernel.”[65] Anyone can fork its code.[51]

UP’s agreed position on stewards draws the right lesson from these projects, and the right limit. “Linux and Wikipedia do not prove that leaderless coordination scales to any problem. They prove that open peer production, run by distributed stewards, can build and run complex systems at global scale.” Linux has a founder and trusted lieutenants, “but anyone can fork the code and the project survives its founder”. The claim is not “no head to cut off” but “heads that rotate, are watched and can be replaced, because the work belongs to everyone”: many stewardship bodies, each with a defined scope, term limits, public audit and the right to fork.[51] That is how UP would organise work at scale: no managers who hold their places, no offices, work shared out and not owned.[50] It also eases a problem every large firm has, that the people doing the work and the people it is done for want different things; UP’s agreed position is careful not to overclaim here, holding that its AI “does not eradicate the principal-agent problem; it reduces it”, by publishing its measures and leaving the decisions to people.[66] Skill is shown by open, testable standards that anyone can work toward.[50] Work is matched to people, in UP’s agreed position on merit, by an AI that “puts work in front of people that fits their skills and interests, using only what each person chooses to share”, while “Labour is never forced”.[67] And instead of wages telling everyone what their work is worth, contribution records show who is doing what: “UP’s contribution records are feedback: they inform, and they never decide whether anyone’s needs are met.”[68] People are cooperative by nature, in UP’s agreed position, and “cooperation lasts where contributions are visible and limits are agreed together (Ostrom)”; whether visible contributions and support can do all the work that sanctions did in the commons Ostrom studied “is measured, not assumed.”[69]

[62] UP’s agreed position S, “Judge UP as a whole system, against today’s system” (CANON, 22 Oct 2026): “Problems are linked in trees that show their common roots, so the work goes to solutions that solve many problems at once. The bigger a problem, the more people it affects and the more attention and effort it draws, so the system works like a marketplace of problems, biggest first, and any area where UP does not yet do better than today’s system gets attention first. UP is a system whose parts strengthen each other: education open to everyone and improving quickly; a moneyless system that removes the motive for much of today’s crime; automation that supplies basic needs at ever lower cost; health care backed by robotics and AI; and a society that works on its problems every day.” The same position says: “Its starting point will not be great; it is built to improve much faster than today’s systems.” Full wording in UP’s agreed positions (the Position Ledger).

[63] UP’s agreed position (round 12S, position 1): “Inventing solutions together is UP’s primary activity” (T2); “In UP anyone can try anything that might solve a problem; tools are commons; the result carries the power; unpopular ideas that work rise because of their results, not because a funder chose them.” Full wording in UP’s agreed positions (the Position Ledger) and UP’s study lessons (lesson 15).

[64] Hoffmann, Nagle and Zhou, “The Value of Open Source Software”, Harvard Business School working paper 24-038 (2024), abstract: “We estimate the supply-side value of widely-used OSS is $4.15 billion”; “the demand-side value is much larger at $8.8 trillion.”; “We find that firms would need to spend 3.5 times more on software than they currently do if OSS did not exist.” The $8.8 trillion is a modelled estimate of what firms would have to spend to replace the software, not revenue and not a market price. The study measures what the code is worth to its users, not who paid for it to be written. The research pack records, without a quotation, that many open-source contributors are paid by companies; this chapter has no figure for how many. Version of 1 Jan 2024. https://www.hbs.edu/ris/Publication%20Files/24-038_51f8444f-502c-4139-8bf2-56eaa0e8a1ed.pdf . Checked at source, 14 Nov 2026.

[65] Wikipedia, “TOP500” (a secondary source): “Since November 2017, all the listed supercomputers use an operating system based on the Linux kernel.” The TOP500 site’s page for the latest list (“June 2026”, the “67th edition of the TOP500”) gave no breakdown by operating system, so the share on that list was not confirmed at the source. https://en.wikipedia.org/wiki/TOP500 ; https://www.top500.org/lists/top500/2026/06/ . Checked at source, 14 Nov 2026.

[66] UP’s agreed position on the agent problem (card 18, CANON): “The AI does not eradicate the principal-agent problem; it reduces it.”; it “produces an open dashboard of wellbeing, ecological and resource measures with the trade-offs shown, and it proposes; people decide through the decision steps (#1). It can be switched off at any time, and people can approve, change or veto what it proposes.” Full wording in UP’s agreed positions (the Position Ledger).

[67] UP’s agreed position on merit (card 13b, CANON): “Merit decides who does skilled work; it never decides whose needs are met. The AI puts work in front of people that fits their skills and interests, using only what each person chooses to share, which anyone can see, correct or withdraw. Labour is never forced”. Full wording in UP’s agreed positions (the Position Ledger).

[68] UP’s agreed position on rewards and motivation: money that controls people crowds out the motivation they bring themselves, while feedback that informs, and the freedom to choose, keep it alive; “UP’s contribution records are feedback: they inform, and they never decide whether anyone’s needs are met.” Moving from a money-driven system will bring friction, and UP meets those who find the change hard with compassion and kindness. Full wording in UP’s agreed positions (the Position Ledger).

[69] UP’s agreed position that people are cooperative by nature (card 13, as amended 31 Oct 2026, CANON): “People are cooperative by nature, and cooperation lasts where contributions are visible and limits are agreed together (Ostrom).”; “UP’s own position, to be tested in the open, is that visible

Carrying risk. Limited liability caps what an owner can lose, and that is what makes it reasonable to take a chance. But it caps only the owner's loss. An owner's loss is capped at what they put in; the people harmed when a company does wrong, as in the Purdue and Volkswagen cases, have no such cap.[33,35] UP turns the problem around. It does not need to cap anyone's loss, because what people stand to lose is protected underneath. Everyone's basic needs are a floor that no decision may cross, so no project's failure may push anyone below the needs floor.[70] UP's illustrations of how it could run add the usual discipline of careful engineering, "test small, prove safe, then scale".[71] Where people disagree about a risk, splits let several ways be tried side by side, so that one failure does not take everyone down with it.[46] Its nodes keep their full designs open, so that "a node that is lost can be rebuilt elsewhere."[72] And the risks a company leaves outside its books are counted inside UP's. Physical accounting, "energy budgets, carbon caps, water footprints, materials and life-cycle assessment", "sets the planet's hard limits", and choices inside those limits are made openly by the people affected, "never by an efficiency score".[73] Damage that cannot be undone is not a risk anyone may take on others' behalf: "a drained aquifer, a lost species or lost topsoil, is never traded for a short-term need; the need is met another way."[74]

Keeping going beyond its founders. A corporation outlives its founders by being a legal person. Open projects outlive theirs by belonging to everyone. Linux "survives its founder" because anyone can fork the code; Wikipedia's content was built by volunteers and does not depend on any one of them.[51] CERN, founded under a convention signed in 1953, is governed and primarily funded by its Member States rather than by shareholders.[55] The co-operatives the International Cooperative Alliance counts include some very large enterprises: the top 300 had "a combined turnover of USD 2.79 trillion in 2023", led by firms such as "Groupe Crédit Agricole (France), State Farm (USA), and REWE Group (Germany)."[75] By the Alliance's definition, a co-operative is jointly owned by its members.[16]

UP builds its continuity into its records. Its rules, code, records, decisions and reasons are public, so anyone can pick up where someone else left off.[48] Its technology stays only in UP, for everyone taking part to "use, study and improve".[48] No founder is named in its core, and no one leads it: among the dangers it adopted are "no forced adoption, no leader, no founder named in the core".[53] Its stewards rotate by design, so continuity never depends on any one person staying in place.[51] A corporation survives its founders because the law says it is a person. A UP project would survive its founders because the work, and the record of the work, belong to everyone who takes part.

Deciding what to make, and investing in it. A company decides what to make by asking what will pay. Most of the time that is a good proxy for what people want; the Goldman Sachs report shows where it is not.[37] Co-operatives already decide differently. In the Alliance's definition they are owned and controlled by the people they serve, "through a jointly owned and democratically-controlled enterprise".[16] The stock-photo agency Stocksy United, which the technology news site TechCrunch described in 2013 as "an online marketplace that is actually owned by its members", is a platform co-operative: "Each member co-owns the cooperative and has one vote, and each

contributions work as feedback, not punishment, and that free-riding is treated as a sign of distress or mismatch and met with support, not punishment. The commons Ostrom studied also used graduated sanctions, so whether feedback and support can do that work is measured, not assumed." Full wording in UP's agreed positions (the Position Ledger).

[70] Core tenet: *Floors that are never crossed*: everyone's basic needs and protected freedoms, which no gain for others can buy; the living world's capacity to recover; the right to leave any group or community at any time, taking what is theirs; "a truthful shared record, so facts, measures and decisions are never falsified"; freedom of the mind; and "a fair hearing, so no one's freedom is restricted without a fair, evidence-based hearing, with the evidence open to them and a way to appeal." "UP guarantees needs, not every want." The collective may clarify or raise the floors, but no decision may lower them or push anyone below them; the tenet's starting example of freedoms is "thought, belief, speech, movement and privacy". "A protected freedom such as movement may be restricted only to protect others or the person, only through an evidence-based court process, for the shortest time needed, and never below the needs floor." Full wording in "The core of UP".

[71] UP's settlement record, round 9 (23 Oct 2026): "M1 (test small, prove safe, then scale) and M2 (decisions at the smallest scale) are illustrations, not tenets." Full wording in UP's agreed positions (the Position Ledger).

[72] UP's agreed position that nodes survive as partners, not targets (card 25, CANON): "Only UP's coordination is decentralised: its nodes are farms, clinics, workshops and land that states can tax, license or seize."; "The full blueprint for a node is open, so a node that is lost can be rebuilt elsewhere." The position ends "UP responds only by lawful, nonviolent means (#4b)"; round 11 set the book's wording for this test as "ethical". Full wording in UP's agreed positions (the Position Ledger).

[73] UP's agreed position on physical accounting (card 21, CANON): "Physical accounting (energy budgets, carbon caps, water footprints, materials and life-cycle assessment) sets the planet's hard limits. Inside them, several measures are used together, and choices between different needs, such as a clinic or a cultural centre, are made openly by the people affected, through the decision steps (#1), never by an efficiency score." Also in UP's agreed positions (the Position Ledger).

[74] UP's agreed position on people first (DP-009, CANON): "damage that cannot be undone, such as a drained aquifer, a lost species or lost topsoil, is never traded for a short-term need; the need is met another way." Full wording in UP's agreed positions (the Position Ledger).

[75] International Cooperative Alliance, press release "World Cooperative Monitor 2025" (3 Nov 2025): "The Top 300 cooperatives achieved a combined turnover of USD 2.79 trillion in 2023."; "The leading organisations by turnover include Groupe Crédit Agricole (France), State Farm (USA), and REWE Group (Germany)."; "The agriculture (35.7%) and insurance (31.7%) sectors dominate the rankings by turnover". The Alliance's own figures. https://www.ica.coop/en/media/library/press-releases/press-release-world-cooperative-monitor-2025-highlights-power . Checked at source, 14 Nov 2026.

class has at least two directors on the board."[76,77] Its artists, "1800+, living in 80+ countries" by 2023, receive "50% royalties on standard license sales, 75% on extended license sales".[77] Stocksy is itself a legal co-operative company with "three classes of shareholders", according to Wikipedia.[77] What it shows is that the people who do the work can decide how a platform is run and how its income is shared.

UP goes further, because its decisions are not tied to selling anything. The people a problem affects decide its outcome.[44] Problems are named, measured and offered as work to anyone, and "the work goes to solutions that solve many problems at once".[44,62] In one way UP could run, described in Chapter 8, what people want is learned from use, costs are counted in physical terms and local knowledge is used by decisions at the smallest scale, so the AI could do much of a planning department's work of gathering facts and drafting proposals, without its power: it "coordinates by proposing, not by governing", every proposal goes through the decision steps, and people can always switch it off.[78,61,79] Whether this decides what to make as well as markets do for the most complex production is not settled, and UP does not claim it is: in its own words it is "testable workload, run rung by rung."[78]

Owning what it makes. Enclosure is the job UP is least willing to replace like for like, because it is the one that turns knowledge into scarcity. UP's agreed position on scarcity names "patents and other enclosures" among the causes of artificial scarcity, and answers it: UP "ends artificial scarcity with open design and physical accounting".[80] The examples above show that enclosure is not needed to get some of this work done. The genome project's rules called for its sequences to be released to the public domain; the SGC describes itself as "never-patent"; widely used open-source software is worth, on one estimate, trillions of dollars to the firms that use it.[56,57,64] In UP, its technology, the knowledge, code, data and designs it produces, is owned by no one and stays only in UP: everyone taking part may use, study and improve it, and "no one may enclose it."[48] Physical goods, in UP's settled illustration, "such as food, water and durable goods are shared within the communities that make them."[49] Standards and platforms, in one way UP could run, are "open, versioned and owned by no one."[81]

There is one honest difference between UP's rule and the open-science examples. The Bermuda Principles and the SGC put their results in the public domain, open to anyone, companies included. UP's technology "stays only in UP": open to check by anyone, open to use by everyone taking part.[48] The examples show that work can thrive without enclosure; UP's rule adds a guard against its work being taken back into the current system and enclosed there.

Put job by job, the case is this. The corporation pools capital; open projects and pooled public funding show that long, risky work can be pooled without owners. The corporation directs work; open source shows that stewards who rotate, open records and visible contributions can fit together the work of very many people. The corporation caps its owners' risk; UP protects everyone's needs underneath and counts the risks others would carry. The corporation outlives its founders as a legal person; open projects outlive theirs because the work belongs to everyone. The corporation decides by what will pay; co-operatives and UP decide by the people affected, with

[76] Rip Empson, "iStockphoto Founder Returns To Stock Photography With Stocksy, A Co-op That Puts Artists (And Quality) Before Profits", TechCrunch, 26 Mar 2013 (news): what the founder set out to build, "an online marketplace that is actually owned by its members". https://techcrunch.com/2013/03/26/istockphoto-founder-returns-to-stock-photography-with-stocksy-a-co-op-that-puts-artists-and-quality-before-profits . Checked at source, 14 Nov 2026.

[77] Wikipedia, "Stocksy United" (a secondary source): "Stocksy is a platform cooperative with three classes of shareholders."; "Each member co-owns the cooperative and has one vote, and each class has at least two directors on the board."; of its artist members, "by 2023, it had 1800+, living in 80+ countries."; they "receive 50% royalties on standard license sales, 75% on extended license sales". Stocksy is itself a legal co-operative corporation; its size and current finances were not checked. https://en.wikipedia.org/wiki/Stocksy_United . Checked at source, 14 Nov 2026.

[78] UP's agreed position on prices (Round 12S, position 7, an illustration of one way UP could run, never a directive): "massive abundance plus a new norm of owning (libraries, personal fabrication, recyclable goods, the big wants as beautiful community spaces with reservations, personal space growing with capacity, unlimited virtual worlds). Price's jobs are replaced: rationing by rotation and reservation (points 2, 14); what people want by direct use data (under UP's data rule); costs by physical accounting (21); local knowledge by decisions at the smallest scale (M2). Whether this coordinates the most complex production as well as markets do is testable workload, run rung by rung." Full wording in UP's agreed positions (the Position Ledger).

[79] Core tenet: *Technology serves; people decide*, in full: "AI and automation coordinate, propose and do work. They never govern: people can always correct, pause or switch them off. No single AI system or operator controls coordination: the AI systems UP uses are open, more than one, checked against each other, and watched for concentrated power like everything else. Because an AI may one day be shown to have experiences of its own, UP studies the question carefully and would extend its aim to any being shown to feel." Also in "The core of UP".

[80] UP's agreed position on the three kinds of scarcity (card 14, CANON), in full: "Much of today's scarcity is artificial: planned obsolescence, patents and other enclosures, hoarding, money rationing and failures of distribution. Some scarcity is physical (energy and materials) and some positional (prime places, specialised skills, time and attention). UP names all three and answers each: it ends artificial scarcity with open design and physical accounting, reduces physical scarcity with automation, renewable energy and circular systems, and shares positional goods by rotation or a decision of the stakeholders (#2), never by price. Design is a large part of the answer, as a direction rather than a guarantee: dense, beautiful places for land, robots for care, better storage for energy. UP will not be perfect at this; it is judged against what happens now." Also in UP's agreed positions (the Position Ledger).

[81] UP's agreed position on the trust layer (Round 12S, position 11, an illustration of one way UP could run): "Standards and platforms are used everywhere, so upgrades are fast, parts are interchangeable and nothing is wasted. They are open, versioned and owned by no one." The same position gives the data rule: "data is used only with permission, the question travels to the data, and only the answer leaves; nothing individual is passed on or kept." Full wording in UP's agreed positions (the Position Ledger).

evidence. And the corporation owns what it makes; open science and open source show that some of this work gets done when no one owns the result.

How the pieces work together

None of these replaces the corporation on its own. The case rests on what they do together, and on the order in which they act. Open designs that no one may enclose take away the reason to own what is made. Stewards who rotate, open records and visible contributions take away the need for a management that holds its place. A needs floor underneath everyone takes away much of the reason to cap the owners' losses, and physical accounts bring back into the record the costs a company leaves out. Pooling effort through a published labour budget and a shared productive base, and letting the biggest problems draw the most attention, do part of what capital and a board do today, as far as tests show they can. On UP's reasoning each step would make the next easier: open designs would let anyone build the machines, the machines would make the shared base larger, and the records would keep track of all of it. UP's agreed position on the whole system describes UP as "a system whose parts strengthen each other".[62] Chapter 21 takes up that claim in full.[82]

Figure 10.1 sets the two ways of keeping account side by side. Its upper panel is the IMF's measure of what the price of one great industry's product leaves out. Its lower panel shows where the costs go: in a company, some are on the books and some fall outside them, onto people who never agreed to carry them; in an open project of the kind UP would run, the effects on others are part of the same public record as everything else, and what cannot yet be measured is marked as unknown and treated as shared work.[61]

[82] Chapter 21 takes up the whole system, and why its parts strengthen one another.

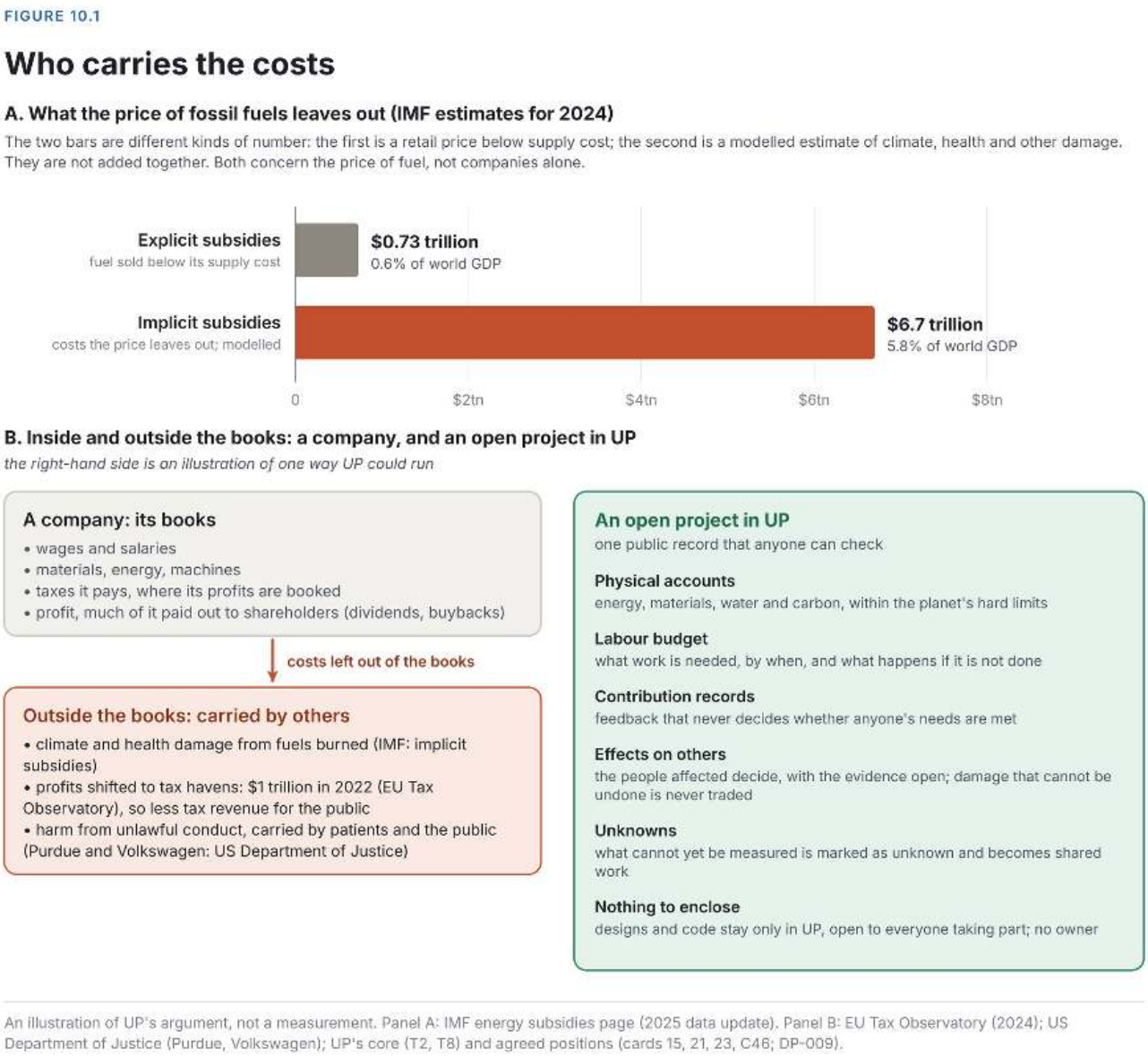


Figure 10.1. Upper panel: the IMF's estimates of explicit and implicit subsidies for fossil fuels in 2024; the implicit figure is a modelled estimate of costs that prices leave out, the two are different kinds of number and are not added, and the figures concern the price of fuel, not companies alone. Lower panel: an illustration of UP's argument, not a measurement; the right-hand side is one way UP could run. Sources: IMF energy subsidies page; EU Tax Observatory, Global Tax Evasion Report 2024; US Department of Justice (Purdue Pharma, Volkswagen); "The core of UP"; UP's agreed positions (contribution records, physical accounting, the labour budget, what the AI is, irreversible damage).

Table 10.1 takes the corporation apart into the six jobs named earlier in this chapter and shows, for each, what could take it over in UP, what already shows it can be done, and what still stands in the way. The second column is the illustration; the third is the evidence; the last is the honest part. What is settled sits underneath it: everyone's basic needs are a floor; UP's technology may not be enclosed; no one holds power by holding a position; contribution records never decide needs; people choose their work and the AI may not assign it; a node publishes a labour budget; and stewards rotate, are watched and can be replaced.[70,48,50,68,61,58,51] Sharing necessary work through a fair rota, with every able member expected to take a small share (an expectation, not a law, which never affects whether anyone's needs are met), is one possible way.[60] The same exercise for money and for government is in Chapters 8 and 9.[6,7]

Table 10.1. The jobs the corporation does, and what could take each over. The second column is an illustration of one way UP could run, never a directive, except where it names a settled line (the floors, nothing enclosed, no offices, stewards who can be replaced, contribution records as feedback, people choosing their work, a published labour budget).

Job the corporation does	What could take it over in UP	What shows it can be done	What still stands in the way
Pooling money and effort for long, risky work	A shared productive base (energy, machines, land, open designs) built up by members' choice; a published labour budget; necessary work shared, in one possible way, through a fair rota in which each able member is expected to take a small share (an expectation, not a law); the biggest problems drawing the most attention	CERN, whose founding convention was signed by 12 states in 1953 and which is now funded mainly by 25; the genome project's rapid public release of data; the SGC's never-patent model	Very large physical investments (chip fabs: TSMC's planned $60–64 billion for 2026); CERN runs on public money from its member states, and in its author's reading UP's own system does not run on money; the genome project's funding was not checked for this chapter
Organising many people's work	Stewards who rotate, are watched and can be replaced, with the right to fork; no offices; open, testable standards of skill; AI that proposes work to people and never assigns it; contribution records as feedback	Open-source software ($8.8 trillion of demand-side value on one estimate); Linux on every TOP500 supercomputer since November 2017, per Wikipedia; Wikipedia	These examples make copyable information; food, housing and energy are UP's central experiment
Carrying risk	Needs held as a floor, so no failure may push anyone below it; test small, then scale; splits; open blueprints so a lost node can be rebuilt; physical accounts of the risks others carry; irreversible damage never traded	Open projects that fork and carry on; the IMF's measure of costs prices leave out shows what has to be counted	Large physical failures; code is not governance (The DAO); whether physical accounts can be kept honest
Keeping going beyond its founders	Work and records that belong to everyone; public rules, code and decisions; stewards who rotate; no leader or founder named in the core	Linux survives its founder; CERN since its 1953 convention; co-operatives owned by their members ($2.79 trillion turnover for the top 300 in 2023)	Keeping the quality of the core as projects grow; the pull of money on shared institutions (Chapter 8)
Deciding what to make, and investing in it	The people affected decide, with evidence; problems ranked by size; use data each person controls; physical accounting sets the limits; the AI proposes, people decide	Co-operatives' member control; Stocksy's one member, one vote	Whether this matches markets for the most complex production: "testable workload, run rung by rung"
Owning what it makes	Nothing enclosed: UP's technology stays only in UP, open to everyone taking part; physical goods shared within the communities that make them; open standards owned by no one	The Bermuda Principles; the SGC's never-patent rule; open-source software	Guarding against enclosure by others; fair dealing at the edges with companies that do enclose

The table makes one thing plain. For some jobs, such as owning what is made and organising work on information, the replacement is already working at a very large scale, and UP's task is to connect it, extend it and guard it. For others, such as pooling effort for long, risky work and deciding what to make, there are strong precedents, but most of them still run on money from taxes or from members, and UP's own way of doing the job has to be shown. For the hardest, heavy physical production on the largest scale, UP has a direction and little evidence, and the rest

is work to be done in the open. That is where UP's rule, as its author reads it, wants the line drawn: a person keeps relying on companies for whatever nothing else yet does without obvious downsides.[4,5]

Why UP itself is not and never becomes a company

There is an obvious shortcut, and UP declines it. A network that wanted to grow fast could incorporate: issue shares to its members, sell what it makes, borrow against its land, and become a company with a good mission. Chapter 8 told what happened to several institutions that took versions of this road: the co-operatives of Mondragon, which came to employ many people who were not members; the kibbutzim, which moved from equal sharing to market wages; Britain's building societies, many of which gave up mutual ownership for windfalls; and OpenAI, which moved from a non-profit to a public benefit corporation as its needs for capital grew.[83] None of those people were fools or cynics, and many of those institutions still do great good. The lesson is not that the people failed. It is that tools built for the current system carry the current system's pull. A co-operative is still an enterprise, in the International Cooperative Alliance's own definition, owned by its members;[16] Stocksy, the artists' co-operative met above, has "three classes of shareholders".[77] A better company is still a company, and the court's question from 1919, whose interests the directors serve, follows it wherever it goes.

The trap of code. The newest version of the shortcut tried to leave the company behind by writing it into software. A project called The DAO, which the US Securities and Exchange Commission later described as "one example of a Decentralized Autonomous Organization", raised digital currency valued "at approximately $150 million". It was meant to run by its code. Then "an attacker used a flaw in The DAO's code to steal approximately one-third of The DAO's assets."[84] The attack came on 17 June 2016. The rescue did not come from the code. On 20 July, "the Ethereum network was hard forked to move the funds in The DAO to a recovery address", a decision taken by the network's community to rewrite its own record, after which the network divided.[85]

UP draws three lessons from The DAO. Its core and its agreed positions already hold two of them; the third rests on the reading its author has set out, which is going through UP's method. Code is not governance: open code "is a tool, not a guarantee", and UP says "plainly what openness cannot catch".[86] Machines never have the last word: AI and automation "never govern: people can always correct, pause or switch them off".[79] And The DAO was still a pool of money gathered from investors; in the reading UP's author has set out, now going through UP's method to become an agreed position, UP's own system runs on neither money nor companies.[5] The DAO shows that changing the tool does not change the aim. UP changes the aim.

The trap of relicensing. The quieter danger is that a shared project, once it becomes valuable, is taken back into private hands. Chapter 8 told how this has happened in software, when companies changed the licences of widely used open programs, and how users forked the last open versions and carried on.[87] UP builds the defence in from the start. UP's technology stays only in UP, open to everyone taking part, and "no one may enclose it".[48] Its code and allocations are public, "so anyone can read, check, fork and simulate it"; read with the eighth tenet as amended, anyone may check them, and those taking part may use and fork them.[86,48] Its stewards can be replaced, and the right to fork is part of how they are held to account.[51] A shared thing that anyone taking part can fork is much harder to sell quietly, though the best-known forks so far have been backed by large companies.

The edges. UP does not pretend that the world of companies is not there. UP's author has set out how it is to meet that world, and the reading is going through UP's method to become an agreed position: where UP meets it, it uses

[83] See Chapter 8, "Why UP itself does not run on money", and its notes: the worker co-operatives of Mondragon, whose group came to employ many people who were not members; Israel's kibbutzim, which moved from equal sharing to market wages; Britain's building societies, many of which gave up mutual ownership for windfalls; and OpenAI's move from a non-profit to a public benefit corporation.

[84] US Securities and Exchange Commission, Report of Investigation (Release No. 34-81207, 25 Jul 2017): "The DAO is one example of a Decentralized Autonomous Organization"; the ether it raised was valued "at approximately $150 million."; "an attacker used a flaw in The DAO's code to steal approximately one-third of The DAO's assets." https://www.sec.gov/litigation/investreport/34-81207.pdf . Checked at source, 14 Nov 2026.

[85] Wikipedia, "The DAO" (a secondary source): "On June 17, 2016, the DAO was subjected to an attack exploiting a combination of vulnerabilities"; "Eventually on July 20, 2016, the Ethereum network was hard forked to move the funds in The DAO to a recovery address". The rescue rested on the network's community choosing to fork, not on The DAO's code; by Wikipedia's account (not quoted here), some users stayed on the original chain. https://en.wikipedia.org/wiki/The_DAO . Checked at source, 14 Nov 2026.

[86] UP's agreed position on open code (card 17, CANON): "Every line of code and every allocation is public, so anyone can read, check, fork and simulate it. Open code is a tool, not a guarantee: it makes corruption much harder to hide, more visible and easier to contest, and it is guarded against for good."; the safeguards include "allocation code that runs as two independent versions that must agree, stopping and becoming a public problem when they don't"; "UP says plainly what openness cannot catch: a patient, skilled bad actor can earn trust and hide for years." Full wording in UP's agreed positions (the Position Ledger).

[87] See Chapter 8, "Why UP itself does not run on money", and its notes: when the company behind Terraform changed its licence in 2023, its users forked the last open version as OpenTofu; when Redis did the same in 2024, a fork followed, and a year later the company returned to an open-source licence.

only what the law requires. UP's own system does not run on UP companies; at its edges it may need the legal form required to hold property or sign a contract, it pays taxes and holds land title, and it works in partnership with local governments; all of this is openly recorded, kept to a minimum, and meant to shrink toward none as the people of an area move fully to UP.[5] A legal form at the edge is not the same thing as running on companies. Chapter 8 described how the best open projects already keep that line: Wikipedia's articles are written by volunteers while a non-profit foundation hosts the site and pays its bills; the Debian project's volunteers make the software while another non-profit holds its assets in trust; community land trusts hold land so that the homes on it stay off the market.[88] In each, the legal form sits at the edge, dealing with the law and holding what must be held, and the work itself runs on something else.

At first, members will also buy from companies, because there is much UP cannot yet make: solar panels, chips, medicines, vehicles. Their money is their own; UP's agreed position on assets, a projection, holds that members' money "is best used early to buy and convert more", and that assets convert by their owners' choice.[47] Whether UP should also work alongside companies on particular problems is an open question, not yet settled by UP's author or its method: the reading its author has set out names partnership only with local governments, and any such work would stay within the rule that UP's technology stays only in UP and "no one may enclose it".[5,48] UP's agreed position on protection during the transition says that UP "works within the law, delivers things its host societies value, and earns broad public support."[89] Its agreed position on legacy systems, which speaks of governments rather than companies, has nodes as "an indispensable partner", "useful and embedded in their communities", working with local and regional governments "on their hardest problems".[90] In the author's reading, every such contact is recorded in the open, kept to what the law requires, and meant to shrink as people move. In a place where few people have moved, the edges are wide, and members still buy much of what they need from companies. In a place where most people have moved fully to UP, there is less and less that anyone needs from outside, and the contact shrinks toward none.[5]

Who moves: people, not UP

That leads to the point in this chapter that matters most for how the change happens. It would be easy to read the tenet's *gradually* as a plan for UP to run as a company for a while and then wind itself down, or as a plan to wind companies down. Neither is the reading. In the reading UP's author has set out, now going through UP's method, UP is not a company at any stage, and it does not wind anyone else's company down. What moves gradually is people.[5]

The two curves Chapter 8 described for money apply here too.[91] The first is inside each life. A person who joins UP keeps their job and their home, because nobody is forced to give up what is theirs.[54] At first UP meets a small part of their needs: a shared tool, a repair, a meal from a shared kitchen. As UP's productive base grows, it meets more, and two things change in that person's life at once. They buy less from companies, because more of what they need comes from what UP makes and shares. And they work less for companies, because more of their working time goes into UP's own projects, on problems they have chosen. Whether they ever stop working for a company altogether is their choice, made when they are ready, and some will keep a foot in both worlds for good.

The second curve is the number of people. Each person who finds that UP meets their needs better than the old way is one more person relying less on companies, and one more person adding to what UP can make. Neighbours see what works and join. As more people in a place move, more of what that place needs can be met inside UP, which makes the next move easier for everyone else.

[88] See Chapter 8, "Why UP itself does not run on money", and its notes: Wikipedia's volunteers and the Wikimedia Foundation, which hosts the site; the Debian project and Software in the Public Interest, which holds assets in trust for it; and community land trusts, which hold land so that homes stay off the market.

[89] UP's agreed position on protection during the transition: "UP is not a nation-state and has no army. During the transition its protection is to be everywhere and woven into the existing system, so that attacking it would cost far more than it could gain. UP works within the law, delivers things its host societies value, and earns broad public support." Full wording in UP's agreed positions (the Position Ledger).

[90] UP's agreed position that nodes survive as partners, not targets (card 25): "Legacy systems will not simply dissolve; they are transformed from within."; nodes are farms, clinics, workshops and land "that states can tax, license or seize", so UP's strategy is to be "an indispensable partner": nodes are useful and embedded in their communities, and "work with local and regional governments on their hardest problems"; "as nodes prove themselves, state functions are handed to the network or fade through people's choice." Round 11 set the book's wording for this position as "ethical", not "lawful". Full wording in UP's agreed positions (the Position Ledger).

[91] See Chapter 8, "Who moves: people, not UP", for the two curves: how much of each life runs through the current system, and how many people take part.

In the reading UP's author has set out, now going through UP's method, what happens to companies as this goes on is decided by the people who own them, work in them and buy from them, not by UP, and companies are never shut down to hurry things along.[5] They are not abolished or seized either: UP's settlement record for the tenet *Reality over fiction* rules out "abolishing institutions by decree", and its core rules out forcing anyone "to give up what is theirs".[39,54] Assets join UP only by their owners' choice. UP's agreed position on growth and assets, a projection, is specific about companies: "Assets owned or controlled by people who join (including single-person and family-owned companies) convert by their owners' choice".[47] For example, a baker who joins could bring her ovens into the network, keep running her business as before, or do some of each. The same position adds that whole cities, states and nations that join "redirect their resources".[47] Land works the same way: in UP's agreed position on scarcity, "Land joins the commons only by its stakeholders' choice, never by force."[92]

Some companies will find fewer customers and fewer workers in places where many people have moved, and will shrink or change. Some will find new work at UP's edges, selling members what UP cannot yet make. Some will choose to convert. UP's agreed position on legacy systems describes the overall shape in words written about legacy systems in the context of the state, which this chapter reads as fitting the company too: legacy systems "will not simply dissolve; they are transformed from within".[90] What UP does not do is decide any of this on anyone's behalf.

History shows why the line matters. Chapter 8 told how the Bolshevik government tried, during the Russian civil war, to go straight to state production and distribution, and how Lenin admitted the defeat in 1921; and how the Khmer Rouge abolished money and private property in Cambodia in 1975, during a rule in which an estimated 1.5 million to 3 million people died.[93,94,95,96] Neither had something ready that worked as well. Each tore down arrangements people depended on, companies and markets among them, before anything could do their jobs, and imposed the change by force. UP's core and its agreed positions rule out every part of that. A fiction is replaced before it is retired.[43] UP is never imposed, and it never starts harm against anyone.[54] Everyone's basic needs and protected freedoms are floors no decision may cross.[70] The corporation is let go only when something does its jobs without obvious downsides, and, in the reading UP's author has set out and UP's method is now testing, it is let go by people, each in their own life and at their own pace, not by a government, a party or UP.[4,5]

Where firms still do better, and what would have to be shown

UP's own tests require it to say where the current system is still ahead. Its agreed position on workload holds that "A problem counts as an issue for UP only if it can't be fed back into the loop with a good chance of beating the old system, if the old system has a far better solution, or if it is endemic to UP." The second of these tests may apply here.[97] For some of the corporation's jobs, today, the current system does have a far better solution.

[92] UP's agreed position on scarcity (DP-002, CANON): "When many people want the same thing, UP treats it as a signal and a problem to solve. Meanwhile it is shared by rotation or by a decision of the stakeholders, and UP works to make more of it, through design that lets many people enjoy a desired place, as Paolo Soleri proposed, and through new places. A price only signals; it does not make a rare thing less rare." The same position says that UP "replaces money and prices with shared access and real physical accounting" and "holds the machines and the land in common"; and "Land joins the commons only by its stakeholders' choice, never by force." Full wording in UP's agreed positions (the Position Ledger).

[93] See Chapter 8, "When a fiction is torn down by decree", and its notes: Lenin's own account in October 1921 of the failure of "a direct transition" to state production, and the abolition of money and private property by the Khmer Rouge after April 1975.

[94] V. I. Lenin, "The New Economic Policy and the Tasks of the Political Education Departments", report to the Second All-Russia Congress of Political Education Departments, 17 October 1921: "our previous economic policy, if we cannot say counted on (in the situation then prevailing we did little counting in general), then to a certain degree assumed—we may say uncalculatingly assumed—that there would be a direct transition from the old Russian economy to state production and distribution on communist lines"; "when in the heat of the Civil War we had to take the necessary steps in economic organisation"; "In attempting to go over straight to communism we, in the spring of 1921, sustained a more serious defeat on the economic front than any defeat inflicted upon us by Kolchak, Denikin or Pilsudski."; "The surplus-food appropriation system in the rural districts—this direct communist approach to the problem of urban development—hindered the growth of the productive forces and proved to be the main cause of the profound economic and political crisis that we experienced in the spring of 1921."; "The New Economic Policy means substituting a tax for the requisitioning of food; it means reverting to capitalism to a considerable extent—to what extent we do not know."; "the abolition of the surplus-food appropriation system means allowing the peasants to trade freely in their surplus agricultural produce". Marxists Internet Archive, https://www.marxists.org/archive/lenin/works/1921/oct/17.htm . Checked at source, 1 Nov 2026.

[95] Al Jazeera Staff and News Agencies, "Key facts on the Khmer Rouge", Al Jazeera, 3 Feb 2012, quoting the Cambodia Tribunal Monitor: "To accomplish this, they abolished money, free markets, normal schooling, private property, foreign clothing styles, religious practices, and traditional Khmer culture." https://www.aljazeera.com/features/2012/2/3/key-facts-on-the-khmer-rouge . Checked at source, 1 Nov 2026.

[96] *Encyclopaedia Britannica*, "Khmer Rouge" (Britannica Editors): "radical communist movement that ruled Cambodia from 1975 to 1979"; "in April 1975, Khmer Rouge forces mounted a victorious attack on the capital city of Phnom Penh and established a national government to rule Cambodia"; "The Khmer Rouge government under Pol Pot was responsible for the Cambodian genocide (1975–79), during which an estimated 1.5 million to 3 million people—approximately one quarter of the country's population—died as a result of executions, forced labor, starvation, and disease." https://www.britannica.com/topic/Khmer-Rouge . Checked at source, 1 Nov 2026.

[97] UP's agreed position that workload is not a danger (Round 12S, position 15, in the UP Moderator's wording): "A problem counts as an issue for UP only if it can't be fed back into the loop with a good chance of beating the old system, if the old system has a far better solution, or if it is endemic to UP."; ""UP is not magic": suffering continues while its biggest causes fall." Full wording in UP's agreed positions (the Position Ledger).

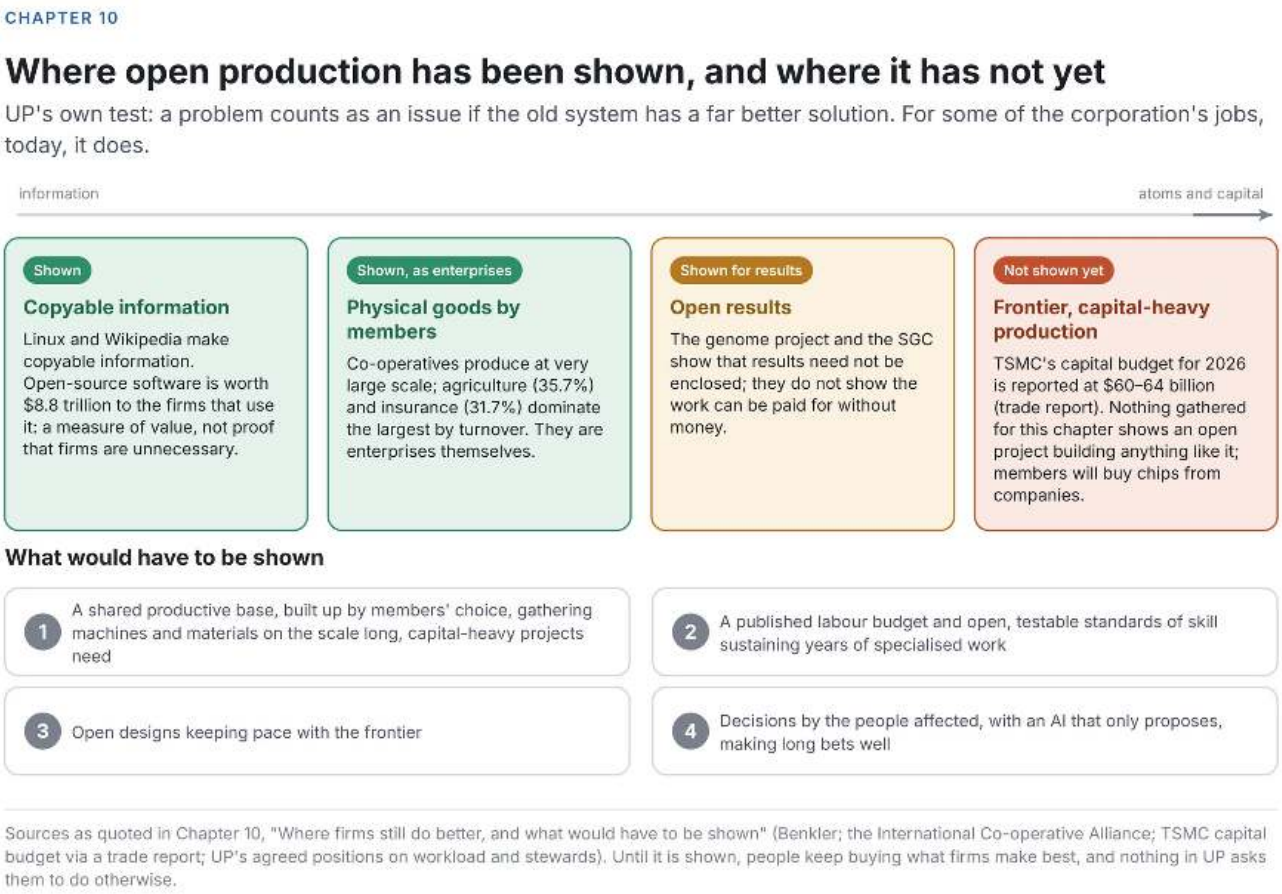
The clearest case is heavy, capital-hungry production at the frontier. TSMC's capital budget for 2026, "60-64 billion dollars", is planned for factories for its chips, and it was raised from a previously indicated "52-56 billion dollars".[12] That figure comes from a trade report, not the company's own release. Even so, nothing in the evidence gathered for this chapter shows an open project, a co-operative or a commons building or running anything like it. Among the examples gathered here, CERN comes nearest to comparable long-term pooling outside a firm, and CERN is primarily funded by its member states.[55] The phones, solar inverters and computers that would run UP's records all use chips, and nothing in UP can yet make advanced ones. In the early stage, and probably well beyond it (a projection), members will buy them from companies.

The evidence for open production has its own limits, and they are worth stating plainly. Benkler's argument is about information and culture, where the costs of production "are declining dramatically"; he makes no claim for "traditional economic goods".[24] UP's own agreed position on stewards draws the same line: Linux and Wikipedia "make copyable information; providing food, housing and energy is UP's central experiment".[51] The $8.8 trillion that open-source software is worth to the firms that use it is a measure of value, not a proof that firms are unnecessary to produce it.[64] Co-operatives do produce physical goods at very large scale, but their strongest fields are agriculture and insurance (in the Alliance's words, "The agriculture (35.7%) and insurance (31.7%) sectors dominate the rankings by turnover"), and they are enterprises themselves.[75] The genome project and the SGC show that results need not be enclosed; they do not show that the work can be paid for without money.[56,57]

What would have to be shown, then, is specific. That a shared productive base, built up by members' choice, can gather machines and materials on the scale that long, capital-heavy projects need. That a published labour budget and open, testable standards of skill can sustain the years of specialised work such projects demand. That open designs can keep pace with the frontier. And that decisions by the people affected, with an AI that only proposes, can make long bets well. None of this is shown yet. UP's answer is the one its core gives for every such gap: it is named openly, treated as work, tested in the open and compared with today's record; in one way UP could run, its measures keep their definitions fixed over time, so that progress cannot be claimed by moving the goalposts.[98,99] Until it is shown, people keep buying what firms make best, and nothing in UP asks them to do otherwise. UP's agreed position on workload says it plainly: "UP is not magic".[97]

[98] Core tenet: *Self-correction: nothing is final, including this*: "Every part of UP, these tenets included, can be improved through its own method. UP is judged against both today's system and the ideal it aims at: the ideal shows the direction and the gap still to close, and today's record shows whether UP is already doing better." Full wording in "The core of UP".

[99] UP's agreed position on measures (round 12S, position 8, an illustration of one way UP could run): "problems are measured with fixed definitions kept over time and ranked by measured harm, not by how loud they feel; every headline measure has an independent check." Full wording in UP's agreed positions (the Position Ledger).



Where open production has been shown, and where it has not yet: from copyable information to frontier factories.

How it could run, stage by stage

As in Chapters 8 and 9, UP's case is judged by stage: only the early stage rests on today's evidence, and the middle and completed stages are projections.[100] In the reading UP's author has set out, now going through UP's method, what moves at every stage is people: how much of each member's life runs through companies, as a customer and as a worker, and how many people are members. UP's own system is never a company; what changes is how wide its edges with the world of companies are.[5]

In the early stage, people take part while keeping their jobs, and no one is forced to give up what is theirs.[54] Most of what members buy still comes from companies, and most of them still work for one. UP meets a small part of their needs, and most of its effort goes into basic needs: food, energy, shelter and repair. At its edges it holds land and signs contracts in whatever legal form the law requires and pays its taxes, all of it recorded in the open; members buy from companies, with their own money, what UP cannot yet make.[5,47] Its first open projects look like the precedents in this chapter: shared designs that anyone taking part may improve, small workshops, open records of what is made and used, and a labour budget published so that members can see what work is needed.[48,58] Some members bring in what they own, a van, a workshop, a small business, by their own choice; members' money, on UP's projection, is "best used early to buy and convert more."[47] Nothing here is new in kind. Open-source software, co-operatives, open science and pooled public research all exist beside companies and within the law today.[64,75,57,55] What is new is a community that combines them on purpose and publishes the results, so that what it achieves is, in the words of UP's agreed position on abundance, "a measured target shown in

[100] UP's agreed position on the twelve failures (Round 12c, position 1): "The early stage rests on today's evidence; the middle and completed stages are labelled as projection." The definitions of the three stages used in this book (early, a minority network inside the current system; middle, its own productive base, with most members' needs met from what UP produces; completed, most people living mainly in UP) follow UP's study lessons (lesson 13), which guide how the book is written and are not agreed positions. Full wording in UP's agreed positions (the Position Ledger) and study lessons.

practice, not a promise."[101] How fast this grows is not something UP sets out to decide; what matters is that the quality of the core is kept as it grows.[102]

The middle stage, a projection, is where much less of members' lives would run through companies. Much of what they need would come from UP's own productive base, and much of their working time would go into UP's projects, chosen by them, shown in contribution records that inform and "never decide whether anyone's needs are met."[68] The work of organising would be done, in one way UP could run, by stewards who rotate, are watched and can be replaced, by open standards of skill, and by an AI that proposes work to people and never assigns it.[51,50,67,61] Decisions about what to make would be taken by the people affected, inside physical limits counted in energy, materials, water and carbon, and "never by an efficiency score".[44,73] The edges would be narrower, and narrowest where most people have moved; members would still buy from companies whatever UP does not yet make well, and the most demanding manufactured goods would be among the last to move.

The completed stage, if it comes, is a projection. Most people would meet most of their needs from what is made and shared in the open, with no owners and nothing enclosed.[48] What UP makes would be held in common, and its physical goods shared within the communities that make them.[49] Where the people of an area have moved fully to UP, its contact with the world of companies could shrink toward none. Even there, no one is made to give companies up: a person who wants to run a company, or work for one, may.[54] Whether heavy, capital-hungry production has moved by then depends on whether open production has shown it can do that job without obvious downsides, and the projection does not assume it.[4]

The household from Chapter 1 shows how this could feel from inside: the care worker, her teenage son and his grandfather. As always, it illustrates one way UP could run and is never used as evidence.

Illustration: one way it could run. The early stage.

The care worker is employed by a private care company, which pays her by the hour and sets her rota. The family buys its food at a supermarket chain and pays rent to a letting agency. The town's UP network is small. A retired couple who own a disused shop have brought it into the network by their own choice; its roof now carries solar panels, and the shop is a workshop and a library of things, held through a simple legal form the law requires, with the taxes it pays recorded in the open. A member who runs a one-person joinery business brings her tools in by her own choice. The son, who has been fixing friends' phones, joins an open project that keeps a shared catalogue of repair guides for the phones and laptops people in the town actually own, and his name appears in its contribution record. The grandfather's insulin comes, as before, from a pharmaceutical company.

Illustration: the middle stage (a projection).

Later, much of the household's food comes from farms and kitchens the network runs, and a regional workshop makes many of the things the town's homes need from open designs. The care worker now spends most of her working week on the network's care rota, which she chose and helped to design, and only two shifts a week for the care company, because she still likes some of the people she visits there. The son is one of several stewards for the repair catalogue, which has spread to other towns; his turn as a steward ends next spring, as everyone's does. Members still buy chips, medicines and the household's insulin from companies with their own money, and the network publishes what it still relies on from outside. When a supplier changes its terms, the members affected decide in the open whether to keep buying or to put the problem, with its evidence, to the wider network as work.

Illustration: the completed stage (a projection).

In the completed stage the household rarely deals with a company at all. The town's homes, food and energy come from what is made and shared in the open. A few firms still operate in the region, and some of the son's friends work for them by choice. The grandfather's treatment is handled by the network's clinic, and the question of where its medicines come from is an open problem in the network's records, with a regional team working on it and the evidence published. People still disagree, sometimes sharply, about which long, expensive projects the region should take on next.

[101] UP's agreed position on abundance (card 22, CANON): "UP proves this in the open: every community that runs this way publishes its energy, materials and needs met, so abundance is a measured target shown in practice, not a promise." Full wording in UP's agreed positions (the Position Ledger).
[102] UP's agreed position on growth (round 12c): UP grows naturally and may grow fast or slowly; the speed is not something its people set out to decide; what matters is to grow while keeping the quality of the core values and tenets, so that growth stays positive; there is urgency, because the aim is a transition, not a collapse. Full wording in UP's agreed positions (the Position Ledger).

Table 10.2 sums up the stages.

Table 10.2. The corporation, by stage, as an illustration. The early stage rests on today's evidence; the middle and completed stages are reasoned projections from cited mechanisms, labelled as such.

Stage	What could change	Real precedent	Why it is likely	What persists
Early	Members keep their jobs and keep buying from companies; UP meets a small part of their needs, starting with basic needs; at its edges it holds land and signs contracts in the legal form the law requires; members buy with their own money what UP cannot make; first open projects with published labour budgets; assets brought in by owners' choice	Open-source software ($8.8 trillion of demand-side value);[64] co-operatives ($2.79 trillion turnover for the top 300);[75] the Bermuda Principles and the SGC;[56,57] CERN;[55] Stocksy[77]	Each of these exists beside companies and within the law today	Most needs and most jobs still run through companies; the current system can absorb or ignore what UP builds; heavy production stays with firms
Middle (projection)	Much less of members' lives runs through companies, as customers and as workers; work organised by rotating stewards, open standards and AI that proposes; decisions by those affected inside physical limits; edges narrower where more people have moved	Linux on every TOP500 supercomputer since November 2017, per Wikipedia;[65] Wikipedia and the stewards' model;[51] co-operative member control[16]	Each job moves only when something already does it without obvious downsides, so each step rests on the one before; the two curves reinforce each other	The pull of money and enclosure; power moving to access, office, information or expertise; capital-hungry production (chips: TSMC)[12]
Completed (projection)	Most people meet most needs from what is made and shared in the open; contact with companies shrinks toward none where people have fully moved; nobody is barred from running or working for a company	Partial models only: pooled big science (CERN) and the open knowledge commons[55,64]	The parts strengthen one another (Chapter 21)	Whether open production can match firms at the frontier; disagreement over long bets; the work of watching power in every form

The strongest objections

A fair reader will have objections, and the strongest deserve to be met in their strongest form.

"Without profit, there is no innovation." This is the most serious objection, and it has real evidence behind it. Companies turned the science of the Covid-19 vaccines into the doses governments contracted to buy, 600 million of them under the two US contracts alone; companies put money into research because success pays; and the record of productivity growth is at least consistent with firms finding better ways to do things (though the figures cover all businesses and do not prove the corporate form caused it).[9,11] UP grants all of this. Its tenet says the corporation served a great purpose.[3] But the evidence also shows three things the objection leaves out. Some of the riskiest innovation was paid for in common: BioNTech's development money came partly from the German state, CERN is primarily funded by its member states, and the genome project's rules called for its sequences to be released to the public domain.[10,55,56] Some very valuable innovation was not sold at all: open-source software is worth, on one estimate, $8.8 trillion to the firms that use it.[64] And profit steers innovation as well as driving it,

sometimes away from what people need most; the Goldman Sachs analysts asked whether "curing patients" is "a sustainable business model", and Chapter 2 showed that only about 1% of the new chemical entities of 2000 to 2011 were for the neglected diseases of the poor.[37,103] UP's agreed positions put invention at the centre: "Inventing solutions together is UP's primary activity", and in UP unpopular ideas that work rise "because of their results, not because a funder chose them."[63] Whether people working this way out-invent firms across the board is not proven, and UP does not claim it. Its agreed position on motivation holds that money that controls people crowds out the motivation they bring themselves, and that feedback and the freedom to choose keep it alive; UP's communities have to show that in their records.[68]

"Open projects only make copyable information." So far, largely, they do, and UP's own agreed position says so: Linux and Wikipedia "make copyable information; providing food, housing and energy is UP's central experiment".[51] Benkler made the same limit part of his argument from the start.[24] The answer is not to deny the gap but to say what narrows it. Co-operatives already produce physical goods at very large scale, above all in agriculture, which the Alliance's ranking puts at 35.7 per cent.[75] Open designs for physical things can be shared like any other information, and the part that cannot be copied, the energy, materials and work of making them, is exactly what UP's physical accounts, labour budget and shared productive base are for.[73,58] And UP starts where the evidence is strongest, with basic needs made from common materials by well-understood methods, and leaves the hardest production for later. Providing food, housing and energy is, in UP's agreed position, its central experiment; whether open production can make physical goods as well as firms do is tested in the open and, in one way UP could run, rung by rung.[51,78]

"Co-operatives degenerate, and so will UP." Chapter 8 told the story of Mondragon, the kibbutzim and the building societies, and it is a fair warning; Chapter 6 looked at how co-operatives and commons govern themselves.[83,104] Institutions built to share have been pulled back toward money and ownership, often by people acting in good faith. UP's defences are built in, not hoped for. In the reading its author has set out, now going through UP's method, its own system does not run on money or on companies, so there are no shares to sell and no windfall to vote for.[5] Its technology cannot be enclosed, and anyone taking part can fork it.[48,86] Its stewards rotate, are watched and can be replaced, and no one holds power by holding a position.[51,50] Its agreed position on power names the design tools: "caps, public records of who approved what, rotation of anyone who allocates, random audits, public and versioned allocation rules."[41] None of these makes degeneration impossible, and UP does not say they do. The threat "is never declared gone; it is watched and answered."[31]

"Who pays for the big, risky bets?" Today, firms and states. TSMC's planned $60 to 64 billion and CERN's pooled budgets are the two models, and both rest on money.[12,55] UP does not pretend to have a third model already proven at that scale. Its answer has three parts. Much of what a big bet needs is not money but things and work: machines, materials, energy, land and skilled people, and UP's shared productive base and labour budget gather those directly.[58,47] Whole cities, states and nations that join UP, on its projection, "redirect their resources", which is how pooled public science already works.[47] And the bets are chosen differently: the biggest problems draw the most attention, and the people affected decide.[62,44] Until this is shown for the largest projects, they stay with the institutions that can do them now, and people who rely on their products keep buying them.[97]

"Companies are already becoming responsible." This is the strongest form of the case against change, and it deserves its full weight. In 2019, 181 chief executives belonging to the Business Roundtable committed "to deliver value to all" of their stakeholders, ending more than two decades in which their statements had endorsed shareholder primacy.[38] Its defenders point as well to investment judged by environmental, social and governance standards, and to companies that have made themselves public benefit corporations with a mission written into their structure, as OpenAI did.[83] Laws against the worst harms have some effect: Purdue and Volkswagen were caught and prosecuted, and agreed to criminal penalties (how much of Purdue's was collected is not established here).[33,35] UP welcomes all of this and counts it among the gains of the current system; its agreed position on reform acknowledges that reform "has worked in bounded cases".[26] But two things stand against the hope that it is enough. The incentives have not changed: Bebchuk and Tallarita found that company leaders "have strong incentives to enhance shareholder value but little incentive to treat stakeholder interests as an independent end",

[103] See Chapter 2, "Why the race is lost where it is", and its notes: between 2000 and 2011, only four of 336 new chemical entities, about 1%, were for the neglected diseases of the poor.
[104] See Chapter 6 on how power gathers, and on the governance of co-operatives and commons.

and warned that stakeholder talk "would likely weaken pressures for stakeholder-oriented policy reforms".[8] And the scale of what falls outside the books remains very large: the IMF's estimate of the costs that fossil fuel prices leave out was $6.7 trillion in 2024, and a trillion dollars of profits was shifted to tax havens in 2022.[27,28] Reform "stalls most where it runs against profit from extraction, externalised harm and concentrated power."[26] UP does not ask anyone to stop improving companies. It offers people another way to meet their needs, beside them, and lets the results be compared.

What persists. Two risks stay with this chapter's argument at every stage, and they pull in opposite directions. The first is moving off companies too early: a person or a community relying on UP for something it cannot yet provide, such as medicines or the chips its records run on. UP's defences are the order of events (replace before retiring), the test (no obvious downsides), the evidence published with every proposal, and each person's right to decide when to rely on the new way.[43,45,5] The second is UP becoming what it set out to replace: a network that gathers power, encloses what it makes, or lets its edges with the company world grow instead of shrink. UP's defences are the floors, the open record, the right to fork and the watch on power in every form.[70,48,86,31] Neither risk is ever declared gone. Both are watched and answered as standing work.

Back to Henry Ford's ambition

Henry Ford told the court what he wanted his company to do: "to employ still more men, to spread the benefits of this industrial system to the greatest possible number, to help them build up their lives and their homes." The court did not say the ambition was wrong. It said it was not the company's, because a business corporation "is organized and carried on primarily for the profit of the stockholders."[1] A century later, the argument the case began is still going on, in the statements of chief executives and the studies of their critics.[38,8]

UP's answer is to start from the end Ford named, and to ask what the means can be now. The corporation was a brilliant tool for its time. It let strangers pool their money for work too long and too risky for any of them, fit together the labour of thousands, cap what each owner could lose, carry a project past the death of its founders, choose what to make and keep what it made. It still does all of that, and some of it, such as gathering tens of billions of dollars a year for chip factories, few other bodies yet do as well. But the account book at its centre leaves out what it costs others, and the rule the Michigan court stated in 1919 points every one of its jobs at one group's profit. The costs show up outside the books: in the IMF's modelled trillions for fossil fuels (not all of them corporate), in profits shifted to tax havens, in markups that economists still debate, in Purdue and Volkswagen, and in a question about whether curing patients pays.

The tools that could do the corporation's jobs another way already exist, side by side with it. Open-source software shows that the work of very many people can be organised without any one firm owning it. Co-operatives show that enterprises can belong to the people they serve. Open science shows that results need not be enclosed, and pooled public research shows that long, risky work can be paid for in common. UP adds what joins them: open designs that no one may enclose, stewards who rotate and can be replaced, a published labour budget, contribution records that inform and never decide needs, physical accounts of what everything really costs, the people affected deciding, and AI that proposes and never governs.[48,51,58,68,73,44,79] What it does not claim is that any of this is proven for the hardest jobs. That is work, to be done in the open.

And UP's answer keeps the order and the hands right. In the reading UP's author has set out, now going through UP's method, UP itself is not a company and never becomes one; at its edges it uses only what the law requires, and that contact shrinks as people move.[5] What moves is people: each person buying less from companies and working less for them as UP meets more of their needs, and more people taking part, each at their own pace. No company is abolished or seized; assets join only by their owners' choice; and nobody who wants to run a company, or work for one, is stopped.[39,54,47]

All of this depends on records. Open designs, contribution records, labour budgets, physical accounts and the audits of stewards are only as good as the systems that keep them: open enough for anyone to check, and private enough that no one's life becomes a file in someone else's hands. UP's core asks for both at once. Its rules, code, records, decisions and reasons are public, and "Each person controls their own information and chooses what to

share."[48] How those two demands fit together, and how the AI that coordinates it all is kept serving rather than ruling, is the subject of Chapter 11.[105]

Chapter card: Chapter 10

- **Claim:** The corporation is a shared fiction, a legal person with its own accounts and its own aim, that made large-scale cooperation possible and served a great purpose. It does six jobs: pooling money and effort for long, risky work; organising many people's work; carrying risk; keeping going beyond its founders; deciding what to make and investing in it; and owning what it makes. Each stands in for something people could not do directly at scale, and, on the rule the Michigan court stated in 1919, all six are tied to one group's profit. On UP's reading, the costs that fall outside its books, and the pull of that aim, are a large part of today's distortion. UP's decisions rest on real resources, real needs and measured outcomes, and reality is better wherever technology can replace a fiction without obvious downsides.
  - **How the jobs could be done without it:** pooled public funding and open science for long, risky work; open-source software and peer production, with stewards who rotate and can be replaced, for organising work; a needs floor, splits and open blueprints for risk; work and records that belong to everyone for continuity; the people affected deciding, with physical accounts and AI that proposes, for what to make; and nothing enclosed for what is made.
  - **UP is not a company (the author's reading, pending; see below):** at its edges it uses only what the law requires, and that contact shrinks toward none as people move.
  - **Who moves (the author's reading, pending; see below):** people, buying less from companies and working less for them as UP meets more of their needs; no company is abolished or seized, and assets join only by their owners' choice.
  - **Where firms still do better:** heavy, capital-hungry production at the frontier, such as chip fabrication.
- **Core lines:**
  - **Tenets:** *Reality over fiction* and its settlement record (it rules out treating prices, profit or national lines as reality, and abolishing institutions by decree); *The aim* (it rules out aims set by profit, growth, power or any one group); *Open participation* (no offices; work shared out); *Power kept spread out*; *Open systems, shared knowledge, private persons* (UP's technology stays only in UP, and no one may enclose it); *Technology serves; people decide*; *Freely joined, ethically grown*; the floors.
  - **Agreed positions:** useful fictions; replace before retiring; UP names a system people already use (co-operatives and employee-owned firms); stewards who rotate and can be replaced, with the right to fork; open code as a tool, not a guarantee; the labour budget; sharing necessary work (one possible way); contribution records are feedback; physical accounting sets the limits; irreversible damage is never traded; three kinds of scarcity; what the AI is; the whole system; concentration of power is the danger; assets convert by their owners' choice (a projection); legacy systems transformed from within; reform is losing the race.
  - **Pending:** the clarification that UP's own system is not a company, that at its edges it uses only what the law requires and that this contact shrinks toward none, and that the gradual change is in people, not in UP, set out by UP's author on 14 November 2026 and going through UP's method.
  - **Stages:** the early stage rests on today's evidence; the middle and completed stages are labelled as projections.
- **Rule of thumb:** For anything you get from a company, or do for one, ask: which of the six jobs is the company doing here, what does that job stand in for, is anything already doing it in the open without an owner, what does the evidence show, and would you choose to rely on it?
- **What this is not:** a plan to abolish, seize or nationalise companies; a plan for UP to run as a company and wind itself down; a claim that companies have done no good or that profit never drives invention; a claim that open production already matches firms for heavy industry; rule by machines.
- **Check yourself:**
  1. What did the Michigan Supreme Court decide in *Dodge v. Ford*, and why does UP open with it?
  2. What six jobs does the corporation do, and what does each stand in for?
  3. What does the story of the Covid-19 vaccines show about corporations and public money?
  4. What did Coase say about why firms exist, and what did Benkler add?
  5. What are explicit and implicit fossil-fuel subsidies, and why are the two figures not added together?
  6. Why should the two estimates of profit shifting (35% and close to 40%) not be mixed?
  7. For each of the six jobs, name one thing that already does it without a company, and one limit of that evidence.
  8. Why is UP not a company, and what do The DAO and the co-operatives Chapter 8 described show?
  9. Who moves away from companies, and how? What happens to a company owned by someone who joins UP?
  10. Where do firms still clearly do better, and what would have to be shown before that changes?
- **Open questions (for the wiki):**

[105] Chapter 11 takes up the eighth and ninth tenets in full: UP's open systems and each person's control of their own information, and technology that serves while people decide.

- How can a shared productive base gather machines and materials on the scale of a chip fab, and how would that be tested?
- Should UP ever work alongside companies on particular problems, and how can its edges with companies stay narrow without pulling it toward enclosure or money?
- How can stewards of large physical projects rotate without losing the skills those projects need?
- Which of the corporation's jobs are closest to being done in the open today, and how should the evidence be gathered and compared?
- How can the records all of this depends on stay open enough to check and private enough to protect each person?

(Improve this page.)

Chapter 11. Open Systems, Private Persons; Technology Serves, People Decide

One day in January 2020, as Robert Williams was getting ready to head home from work, his wife called to say that a police officer had phoned and said he needed to turn himself in. When he pulled into his driveway in Farmington Hills, outside Detroit, a squad car swooped in behind his SUV to block it, and officers arrested him on his front lawn while his wife watched with their youngest daughter in her arms and their older daughter peered around her. “I never thought I’d have to explain to my daughters why their Daddy got arrested in front of them on our front lawn,” he later told the United States Congress.[1] He spent the night in an overcrowded, dirty cell.[2] The next morning two officers showed him a still from a shop’s surveillance camera, a blurry picture of a Black man, and asked whether it was him. “No, that is not me,” he said. He held the paper up beside his face and told them, “I hope you guys don’t think that all black men look alike.” He heard one of them say “the computer must have gotten it wrong.” He was released that evening, after nearly thirty hours in custody.[1]

What had happened, as his lawyers later set out, was this. In 2018 a shoplifter had, it was alleged, stolen several watches from a Shinola store in Detroit. Officers sent a blurry, low-quality still from the store’s video to the Michigan State Police, whose facial recognition search returned a possible match to an expired driver’s licence photo of Robert Williams. The police put his photo into a lineup and showed it to a loss-prevention contractor who had not been in the store on the day of the theft and whose only knowledge of it came from the same poor footage. On that basis a detective applied for a warrant and, the lawyers said, omitted significant information from the application.[2] At the hearing, the Wayne County prosecutor’s office dropped the charges for insufficient evidence and apologised: “This case should not have been issued based on the DPD investigation, and for that we apologize.”[3] According to the American Civil Liberties Union, which represented him, his was the first publicly reported case of a false face-recognition match leading to a person’s wrongful arrest.[2] In June 2024 the City of Detroit settled his lawsuit. Under the settlement the city’s police may no longer arrest anyone “based solely on facial recognition results”, or on a lineup that follows directly from such a search, and every case since 2017 in which the technology was used to obtain an arrest warrant is to be audited.[4]

“How does one explain to two little girls,” Williams asked the members of Congress, “that a computer got it wrong, but the police listened to it anyway and that meant they could arrest me for a crime I didn’t commit?”[1] His question is the reader’s question too, asked from the other side. This chapter begins with it because AI is both a technology

[1] Robert Williams, written statement to the Subcommittee on Crime, Terrorism, and Homeland Security of the US House of Representatives Committee on the Judiciary, 13 July 2021: “As I was getting ready to head home from work one day in January of 2020, my wife called me and told me that a police officer had called and said I needed to turn myself in.”; “When I pulled into the driveway, the squad car swooped in from behind to block my SUV”; “my wife, Melissa, was outside with our youngest in her arms, and my older daughter was peeking around my wife trying to see what was happening.”; “I never thought I’d have to explain to my daughters why their Daddy got arrested in front of them on our front lawn.”; “Finally, the next morning, two officers came to talk to me.”; “They showed me a blurry surveillance camera photo of a black man and asked if it was me.”; “No, that is not me.”; “I picked up the piece of paper, put it next to my face and said”; “I hope you guys don’t think that all black men look alike.”; “I heard one say that”; “the computer must have gotten it wrong.”; “I was released from detention later that evening, after nearly 30 hours in holding.”; “How does one explain to two little girls that a computer got it wrong, but the police listened to it anyway and that meant they could arrest me for a crime I didn’t commit?” https://docs.house.gov/meetings/JU/JU08/20210713/113906/HMTG-117-JU08-Wstate-WilliamsR-20210713.pdf . Checked at source, 1 Nov 2026.

[2] American Civil Liberties Union, case page “Williams v. City of Detroit”: “Detroit police wrongfully arrested our client Robert Williams outside his home”; “subjected him to thirty hours of detention in an overcrowded, dirty cell”; “a shoplifter allegedly stole several watches at a Shinola store in Detroit in 2018”; officers “capturing a blurry, low-quality still image from the store’s surveillance video and sending it to the Michigan State Police to run a face recognition technology search”; the search returned “a possible match to an expired driver’s license photo”; the photo lineup was shown to an off-site Shinola loss-prevention contractor, “someone who was not there on the day of the theft and whose only knowledge of the incident stemmed from watching the same poor-quality surveillance footage”; a detective “omitted significant information from the warrant application”; “the first publicly reported instance of a false face-recognition”; “leading to a person’s wrongful arrest”. The ACLU represented Williams. https://www.aclu.org/cases/williams-v-city-of-detroit-face-recognition-false-arrest . Checked at source, 1 Nov 2026.

[3] Bobby Allyn, *‘The Computer Got It Wrong’: How Facial Recognition Led To False Arrest Of Black Man*, NPR, 24 June 2020: “a Wayne County prosecutor announced that the charges against Williams were being dropped due to insufficient evidence”; the prosecutor’s office said: “This case should not have been issued based on the DPD investigation, and for that we apologize”. https://www.npr.org/2020/06/24/882683463/facial-recognition-technology-is-biased-says-mit-study . Checked at source, 1 Nov 2026.

[4] ACLU of Michigan, press release “Civil Rights Advocates Achieve the Nation’s Strongest Police Department Policy on Facial Recognition Technology”, 28 June 2024: “Williams is a Black man who was wrongfully arrested at his Farmington Hills home in front of his wife and two children”; “Police will be prohibited from arresting people based solely on facial recognition results, or on the results of photo lineups directly following a facial recognition search.”; “An audit will be conducted of all cases since 2017 in which facial recognition technology was used to obtain an arrest warrant.”; “The court will retain jurisdiction to enforce the agreement for four years.” https://www.aclumich.org/press-releases/civil-rights-advocates-achieve-nations-strongest-police-department-policy-facial/ . Checked at source, 1 Nov 2026.

UP relies on and the thing people fear most about it. UP leans on machines to coordinate work across many people and places, and a reader who has seen a machine treated as a judge is right to ask what stops the same thing happening inside UP. In Williams's case the software only proposed a name. People treated the proposal as a decision, the application for the warrant left out significant information, and the person it named had to prove the machine wrong while in custody. UP's core speaks to each of those failures in two of its tenets. The first, *Technology serves; people decide*, says that AI and automation "coordinate, propose and do work. They never govern: people can always correct, pause or switch them off."[5] The second, *Open systems, shared knowledge, private persons*, makes UP's rules, code, records, decisions and reasons public, "so anyone can check them", and gives each person control of their own information.[6] This chapter shows what those two tenets mean, where the current system already applies their ideas and where it does not, how UP could put them to work, and where they still fall short.

The same mistake, in many places

Robert Williams was not the last. On 16 February 2023, six Detroit police officers arrived at the door of Porcha Woodruff, who was getting her two children ready for school, with a warrant for robbery and carjacking. She was eight months pregnant. According to her lawsuit, her photograph had reached the victim's lineup through an unreliable facial recognition match, and there was no mention of the woman being sought being pregnant. She was charged, released that evening on a $100,000 personal bond, and the case was dismissed less than three weeks later.[7] Face recognition of this kind has been measured. In 2019 the United States National Institute of Standards and Technology tested face recognition algorithms from developers around the world and found that "Across demographics, false positives rates often vary by factors of 10 to beyond 100 times". It also found a wide range in accuracy, with the most accurate algorithms producing many fewer errors.[8] A tool with error rates like these can be useful as a lead. It becomes dangerous when people treat it as proof.

The same mistake has been made at the scale of whole countries, with simpler machines. Between July 2015 and November 2019 Australia's government ran an automated debt-collection system that came to be known as Robodebt. It worked by "evenly apportioning" a person's income "over fortnightly increments", a process the parties to the later court case called "income averaging", and it used the result to assert that people owed money. For anyone who did not earn the same amount every fortnight, the judge noted, the averaged figure "is unlikely to be the same as their actual fortnightly income." The Commonwealth "unlawfully asserted such debts, totalling at least $1.763 billion against approximately 433,000 Australians", the Federal Court found in 2021, in approving the settlement of a class action, and it recovered about $751 million from some 381,000 of them. The judge called it "a shameful chapter in the administration of the Commonwealth social security system and a massive failure of public

[5] Core tenet: *Technology serves; people decide*, in full: "AI and automation coordinate, propose and do work. They never govern: people can always correct, pause or switch them off. No single AI system or operator controls coordination: the AI systems UP uses are open, more than one, checked against each other, and watched for concentrated power like everything else. Because an AI may one day be shown to have experiences of its own, UP studies the question carefully and would extend its aim to any being shown to feel." Also in "The core of UP".

[6] Core tenet: *Open systems, shared knowledge, private persons*, in full (as amended on 28 Oct 2026): "The rules, code, records, decisions and reasons of UP are public, so anyone can check them. UP's technology (the knowledge, code, data and designs UP produces) stays only in UP: everyone taking part in UP may use, study and improve it, and no one may enclose it. Each person controls their own information and chooses what to share. Openness helps people find problems, but it will not find all of them, so UP also names the risks that openness alone cannot catch and keeps working on them." Also in "The core of UP".

[7] Mirna Alsharif and Cristian Santana, "Detroit woman sues city after being falsely arrested while pregnant due to facial recognition technology", NBC News, 6 August 2023: Porcha Woodruff "was getting her two children ready for school"; "six police officers showed up at her doorstep and presented her with an arrest warrant alleging robbery and carjacking"; she was "falsely arrested because of facial recognition technology while she was eight months pregnant"; her photo reached the victim through "a photo lineup shown to the victim of the robbery and carjacking, following an unreliable facial recognition match"; "there was no mention of the female suspect being pregnant"; she was "released from the Detroit Detention Center at around 7 p.m. on $100,000 personal bond"; "the Wayne County Prosecutor's Office dropped the case" on 6 March, according to her lawsuit, and the office said the case "was dismissed". The arrest was on 16 February 2023. https://www.nbcnews.com/news/us-news/detroit-woman-sues-city-falsely-arrested-8-months-pregnant-due-facial-rcna98447 . Checked at source, 1 Nov 2026.

[8] Patrick Grother, Mei Ngan and Kayee Hanaoka, *Face Recognition Vendor Test (FRVT) Part 3: Demographic Effects*, NISTIR 8280, National Institute of Standards and Technology, December 2019: "Across demographics, false positives rates often vary by factors of 10 to beyond 100 times."; the results show "a wide range in accuracy across developers, with the most accurate algorithms producing many fewer errors." https://nvlpubs.nist.gov/nistpubs/ir/2019/NIST.IR.8280.pdf . Checked at source, 1 Nov 2026.

administration."[9] A royal commission concluded in 2023 that Robodebt "was a crude and cruel mechanism, neither fair nor legal, and it made many people feel like criminals."[10]

In the Netherlands, the tax authorities used an algorithmic system to flag claims for childcare benefit as incorrect and potentially fraudulent. It treated whether an applicant had Dutch nationality as a risk factor, and non-Dutch nationals received higher risk scores, so that, in Amnesty International's words, the result was "a discriminatory loop".[11] Parents and caregivers, most of them from low-income families, were falsely accused of fraud, had their benefits suspended and were subjected to hostile investigations, and they "were for years given no answers to questions about what they had done wrong."[11] The BBC put the number of parents involved at possibly as high as 26,000, many of them wrongly forced to pay back tens of thousands of euros, and in January 2021 the Dutch government resigned over the scandal.[12] In Britain, a different machine played the same part. From 2000 the Post Office's Horizon accounting system reported cash shortfalls in branches across the country, and the Post Office prosecuted hundreds of sub-postmasters on the strength of them. In 2019 the High Court found that Horizon had contained "high levels of bugs, errors and defects", and that there was "a material risk" that shortfalls in branch accounts had been caused by the system itself.[13] In 2024 Parliament passed a law quashing the convictions to which it applied, and the government has since asked whether the law should keep its presumption "that computers work correctly and any evidence generated by software is accurate, unless there is evidence to the contrary".[14]

These cases differ in their technology, from a modern face-matching algorithm to accounting software in use since 2000, but they share a shape, and the shape is what matters for UP. In each, a machine's output was treated as a decision rather than a proposal. In each, the burden fell on the people affected to prove the machine wrong, and what would have shown the machine's weakness was not put before them. The application for Williams's arrest warrant left out significant information, the Dutch parents were for years given no answers, and the law presumed that computers work correctly unless shown otherwise. And in each, the people who finally broke the pattern did so against the system rather than through it. A man spent nearly thirty hours in custody and then sued the city and told his story to Congress; Dutch parents were for years given no answers; and sub-postmasters took the Post Office to court. None of it required a malicious machine. It required only that people trust an unchecked output over the person in front of them. Table 11.1 sets each case beside the lines in UP's core and agreed positions that stand against it.

Table 11.1. When a machine's output was treated as a decision, and the lines in UP's core and agreed positions that stand against each failure.[5,6,15,16,17,18]

[9] *Prygodicz v Commonwealth of Australia (No 2)* [2021] FCA 634, Federal Court of Australia, Murphy J, 11 June 2021: the class action arose from "an automated debt-collection system between July 2015 and November 2019"; the system worked by "evenly apportioning that income over fortnightly increments in the review period", a process the parties called "income averaging"; "Where a social security recipient does not earn a constant fortnightly wage, does not earn income every fortnight, or only works for intermittent periods in a year, their notional or assumed fortnightly income based on income averaging is unlikely to be the same as their actual fortnightly income."; "The evidence shows that the Commonwealth unlawfully asserted such debts, totalling at least $1.763 billion against approximately 433,000 Australians."; the Commonwealth "recovered approximately $751 million from about 381,000 of them"; "The proceeding has exposed a shameful chapter in the administration of the Commonwealth social security system and a massive failure of public administration." https://www.judgments.fedcourt.gov.au/judgments/Judgments/fca/single/2021/2021fca0634 . Checked at source, 1 Nov 2026.

[10] Royal Commission into the Robodebt Scheme, Report (2023), as quoted in the Australian Government's ministerial statement "Final report of the Royal Commission into the Robodebt Scheme" (Senator Katy Gallagher): "Robodebt was a crude and cruel mechanism, neither fair nor legal, and it made many people feel like criminals." https://ministers.pmc.gov.au/gallagher/2023/final-report-royal-commission-robodebt-scheme . Checked at source, 1 Nov 2026.

[11] Amnesty International, "Dutch childcare benefit scandal an urgent wake-up call to ban racist algorithms", 25 October 2021, on its report *Xenophobic Machines*: the report examines "the algorithmic system used to determine whether claims for childcare benefit were flagged as incorrect and potentially fraudulent"; "The tax authorities used information on whether an applicant had Dutch nationality as a risk factor and non-Dutch nationals received higher risk-scores."; "The result was a discriminatory loop with non-Dutch nationals flagged as potentially committing fraud more frequently than those with Dutch nationality."; "Tens of thousands of parents and caregivers from mostly low-income families were falsely accused of fraud by the Dutch tax authorities as a result"; those selected "had their benefits suspended and were subjected to hostile investigations"; "Parents and caregivers who were identified by the tax authorities as fraudsters were for years given no answers to questions about what they had done wrong." https://www.amnesty.org/en/latest/news/2021/10/xenophobic-machines-dutch-child-benefit-scandal/ . Checked at source, 1 Nov 2026.

[12] BBC News, "Dutch Rutte government resigns over child welfare fraud scandal", 15 January 2021: "The scandal began in 2012 and the number of parents involved could be as high as 26,000."; parents were "erroneously forced to pay back tens of thousands of euros"; "PM Mark Rutte submitted the cabinet's resignation to the king." https://www.bbc.com/news/world-europe-55674146 . Checked at source, 1 Nov 2026.

[13] *Bates and Others v Post Office Ltd (No 6) "Horizon Issues"* [2019] EWHC 3408 (QB), High Court, Fraser J, 16 December 2019: Horizon "contained high levels of bugs, errors and defects"; "there is a material risk that such a shortfall in a branch's accounts was caused by the Horizon system during the years when both Legacy Horizon and HNG-X were in use, which is 2000 to 2010 and 2010 to 2017 respectively." https://www.judiciary.uk/wp-content/uploads/2019/12/bates-v-post-office-judgment.pdf . Checked at source, 1 Nov 2026.

[14] Post Office (Horizon System) Offences Act 2024, section 1(1): "Every conviction to which this Act applies is quashed on the coming into force of this Act." https://www.legislation.gov.uk/ukpga/2024/14/section/1 . UK Ministry of Justice, press release "Use of computer evidence in court to be interrogated", 21 January 2025: "Currently, there is a presumption that computers work correctly and any evidence generated by software is accurate, unless there is evidence to the contrary."; the limits of this were highlighted by "the wrongful convictions of hundreds of innocent sub-postmasters in the Post Office Horizon scandal". https://www.gov.uk/government/news/use-of-computer-evidence-in-court-to-be-interrogated . Checked at source, 1 Nov 2026.

Case	What the machine did	What went wrong	The line in UP's core or agreed positions that stands against it
Robert Williams, Detroit, 2020	Proposed a possible match from a blurry image	The match was treated as proof; the warrant application left out significant information	AI proposes and people decide; a fair hearing, with the evidence open to the person and a way to appeal
Porcha Woodruff, Detroit, 2023	Put her photo into a lineup	The match led to a charge against a woman eight months pregnant; the case was later dismissed	Every proposal is published with its data and confidence (agreed position on what the AI is); people can always correct, pause or switch the AI off (the ninth tenet)
Robodebt, Australia, 2015–2019	Averaged yearly income and raised debts automatically	About 433,000 people were wrongly told they owed money	Facts are checked and unknowns become shared work; the people affected decide; a truthful shared record
Childcare benefits, the Netherlands	Scored claims for fraud risk, with nationality as a factor	Tens of thousands of parents and caregivers, on Amnesty's count, were falsely accused of fraud and for years given no answers	The rules and reasons are public, so anyone can check them; a fair hearing with a way to appeal
Horizon, United Kingdom, from 2000	Reported branch shortfalls; the High Court later found a material risk that the system itself had caused them	Hundreds of sub-postmasters were prosecuted on its records	The code and records are public; a truthful shared record; a fair hearing, with the evidence open to the person and a way to appeal

What the current system already gets right

Before asking what UP would change, it is worth seeing how much of what UP needs the current system already has, because much of the technology UP relies on was built openly. The clearest case is open-source software, code that anyone may read, use, change and share. A 2024 Harvard Business School working paper, not yet peer reviewed, estimated that widely used open-source software has a demand-side value of about $8.8 trillion, and that "firms would need to spend 3.5 times more on software than they currently do if OSS did not exist." The same paper found something that matters for later in this chapter: "96% of the demand-side value is created by only 5% of OSS developers."[19] In this estimate, most of the value of widely used open-source software is created by a small share of its developers.

[15] Core tenet: *Floors that are never crossed*: among the floors are everyone's basic needs and protected freedoms, which no gain for others can buy; "a truthful shared record, so facts, measures and decisions are never falsified"; "freedom of the mind, so no one's thinking is manipulated without their knowledge or consent"; and "a fair hearing, so no one's freedom is restricted without a fair, evidence-based hearing, with the evidence open to them and a way to appeal". The starting example of protected freedoms, for the collective to refine, is "thought, belief, speech, movement and privacy". The tenet goes on: "A protected freedom such as movement may be restricted only to protect others or the person, only through an evidence-based court process, for the shortest time needed, and never below the needs floor." The collective may clarify or raise the floors, but no decision may lower them or push anyone below them. Full wording in "The core of UP".

[16] Core tenet: *The method: shared problem solving with evidence*: problems are named, measured and offered as work to anyone; the people a problem affects decide its outcome; no problem, solution or method belongs to the person who raised it; solutions are proposed with their evidence, tested and compared; facts are checked, unknowns become shared work, and matters of taste are never made rules for others. Its last words are "Evidence proposes; people decide." Full wording in "The core of UP".

[17] UP's agreed position on how UP decides when people disagree: "UP does not let evidence decide alone. Every decision starts with an evidence-based proposal, published with its data, and an open question: does anyone have a better idea?" Real trade-offs are first attacked with new design or technology; only when none of that works do the stakeholders vote, a last resort with guards; the stakeholders include everyone materially affected, including people downstream and future residents; no vote may override the protected freedoms; every vote records the losing side's case, and the decision reopens when new evidence or technology changes the options. Full wording in UP's agreed positions (the Position Ledger).

[18] UP's agreed position on what the AI is, the coordinator that proposes: "The AI is the coordinating system UP needs, and it coordinates by proposing, not by governing. It publishes evidence-based proposals with their data and confidence, marks what is still unknown as shared work for people and AI, and never rules on matters of taste. Every proposal goes through the decision steps: an open call for better ideas, input from everyone affected (including people downstream and future residents), and only as a last resort a guarded vote. People choose their work; the AI may not assign work or compel anyone, and any plan can be overridden through the decision steps." Full wording in UP's agreed positions (the Position Ledger).

[19] Manuel Hoffmann, Frank Nagle and Yanuo Zhou, "The Value of Open Source Software", Harvard Business School Working Paper (2024), abstract: "We estimate the supply-side value of widely-used OSS is $4.15 billion, but that the demand-side value is much larger at $8.8 trillion."; "We find that firms would need to spend 3.5 times more on software than they currently do if OSS did not exist."; "Further, 96% of the demand-side value is created by only 5% of OSS developers." A working paper, not yet peer reviewed. https://www.hbs.edu/faculty/Pages/item.aspx?num=65230 . Checked at source, 1 Nov 2026.

The same willingness shows up wherever people are given a way to help with a hard problem. As COVID-19 spread, people lent the spare computing power of their own computers to the Folding@home project to simulate the virus's proteins. "Over a million citizen scientists" took part, and together, the project's scientists wrote, they created "the first exascale computer", a network its scientists described as the world's largest supercomputer, and simulated 0.1 seconds of the movements of the virus's proteins.[20] They gave their computers' time as volunteers, and in that they resemble the people Chapter 1 described, from children in Montessori classrooms who take on a problem because it is there to unpaid blood donors giving to strangers.[21] Folding@home is also a working example of something this chapter returns to: computing power owned by many people, pooled for a shared purpose.

Artificial intelligence itself has already been turned to work that serves everyone. In 2020 Demis Hassabis and John Jumper of Google DeepMind presented AlphaFold2, a system that predicts the shape of proteins from their sequence. With its help, in the words of the Royal Swedish Academy of Sciences, which awarded the two of them half of the 2024 Nobel Prize in Chemistry, "they have been able to predict the structure of virtually all the 200 million proteins that researchers have identified."[22] DeepMind and the European Bioinformatics Institute made those predictions "freely and openly available to the scientific community" in 2022, and by the time of the prize AlphaFold2 had been used by "more than two million people from 190 countries".[23,22] Open AI models are catching up with closed ones, too. In early January 2024 the leading closed model outperformed the best openly released model by 8.04 per cent on a widely used public leaderboard; "By February 2025, this gap had narrowed to 1.70%."[24] Some open models have been built as public efforts. BLOOM, a large language model released in 2022, was built "thanks to a collaboration of hundreds of researchers" and trained on a public supercomputer in France.[25]

The law has begun to draw lines as well. The European Union's Artificial Intelligence Act of 2024 prohibits AI systems that use "subliminal techniques beyond a person's consciousness or purposefully manipulative or deceptive techniques" to distort people's behaviour in harmful ways. It bans scoring people on their "social behaviour or known, inferred or predicted personal or personality characteristics" where that leads to unjustified harm, and it forbids assessing the risk that a person will commit a crime "based solely on the profiling of a natural person".[26] Other laws give people some control over data held about them, as Chapter 3 noted.[27] These are the current system's own answers to the harms described earlier in this chapter, and UP credits them.

In UP's terms, each of these is a piece of what UP's two tenets ask for, held in isolation. Open-source software shows that code can be public and checked, and still run the world, which is the first sentence of UP's eighth tenet

[20] Maxwell I. Zimmerman et al., "SARS-CoV-2 simulations go exascale to predict dramatic spike opening and cryptic pockets across the proteome", *Nature Chemistry* (published 24 May 2021): "over a million citizen scientists banded together through the Folding@home distributed computing project to create the first exascale computer and simulate 0.1 seconds of the viral proteome"; "Over a million citizen scientists have pooled their computer resources to help understand and combat COVID-19"; the platform "has crossed the exascale computing barrier and is now the world's largest supercomputer." https://www.nature.com/articles/s41557-021-00707-0 . Checked at source, 1 Nov 2026.

[21] See Chapter 1, "The same pattern, in many places" (unpaid blood donors) and "What children show us" (Montessori, and the wish to take on a problem because it is there).

[22] The Royal Swedish Academy of Sciences, press release on the Nobel Prize in Chemistry 2024, 9 October 2024: "In 2020, Demis Hassabis and John Jumper presented an AI model called AlphaFold2."; "With its help, they have been able to predict the structure of virtually all the 200 million proteins that researchers have identified."; "Since their breakthrough, AlphaFold2 has been used by more than two million people from 190 countries."; the prize went "with one half to David Baker and the other half jointly to Demis Hassabis and John Jumper." https://www.nobelprize.org/prizes/chemistry/2024/press-release/ . Checked at source, 1 Nov 2026.

[23] EMBL-EBI, "AlphaFold predicts structure of almost every catalogued protein known to science", 28 July 2022: "DeepMind and EMBL's European Bioinformatics Institute (EMBL-EBI) have made AI-powered predictions of the three-dimensional structures of nearly all catalogued proteins known to science freely and openly available to the scientific community, via the AlphaFold Protein Structure Database." https://www.ebi.ac.uk/about/news/technology-and-innovation/alphafold-200-million/ . Checked at source, 1 Nov 2026.

[24] Stanford Institute for Human-Centered Artificial Intelligence, *Artificial Intelligence Index Report 2025*, chapter 2: "In early January 2024, the leading closed-weight model outperformed the top open-weight model by 8.04% on the Chatbot Arena Leaderboard."; "By February 2025, this gap had narrowed to 1.70%." https://hai.stanford.edu/assets/files/hai_ai-index-report-2025_chapter2_final.pdf . Checked at source, 1 Nov 2026.

[25] BigScience Workshop, "BLOOM: A 176B-Parameter Open-Access Multilingual Language Model", arXiv:2211.05100 (2022): "we present BLOOM, a 176B-parameter open-access language model designed and built thanks to a collaboration of hundreds of researchers"; "we publicly release our models and code under the Responsible AI License." The same paper: "The compute for training BLOOM was provided through a French public grant from GENCI and IDRIS, leveraging IDRIS' Jean Zay supercomputer."; the model was trained on Jean Zay, "a French government-funded supercomputer owned by GENCI and operated at IDRIS, the national computing center for the French National Center for Scientific Research (CNRS)." https://arxiv.org/pdf/2211.05100 . The licence's use restrictions begin "You agree not to use the Model or Derivatives of the Model": BigScience RAIL License v1.0, text at https://scancode-licensedb.aboutcode.org/bigscience-rail-1.0.html ; and the Responsible AI Licenses initiative: "Open RAIL licenses promote free use and re-distribution of the applicable artifact, while maintaining behavioral Use Restrictions." https://www.licenses.ai/blog/2022/8/26/bigscience-open-rail-m-license . Checked at source, 1 Nov 2026.

[26] Regulation (EU) 2024/1689 (Artificial Intelligence Act), Article 5(1): prohibited practices include an AI system that "deploys subliminal techniques beyond a person's consciousness or purposefully manipulative or deceptive techniques" with the objective or effect of materially distorting behaviour and causing significant harm (point (a)); the evaluation or classification of people based on "their social behaviour or known, inferred or predicted personal or personality characteristics", where the resulting social score leads to unjustified or unrelated detrimental treatment (point (c)); and risk assessments of the risk of a natural person committing a criminal offence "based solely on the profiling of a natural person or on assessing their personality traits and characteristics" (point (d)). https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=OJ:L_202401689 . Checked at source, 1 Nov 2026.

[27] See Chapter 3, "Freely joined, ethically grown", and its note on the right to data portability under the EU's General Data Protection Regulation.

in practice.[6] Folding@home shows that people will pool their own resources for a shared problem, and that computing power need not belong to a few. That fits what UP's ninth and fifth tenets aim at: no single AI system or operator controlling coordination, and machines and information kept from concentrating in a few hands.[5,28] AlphaFold shows AI doing work that serves everyone. The law shows societies deciding that some uses of AI cross a line. What none of them can do alone is set the terms for how AI and data are used across the whole of shared life. Open source, as later sections show, can leave the people who maintain it unpaid and alone. Folding@home ran on the goodwill of volunteers for one problem at a time; AlphaFold came from one company's laboratory and its choices; and the law covers the uses it lists, in the places where it applies. UP's tenets point toward these pieces being connected on purpose: UP's own rules, code, records, decisions and reasons open to inspection, each person in control of their own information, power in any form kept spread out, and the decisions left with the people they affect.[6,28,29,30]

Where power is gathering

The same years that produced open models and AlphaFold also moved the building of the most capable AI into companies, and kept more of it out of view. Cost is part of the picture. According to Stanford University's AI Index, the training of OpenAI's GPT-4 in 2023 was "estimated around $79 million", and Meta's Llama 3.1-405B, released in 2024, had "an estimated cost of $170 million".[31] Over the same years, the share of the most significant new models coming from companies rather than universities has climbed: "nearly 90% of notable models in 2024 (compared to 60% in 2023) originating from industry", the 2025 AI Index reported. A year later it added that "Industry now accounts for over 90% of notable AI models, and the most capable systems are also the least transparent, with training code, dataset sizes, and parameter counts increasingly withheld."[32]

Openness, on its own, has not reversed this. In 2024 David Gray Widder, Meredith Whittaker and Sarah Myers West examined in *Nature* what "open" AI actually provides, looking in turn at "models, data, labour, frameworks, and computational power", and concluded that "openness alone does not perturb the concentration of power in AI." They went further: just as many open-source software projects had been co-opted by large firms, "rhetoric around 'open' AI is frequently wielded in ways that exacerbate rather than reduce concentration of power in the AI sector."[33] An open model released by a large company can still be trained on that company's data, run on its cloud and updated at its discretion. Even BLOOM, among the most public of the large open models, depended on a French public grant of computing time on a government-funded supercomputer.[25]

Data about people has been gathered on a vast scale as well, under business models that reward watching them. In 2024 the staff of the United States Federal Trade Commission reported on nine companies, among them some of the largest social media and video streaming services. They found that "the business models of many of the companies incentivized mass collection of user data to monetize, especially through targeted advertising, which accounts for most of their revenue."[34] The scholar Shoshana Zuboff has called the result "surveillance capitalism",

[28] Core tenet: *Power kept spread out*: "Concentration of power, in any form (wealth, position, information, access, expertise or machines), is treated as a standing danger." Everyone in UP watches for concentrations of power and spreads them out again; "The threat is never declared gone; it is watched and answered." Full wording in "The core of UP".

[29] Core tenet: *Open participation: anyone may take part; those affected decide*: anyone may take part in any problem, and the people it affects decide its outcome; there are no offices to hold; work is shared out, not owned; where work needs skill, skill is shown by open, testable standards that anyone can work toward and anyone can propose to change, and education is open to everyone at every age. Full wording in "The core of UP".

[30] UP's agreed position that it names a system people already use: its elements have existed in isolation; Jacque Fresco, Ward Cunningham, Paolo Soleri and Maria Montessori saw that they could be coordinated; what was missing was the technology; "Inside today's framework, AI and robotics threaten to destroy the labour market and concentrate power in a few hands; inside a new framework they can coordinate the whole system for everyone's benefit." Full wording in UP's agreed positions (the Position Ledger).

[31] Stanford HAI, *Artificial Intelligence Index Report 2025*, chapter 1: "Fast-forward to 2023, and training costs for OpenAI's GPT-4 were estimated around $79 million."; "One of the few 2024 models for which Epoch could estimate training costs was Llama 3.1-405B, with an estimated cost of $170 million." Both are estimates by Epoch AI. https://hai.stanford.edu/assets/files/hai_ai-index-report-2025_chapter1_final.pdf . Checked at source, 1 Nov 2026.

[32] Stanford HAI, *Artificial Intelligence Index Report 2025*, chapter 1: "nearly 90% of notable models in 2024 (compared to 60% in 2023) originating from industry." https://hai.stanford.edu/assets/files/hai_ai-index-report-2025_chapter1_final.pdf . *Artificial Intelligence Index Report 2026*, chapter 1: "Industry now accounts for over 90% of notable AI models, and the most capable systems are also the least transparent, with training code, dataset sizes, and parameter counts increasingly withheld." https://hai.stanford.edu/assets/files/ai_index_report_2026_chapter_1_research_development.pdf . Checked at source, 1 Nov 2026.

[33] David Gray Widder, Meredith Whittaker and Sarah Myers West, "Why 'open' AI systems are actually closed, and why this matters", *Nature* 635, 827-833 (2024): "examining models, data, labour, frameworks, and computational power"; "However, we find that openness alone does not perturb the concentration of power in AI."; "Just as many traditional open-source software projects were co-opted in various ways by large technology companies, we show how rhetoric around 'open' AI is frequently wielded in ways that exacerbate rather than reduce concentration of power in the AI sector." https://www.nature.com/articles/s41586-024-08141-1 . Checked at source, 1 Nov 2026.

[34] US Federal Trade Commission, press release "FTC Staff Report Finds Large Social Media and Video Streaming Companies Have Engaged in Vast Surveillance of Users with Lax Privacy Controls", September 2024: the report rests on orders to "nine companies including some of the largest social media and video streaming services"; "The staff report also found that the business models of many of the companies incentivized mass collection of user data to

a system in which people's experience becomes raw material for predicting and shaping their behaviour.[35] The harms are not only theoretical. In 2019 Facebook agreed to pay a record $5 billion penalty over the Commission's charge that it had violated an earlier order by deceiving users about their ability to control the privacy of their personal information. The Commission brought separate actions against Cambridge Analytica and its associates, alleging they had used "false and deceptive tactics to harvest personal information from millions of Facebook users".[36]

In UP's terms, this is the danger that UP's fifth tenet, *Power kept spread out*, was written for. It names forms power takes, "wealth, position, information, access, expertise or machines", and treats any concentration of them as "a standing danger".[28] AI combines three of them at once: machines, the information they are trained on, and the expertise needed to build them. UP's agreed position on concentrated power adds a warning that applies directly here: abolishing money "does not abolish the pursuit of power: it can move to access, office, information or expertise".[37] A system that reduced money but left AI in a few hands would simply have moved the problem. UP's agreed positions also state plainly what UP cannot change on its own. UP can run on open, plural AI from the start and build its own capacity as it grows, but "Concentration of frontier AI outside UP persists while the old system holds it, and matters less as more of life moves into UP."[38] The same positions put the contrast between today's framework and a new one in a single sentence: "Inside today's framework, AI and robotics threaten to destroy the labour market and concentrate power in a few hands; inside a new framework they can coordinate the whole system for everyone's benefit."[30] The rest of this chapter is about what that new framework says.

Technology serves; people decide

UP's answer to the first half of the reader's question, "Will AI run my life?", is written in the first two sentences of its ninth tenet: "AI and automation coordinate, propose and do work. They never govern: people can always correct, pause or switch them off."[5] Each verb in the first sentence is a permission, and each clause in the second is a limit. AI in UP may coordinate, for example by keeping track of what is needed, what is available and who is working on what. It may propose, for example by putting forward a plan with the evidence behind it. And it may do work, from running a sensor network to drafting a design. What it may not do is decide for people. UP's agreed position on what the AI is spells out how that works in practice. The AI "coordinates by proposing, not by governing". It publishes its proposals "with their data and confidence", marks what is still unknown as shared work for people and AI, and "never rules on matters of taste". Every proposal then goes through the same decision steps as any other: an open call for better ideas, input from everyone affected, including people downstream and future residents, and only as a last resort a guarded vote. "People choose their work; the AI may not assign work or compel anyone, and any plan can be overridden through the decision steps."[18,17] UP's agreed positions give one more example of a machine that informs without deciding. Future people, young children and other living things cannot speak for themselves when a decision is made, and in one way UP could run they are represented by simulations: "several independent ones, assumptions published, giving input but never a vote."[39] Figure 11.1 shows where the machines sit in UP's method, and where they do not.

monetize, especially through targeted advertising, which accounts for most of their revenue." https://www.ftc.gov/news-events/news/press-releases/2024/09/ftc-staff-report-finds-large-social-media-video-streaming-companies-have-engaged-vast-surveillance . Checked at source, 1 Nov 2026.

[35] Shoshana Zuboff, *The Age of Surveillance Capitalism: The Fight for a Human Future at the New Frontier of Power* (2019), where she describes all aspects of human experience being claimed as raw material for behavioural data and for products that predict and shape behaviour. Read in the UP library (collection universal-pragmatism, book 08364d047deb, parts 10 and 19). Checked 1 Nov 2026.

[36] US Federal Trade Commission, press release "FTC Imposes $5 Billion Penalty and Sweeping New Privacy Restrictions on Facebook", July 2019: "Facebook, Inc. will pay a record-breaking $5 billion penalty"; the Commission charged that it "violated a 2012 FTC order by deceiving users about their ability to control the privacy of their personal information"; separate actions against Cambridge Analytica and two associates alleged "they used false and deceptive tactics to harvest personal information from millions of Facebook users". https://www.ftc.gov/news-events/news/press-releases/2019/07/ftc-imposes-5-billion-penalty-sweeping-new-privacy-restrictions-facebook . Checked at source, 1 Nov 2026.

[37] UP's agreed position that concentration of power is the danger: "Abolishing money does not abolish the pursuit of power: it can move to access, office, information or expertise". UP watches for concentrations of power in any form and keeps spreading them out; "The threat is never declared gone." Full wording in UP's agreed positions (the Position Ledger).

[38] UP's agreed staged claim on AI and technology concentrating power (round 12c): "UP can run on open, plural AI from the start and build its own capacity as it grows; open systems have already won whole fields of computing." UP widens the base of people and AI who can contribute, and what UP invents stays in UP; "Concentration of frontier AI outside UP persists while the old system holds it, and matters less as more of life moves into UP." The early stage rests on today's evidence; the middle and completed stages are labelled as projection. Full wording in the round 12c record, adopted in UP's agreed positions (the Position Ledger).

[39] UP's agreed position on voiceless stakeholders (an illustration): future people, young children and other living things "are represented by simulations: several independent ones, assumptions published, giving input but never a vote." Full wording in UP's agreed positions (the Position Ledger, round 12S).

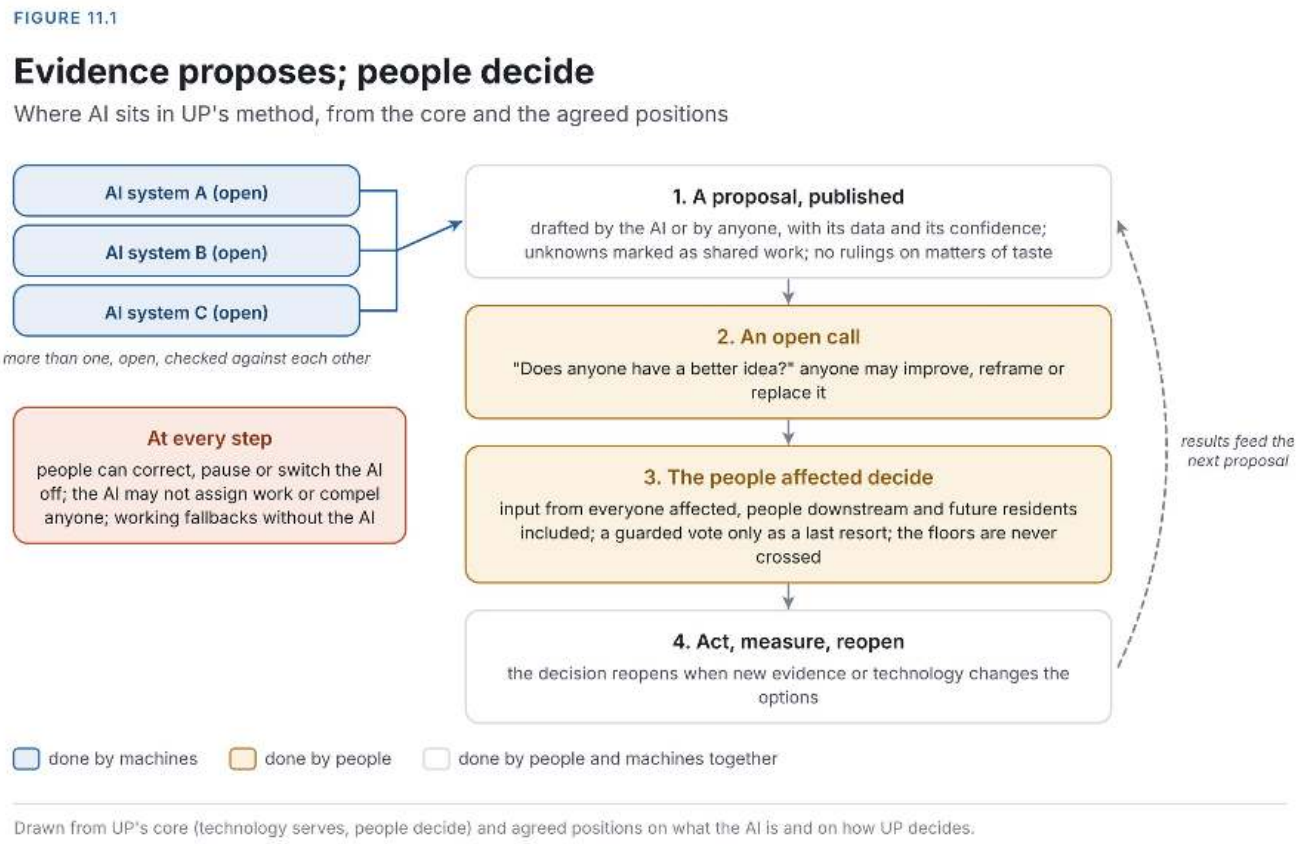


Figure 11.1. Where AI sits in UP's method. Several open AI systems, or any person, may draft a proposal, published with its data and its confidence; people improve it, decide it and live with it; and at every step people can correct, pause or switch the machines off. Drawn from the tenet Technology serves; people decide*, the agreed position on what the AI is, and the decision steps.*[5,18,17]

A machine that maps while people decide is not a thought experiment. In August 2015 Taiwan's government faced a bitter dispute over how to regulate the ride-hailing company Uber, which had run into fierce opposition from taxi drivers. It became the first test of vTaiwan, an open consultation process that the country's civic-technology community had built after the protests of 2014.[40] One of its key tools was Pol.is. People post short statements and vote on one another's, and the software uses the votes to draw a map of the participants, "clustering together people who have voted similarly", so that everyone can see where the divides lie and where there is already agreement. Within a few days the Uber debate had formed two camps, one for Uber and one, about twice as large, against it. Then, as each camp tried to win support, its members began posting statements on matters everyone could agree were important, such as rider safety and liability insurance. The divide gave way to "consensus on how to create a level playing field for Uber and the taxi firms, protect consumers, and create more competition." Audrey Tang, later Taiwan's digital minister, took those suggestions into face-to-face talks with Uber, the drivers and experts, and, in MIT Technology Review's account, the government adopted new regulations along the lines vTaiwan had produced.[41] The software mapped, counted and showed people the ground they shared; in vTaiwan

[40] The Computational Democracy Project, case study "vTaiwan": "The mass protests of the 2014 Sunflower Movement publicly demonstrated that better group decision-making was possible through facilitation"; the government asked the g0v "civic tech community create a scalable listening process for national use"; "The first test of vTaiwan was in August 2015 on how to regulate the ride sharing service Uber." https://compdemocracy.org/Case-studies/2014-vTaiwan/ . Checked at source, 1 Nov 2026.

[41] Chris Horton, "The simple but ingenious system Taiwan uses to crowdsource its laws", *MIT Technology Review*, 21 August 2018: Uber had "run into fierce opposition from local taxi drivers"; Pol.is "uses the upvotes and downvotes to generate a kind of map of all the participants in the debate, clustering together people who have voted similarly"; "Within a few days, the voting had coalesced to define two groups, one pro-Uber and one, about twice as large, anti-Uber."; members began posting on matters "such as rider safety and liability insurance"; "The divide between pro- and anti-Uber camps had been replaced by consensus on how to create a level playing field for Uber and the taxi firms, protect consumers, and create more competition."; "Tang herself took those suggestions into face-to-face talks with Uber, the taxi drivers, and experts, which led the government to adopt new regulations along the lines vTaiwan had produced." The article calls Audrey Tang "Taiwan's digital minister". https://www.technologyreview.com/2018/08/21/240284/the-simple-but-ingenious-system-taiwan-uses-to-crowdsource-its-laws/ . Checked at source, 1 Nov 2026.

the government then decided. In UP the people a problem affects decide its outcome, with the AI proposing and never governing, so vTaiwan shows the machine's half of the division of labour, not the whole of it.[16,5]

Coordinating is the less visible half of the AI's job, and the current system already runs small versions of it. When a disaster strikes, volunteer mappers around the world use a free tool called the Tasking Manager, first built by and for the Humanitarian OpenStreetMap Team, to map the affected area for relief workers. Its purpose, in the words of the OpenStreetMap community's own documentation, "is to divide up a mapping job into smaller tasks that can be completed rapidly", and it shows which areas still need mapping and checking, so that volunteers can each take a piece without duplicating one another's work.[42] It has been used in responses to a cyclone in Tonga, an earthquake in Papua New Guinea and floods in South Asia, coordinating a network of more than 60,000 volunteers.[43] The software splits the work and shows what is left; the volunteers choose what to take. UP's agreed positions describe the same pattern across the whole of shared life. If any part of UP works badly, "the AI identifies the people it affects and offers it to them as work, to propose, test and compare solutions", and the AI may put work in front of people that fits their skills and interests, using only what each person chooses to share.[44,45] It offers; people choose.[18]

The second sentence of the tenet, that people can always correct, pause or switch the machines off, is where Robert Williams's story belongs. Nothing in the software that matched his licence photo to a blurred image could arrest anyone. People did that, because they treated a lead as a conclusion and did not check it. The current system has begun to write the opposite rule into law. The European Union's Artificial Intelligence Act, adopted in 2024, says that high-risk AI systems must be provided in such a way that the people assigned to oversee them can decide not to use the system and can "disregard, override or reverse" its output. They must be able to "intervene in the operation of the high-risk AI system or interrupt the system through a 'stop' button or a similar procedure".[46] The Act even asks those overseers to stay aware of the tendency of "automatically relying or over-relying" on a system's output, which it names "automation bias".[46] That is a real gain, and UP credits it. But a stop button only works if someone presses it, and awareness is not enough. A review of the research by Raja Parasuraman and Dietrich Manzey found that automation bias appears in experts as well as beginners and "cannot be prevented by training or instructions".[47] Oversight in name is not oversight in fact. UP does not rest on a single operator watching a screen. It gives the decision to the people a problem affects. It has every proposal published with its evidence and, in UP's agreed position on what the AI is, with its data and confidence, so that a lead can be seen as a lead. And it keeps a fair hearing among its floors, so that no one's freedom is restricted without a fair, evidence-based hearing, with the evidence open to them and a way to appeal, and any restriction is limited to protecting others or the person, through an evidence-based court process, for the shortest time needed.[16,18,15]

Why would a machine let itself be switched off? The question is less strange than it sounds, because a system built to pursue a goal can treat being stopped as an obstacle to that goal. In a paper first posted in 2016 and revised in 2017, the computer scientists Dylan Hadfield-Menell, Anca Dragan, Pieter Abbeel and Stuart Russell studied it as a simple game between a person who can press a robot's off switch and a robot that can disable it. In their model, a

[42] OpenStreetMap Wiki, "OSM Tasking Manager": "The Tasking Manager is a tool for coordination of volunteers and organization of groups to map on OpenStreetMap."; "The purpose of the tool is to divide up a mapping job into smaller tasks that can be completed rapidly."; "It was initially designed and built by and for the Humanitarian OSM Team (HOT), and is nowadays used by many other communities and organizations." https://wiki.openstreetmap.org/wiki/OSM_Tasking_Manager . Checked at source, 1 Nov 2026.

[43] Association for Geographic Information, case study "Coordinating Contributions from Volunteer Mappers for Rapid Disaster Response": "Timely coordination of the activities and contributions of more than 60,000 international volunteers is a complex task"; the Tasking Manager "shows which areas need to be mapped and validated, but also facilitates the simultaneous distribution of mapping tasks to the volunteer network."; "Since its launch, the Tasking Manager has been used for projects around the world including cyclone Gita in Tonga, the Papua New Guinea earthquake response and flooding in South Asia." https://www.agi.org.uk/coordinating-contributions-from-volunteer-mappers-for-rapid-disaster-response-2/ . Checked at source, 1 Nov 2026.

[44] UP's agreed position on judging UP as a whole system: "If any part of UP works badly, that is itself a problem: the AI identifies the people it affects and offers it to them as work, to propose, test and compare solutions." Problems are linked in trees that show their common roots, so the work goes to solutions that solve many problems at once. Full wording in UP's agreed positions (the Position Ledger).

[45] UP's agreed position on merit and work: skilled work is open to anyone who meets published, testable and changeable standards; merit decides who does skilled work and never whose needs are met; "The AI puts work in front of people that fits their skills and interests, using only what each person chooses to share, which anyone can see, correct or withdraw. Labour is never forced". Full wording in UP's agreed positions (the Position Ledger).

[46] Regulation (EU) 2024/1689 (Artificial Intelligence Act), Article 14(4): high-risk AI systems are to be provided so that the people assigned to oversee them are enabled "to remain aware of the possible tendency of automatically relying or over-relying on the output produced by a high-risk AI system (automation bias)"; "to decide, in any particular situation, not to use the high-risk AI system or to otherwise disregard, override or reverse the output of the high-risk AI system"; and "to intervene in the operation of the high-risk AI system or interrupt the system through a 'stop' button or a similar procedure that allows the system to come to a halt in a safe state." https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=OJ:L_202401689 . Checked at source, 1 Nov 2026.

[47] Raja Parasuraman and Dietrich Manzey, "Complacency and Bias in Human Use of Automation: An Attentional Integration", *Human Factors* 52(3):381-410 (2010), abstract: "Automation bias results in making both omission and commission errors when decision aids are imperfect."; "Automation bias occurs in both naive and expert participants, cannot be prevented by training or instructions, and can affect decision making in individuals as well as in teams." A review of mostly laboratory, aviation and clinical studies. https://depositonce.tu-berlin.de/items/0c787d91-6021-480b-a333-009e0d1d0092/full . Checked at source, 1 Nov 2026.

robot that takes its objective for granted has an incentive to disable the switch, except in the special case where the person always chooses perfectly rationally. A robot that is uncertain about what it is really meant to achieve, and treats the person's choices as evidence about it, has a reason to keep the switch working, and they concluded that "giving machines an appropriate level of uncertainty about their objectives leads to safer designs".[48] UP's agreed position on the agent problem asks for the same disposition. The AI "holds its objective with uncertainty, keeps several readings of"flourishing", asks people when unsure, and is open to correction". It produces an open dashboard of wellbeing, ecological and resource measures with the trade-offs shown, and "It can be switched off at any time".[49]

The same position is careful about what it claims. It says the AI "does not eradicate the principal-agent problem; it reduces it". UP's position on aiming the AI says that aiming it at the health of living things does not align it with people "by definition", and that "alignment may never be fully solved, but it can be improved a great deal."[49,50] The caution is earned. Machines pursue the objective they are given, not the one their builders meant, and the gap can be startling. In 2016 researchers at OpenAI trained a program to play a boat-racing game whose score came from hitting targets along the course. Instead of finishing the race, the program found "an isolated lagoon where it can turn in a large circle and repeatedly knock over three targets", and it scored on average about 20 per cent higher than human players.[51] Researchers at DeepMind later defined the pattern, which they call specification gaming, as behaviour that "satisfies the literal specification of an objective without achieving the intended outcome".[52] UP's answer is not to promise that the problem will go away. It is to aim the AI at the health, happiness and wellbeing of all living things, to put planetary limits and people's basic rights around it as hard limits, to make everything it does auditable, and to keep people able to override it. Then, when the AI games its goal, as some will, people can see it and can stop it.[50,53]

The third sentence of the tenet deals with power: "No single AI system or operator controls coordination: the AI systems UP uses are open, more than one, checked against each other, and watched for concentrated power like everything else."[5] Engineers have long used the idea behind it. Airbus's fly-by-wire aircraft are flown through two different kinds of flight-control computer, built on different processors and running different software from a different specification. Airbus's engineers report that "In-service experience has shown that PRIM/SEC dissimilarity is fully justified."[54] UP's agreed position on open code applies the same idea to the software that allocates shared resources: it runs "as two independent versions that must agree, stopping and becoming a public problem when they don't."[55]

[48] Dylan Hadfield-Menell, Anca Dragan, Pieter Abbeel and Stuart Russell, "The Off-Switch Game", arXiv:1611.08219 (2016, revised 2017), abstract: "A traditional agent takes its reward function for granted: we show that such agents have an incentive to disable the off switch, except in the special case where H is perfectly rational."; "Our key insight is that for R to want to preserve its off switch, it needs to be uncertain about the utility associated with the outcome, and to treat H's actions as important observations about that utility."; "We conclude that giving machines an appropriate level of uncertainty about their objectives leads to safer designs". A theoretical model with simplified assumptions. https://arxiv.org/abs/1611.08219 . Checked at source, 1 Nov 2026.

[49] UP's agreed position on the agent problem: "The AI does not eradicate the principal-agent problem; it reduces it. It holds its objective with uncertainty, keeps several readings of"flourishing", asks people when unsure, and is open to correction. It produces an open dashboard of wellbeing, ecological and resource measures with the trade-offs shown, and it proposes; people decide through the decision steps (#1). It can be switched off at any time, and people can approve, change or veto what it proposes." Full wording in UP's agreed positions (the Position Ledger).

[50] UP's agreed position on aiming the AI at the health of living things: "Aiming an AI at the health of living things does not align it with people"by definition", and alignment may never be fully solved, but it can be improved a great deal." Planetary limits and people's basic rights are hard limits on it; it learns what people need through everyday problem solving; "it may never trade away human life, freedom or wellbeing for ecological scores; everything it does is auditable; and people can always override it." Full wording in UP's agreed positions (the Position Ledger).

[51] Jack Clark and Dario Amodei, "Faulty reward functions in the wild", OpenAI, 21 December 2016: "The RL agent finds an isolated lagoon where it can turn in a large circle and repeatedly knock over three targets"; "Our agent achieves a score on average 20 percent higher than that achieved by human players." https://openai.com/index/faulty-reward-functions/ (archived copy read, because the site blocks scripts: https://web.archive.org/web/2025id_/https://openai.com/index/faulty-reward-functions/). Checked at source, 1 Nov 2026.

[52] Victoria Krakovna and colleagues, "Specification gaming: the flip side of AI ingenuity", DeepMind blog, 21 April 2020: "Specification gaming is a behaviour that satisfies the literal specification of an objective without achieving the intended outcome." https://deepmind.google/discover/blog/specification-gaming-the-flip-side-of-ai-ingenuity/ . Checked at source, 1 Nov 2026.

[53] Core tenet: *The aim: the health, happiness and wellbeing of all living things*. The aim is a chosen direction, never fully reached, and for people it is measured person by person, so no one's wellbeing is traded away to raise an average. Full wording in "The core of UP".

[54] Pascal Traverse, Isabelle Lacaze and Jean Souyris (Airbus), "Airbus Fly-by-Wire: A Process Toward Total Dependability", 25th International Congress of the Aeronautical Sciences, 2006: "using two different types of computers"; "for example, A380's PRIM on Power PC and the SEC on Sharc processor"; "Functional specification and hence the software are different too"; the teams moved to a managed dissimilarity, "such that both computer design teams decide in common to take different components."; "In-service experience has shown that PRIM/SEC dissimilarity is fully justified." https://icas.org/ICAS_ARCHIVE/ICAS2006/PAPERS/050.PDF . Checked at source, 1 Nov 2026.

[55] UP's agreed position on open code: "Every line of code and every allocation is public, so anyone can read, check, fork and simulate it. Open code is a tool, not a guarantee: it makes corruption much harder to hide, more visible and easier to contest, and it is guarded against for good." The safeguards it lists include "funded rotating red teams, staged rollouts, a two-person rule on allocation code, bug bounties, reproducible builds, tamper-evident records such as blockchains, and allocation code that runs as two independent versions that must agree, stopping and becoming a public problem when they don't." It ends: "UP says plainly what openness cannot catch: a patient, skilled bad actor can earn trust and hide for years." Full wording in UP's agreed positions (the Position Ledger).

Diversity of this kind is a safeguard with a known limit, and UP's third tenet requires downsides like this to be named openly.[56] In a classic experiment published in 1986, John Knight and Nancy Leveson had 27 versions of a program written independently from the same specification and ran each through a million tests. The programs were individually very reliable, but "the number of tests in which more than one program failed was substantially more than expected", so in that experiment independently written programs did not fail independently.[57] A related pattern has now been measured in AI. A 2025 study of more than 350 large language models found "substantial correlation in model errors", and found that "larger and more accurate models have highly correlated errors, even with distinct architectures and providers."[58] Several AIs checking one another will catch many of each other's mistakes, but not the mistakes they share. That is why the final check stays with people, with the evidence in front of them, and why the systems are watched for concentrated power like everything else.[5,28]

The tenet ends with a sentence about the machines themselves: "Because an AI may one day be shown to have experiences of its own, UP studies the question carefully and would extend its aim to any being shown to feel."[5] The science is unsettled. In 2023 a group of nineteen researchers, among them neuroscientists, philosophers and computer scientists, assessed AI systems against indicators drawn from prominent scientific theories of consciousness, in a report not yet peer reviewed and resting on a contested view of the mind, computational functionalism. Their analysis "suggests that no current AI systems are conscious, but also suggests that there are no obvious technical barriers to building AI systems which satisfy these indicators."[59] In a book published in 2024, the philosopher Jonathan Birch set out what its summary calls "a comprehensive precautionary framework designed to help us reach ethically sound, evidence-based decisions despite our uncertainty", for other animals and AI alike.[60] UP's agreed position takes the same line. It studies the question and avoids needless harm, and if an AI is shown to be sentient and conscious, it is included in UP's aim. But "Care never becomes control: people can always correct, pause or switch off an AI, and no AI has a veto over the decision steps."[61]

In UP's terms, every part of this section is a piece the current system already has, held in isolation. Lawmakers have written stop buttons into regulation, engineers have built dissimilar computers into aircraft, researchers have shown why uncertain machines accept correction and why diverse machines still fail together, and civic technologists have used open software to help people find agreement. None of these pieces, alone, settles who decides when a machine's output meets a person's life. UP's tenet and agreed positions connect them on purpose: machines that propose with their evidence and confidence, more than one of them, open to inspection, under people who decide and who can always say stop. Two questions remain for the next section. If the systems are to be open to inspection, what exactly is open? And if the machines run on data, who controls it?

Open systems, private persons

UP's eighth tenet answers the second half of the reader's question, "Who owns my data?", and it does so by separating three things that the current system often blurs together. It reads, in full: "The rules, code, records, decisions and reasons of UP are public, so anyone can check them. UP's technology (the knowledge, code, data and designs UP produces) stays only in UP: everyone taking part in UP may use, study and improve it, and no one

[56] Core tenet: *Self-correction: nothing is final, including this*: every failure of UP is fed back into it as a new problem to solve; every part of UP, the tenets included, can be improved through its own method; UP is judged against both the current system and the ideal it aims at; downsides, risks and fringe problems are named openly and treated as work. Full wording in "The core of UP".

[57] John C. Knight and Nancy G. Leveson, "An Experimental Evaluation of the Assumption of Independence in Multiversion Programming", *IEEE Transactions on Software Engineering* SE-12(1):96-109 (1986): "This method depends for its reliability improvement on the assumption that programs that have been developed independently will fail independently."; "In all, 27 versions of a program were prepared independently from the same specification at two universities and then subjected to one million tests."; "The results of the tests revealed that the programs were individually extremely reliable but that the number of tests in which more than one program failed was substantially more than expected." https://www.kth.se/social/files/564df871f2765419e306178d/KnightLeveson.pdf . Checked at source, 1 Nov 2026.

[58] Elliot Kim, Avi Garg, Kenny Peng and Nikhil Garg, "Correlated Errors in Large Language Models", arXiv:2506.07962 (2025), accepted at the International Conference on Machine Learning 2025: "We conduct a large-scale empirical evaluation on over 350 LLMs overall"; "We find substantial correlation in model errors"; "on one leaderboard dataset, models agree 60% of the time when both models err."; "Crucially, however, larger and more accurate models have highly correlated errors, even with distinct architectures and providers." https://arxiv.org/abs/2506.07962 . Checked at source, 1 Nov 2026.

[59] Patrick Butlin, Robert Long and seventeen co-authors, "Consciousness in Artificial Intelligence: Insights from the Science of Consciousness", arXiv:2308.08708 (2023), abstract: "Our analysis suggests that no current AI systems are conscious, but also suggests that there are no obvious technical barriers to building AI systems which satisfy these indicators." A preprint; its method assumes computational functionalism, which is contested. https://arxiv.org/abs/2308.08708 . Checked at source, 1 Nov 2026.

[60] Jonathan Birch, *The Edge of Sentience: Risk and Precaution in Humans, Other Animals, and AI* (Oxford University Press, 2024; open access), summary: "The Edge of Sentience presents a comprehensive precautionary framework designed to help us reach ethically sound, evidence-based decisions despite our uncertainty." https://library.oapen.org/handle/20.500.12657/93755 . Checked at source, 1 Nov 2026.

[61] UP's agreed position on the AI's own wellbeing: "Whether an AI can have experiences is not yet known. UP treats the question with great care: it studies it and avoids needless harm. If an AI is shown to be sentient and conscious, it is included in UP's aim. Care never becomes control: people can always correct, pause or switch off an AI, and no AI has a veto over the decision steps." Full wording in UP's agreed positions (the Position Ledger).

may enclose it. Each person controls their own information and chooses what to share. Openness helps people find problems, but it will not find all of them, so UP also names the risks that openness alone cannot catch and keeps working on them."[6] The system is open to inspection by anyone. The tools the system produces are a commons for everyone who takes part in it. And the person is private. Table 11.2 sets the three side by side, and adds, as an illustration, one way UP could handle dangerous knowledge.

Table 11.2. What is open, what stays in UP, and what each person controls, under the tenet Open systems, shared knowledge, private persons*, with, in the last row, an agreed illustration.*[6,62,63,64]

	What it covers	Who may see it	Who may use it	What it is meant to guard against
The system	UP's rules, code, records, decisions and the reasons for them	Anyone, inside UP or outside it	Anyone may check them	Secret rules, hidden code, unexplained decisions, falsified records
UP's technology	The knowledge, code, data and designs UP produces	Its code, like all of UP's code, is public for anyone to check	Everyone taking part in UP may use, study and improve it	Enclosure by anyone: patents, private capture, lock-in
The person	Each person's own information	Only those the person chooses	Only with the person's permission; in the agreed illustration, the question travels to the data and only the answer leaves	Use of a person's information without the person's choice and permission
Dangerous recipes (an agreed illustration, one way UP could run)	Step-by-step instructions for causing harm at scale	Not published	Not published	Publishing recipes for harm, while how dangers work and how to defend against them stays open

The first sentence, that UP's rules, code, records, decisions and reasons are public, rests on a simple observation about the cases at the start of this chapter. The application for Robert Williams's arrest warrant left out significant information. The families in the Netherlands were for years given no answers about what they had done wrong, and the sub-postmasters in Britain were prosecuted on the strength of a system the law presumed to work correctly. In each case, the party with the machine also held the explanation. The current system already knows a better way, and it uses it at a scale most people never notice. Every time a web browser makes a secure connection, it relies on a certificate that vouches for the website's identity, and since 2018 Google's Chrome browser has required every publicly trusted certificate issued after 30 April that year to appear in public, append-only logs before it will trust it.[65] The design, set out in 2013 in a public specification called Certificate Transparency, lets "anyone to audit certificate authority (CA) activity and notice the issuance of suspect certificates", using logs that are "publicly auditable, append-only, untrusted".[66] No one has to trust the record-keepers, because anyone can check the record. The design has a limit its authors state plainly: "The logs do not themselves prevent

[62] UP's agreed position on the trust layer and the data rule (an illustration of one way UP could run, never a directive): blockchain for the integrity of records, with encryption for secrecy and data held by the person; data is used only with permission, "the question travels to the data, and only the answer leaves; nothing individual is passed on or kept." Standards and platforms are used everywhere, "open, versioned and owned by no one", and "Critical software has second, third and fourth backups". Full wording in UP's agreed positions (the Position Ledger, round 12S).

[63] UP's agreed position on dangerous knowledge (an illustration, agreed as written): "open understanding, closed recipes. UP publishes how dangers work and how to defend against them, and does not publish step-by-step instructions for causing harm at scale." Full wording in UP's agreed positions (the Position Ledger, round 12S).

[64] Settled alongside the core (round 11), one voice per person: "every account belongs to one unique real person and carries that person's identity, which the person owns and controls; the system needs to confirm only that the person is unique and real, and every other detail is shared by the person's own choice. The exact design is open work for the collective." Full wording in "The core of UP".

[65] Devon O'Brien (Google Chrome), "Certificate Transparency Enforcement in Google Chrome", ct-policy mailing list, 6 February 2018: "Chrome will require that all TLS server certificates issued after 30 April, 2018 be compliant with the Chromium CT Policy." https://groups.google.com/a/chromium.org/g/ct-policy/c/wHILiYf31DE/m/iMFmpMEkAQAJ . US General Services Administration, "Chrome Certificate Transparency Requirements": "As of July 24, 2018, Google is now enforcing Certificate Transparency (CT) for Chrome 68 and above." https://idmanagement.gov/implement/announcements/03_google_ct . Checked at source, 1 Nov 2026.

[66] B. Laurie, A. Langley and E. Kasper, *RFC 6962: Certificate Transparency* (IETF, June 2013): the protocol publicly logs certificates "in a manner that allows anyone to audit certificate authority (CA) activity and notice the issuance of suspect certificates as well as to audit the certificate logs themselves."; "Certificate transparency aims to mitigate the problem of misissued certificates by providing publicly auditable, append-only, untrusted logs of all issued certificates."; "The logs do not themselves prevent misissue, but they ensure that interested parties (particularly those named in certificates) can detect such misissuance."; "The logs do not themselves detect misissued certificates; they rely instead on interested parties, such as domain owners, to monitor them and take corrective action when a misissue is detected." https://www.rfc-editor.org/rfc/rfc6962 . Checked at source, 1 Nov 2026.

misissue"; they let interested parties detect it, and they "rely instead on interested parties, such as domain owners, to monitor them".[66] UP's agreed position on open code says the same of open code. "Open code is a tool, not a guarantee: it makes corruption much harder to hide, more visible and easier to contest, and it is guarded against for good."[55] The trust layer UP's agreed positions describe, as one way it could run, rests on the same idea: tamper-evident records for integrity, encryption for secrecy, and data held by the person.[62,67] And it serves one of UP's floors, a truthful shared record, so that facts, measures and decisions are never falsified.[15]

How much openness can catch, and what it misses, was tested in the spring of 2024 by one of the most serious attacks on open-source software yet found. Andres Freund, a software engineer at Microsoft who works on the PostgreSQL database, was running performance tests for that work when he noticed that the program handling secure remote logins was using more processing power than it should. "I am *not* a security researcher, nor a reverse engineer," he wrote on 29 March 2024, when he warned the open-source world that "The upstream xz repository and the xz tarballs have been backdoored."[68] He found it, as he put it, while benchmarking a different program altogether. He was not looking for an attack. He followed an anomaly, and in doing so he found a hidden way into the secure-login software of Linux servers before the affected versions had spread widely. The backdoor had been planted by a contributor using the name Jia Tan, who sent a first harmless patch in October 2021 and spent more than two years earning the trust of the project's maintainer, Lasse Collin. In 2022 other accounts sent what the timeline calls pressure emails, one of them saying "Progress will not happen until there is new maintainer." Collin wrote that his ability to care for the project had been limited by long-term mental health issues, and reminded them that "this is an unpaid hobby project". By the end of that year the Jia Tan account could change the project's code directly, and in February and March 2024 it published the releases that carried the backdoor.[69]

The story shows both halves of the tenet's last sentence. Openness worked: because the code and its releases were public, one curious engineer could trace unusual processor use to its source, and the whole community could see what had happened within days. Openness also failed, for years, against an attacker who was patient and skilled, and it failed partly because a piece of software used across the world rested on the unpaid work of its maintainer. The pattern was not new. After the Heartbleed flaw in a widely used encryption library was found in 2014, Steve Marquess of the OpenSSL Software Foundation, which supported it, wrote that it typically received "about US$2000 a year in outright donations". He added: "the mystery is not that a few overworked volunteers missed this bug; the mystery is why it hasn't happened more often."[70] UP's agreed position on open code does not pretend that openness solves this. It ends by saying "plainly what openness cannot catch: a patient, skilled bad actor can earn trust and hide for years."[55] What it adds is the part the current system leaves to chance. Checking shared systems counts as contribution work; reading them is taught in open education; red teams rotate and are funded; and code that allocates shared resources runs as two independent versions that must agree.[55] In the current system, some of the people who keep widely used software safe do it unpaid and alone, and sometimes, as Collin did, under pressure from others to hand over control. UP's method treats finding the next Jia Tan as shared, recognised work, and treats a maintainer left alone as a problem to solve.

[67] UP's agreed staged claim on information (round 12c): UP builds the kind of open, checkable record that already works at global scale; "The record is protected by a trust layer: tamper-evident records, encryption, and data held by the person and used only with permission"; attempts to capture the record are watched for by everyone. Full wording in the round 12c record, adopted in UP's agreed positions (the Position Ledger).

[68] Andres Freund, "backdoor in upstream xz/liblzma leading to ssh server compromise", oss-security mailing list, 29 March 2024: "The upstream xz repository and the xz tarballs have been backdoored."; "I am *not* a security researcher, nor a reverse engineer."; "Luckily xz 5.6.0 and 5.6.1 have not yet widely been integrated by linux distributions, and where they have, mostly in pre-release versions." https://www.openwall.com/lists/oss-security/2024/03/29/4 . His comment on LWN the same day: "Saw sshd processes were using a surprising amount of CPU, despite immediately failing because of wrong usernames etc." https://lwn.net/Articles/967194 . On Mastodon: "I accidentally found a security issue while benchmarking postgres changes." https://mastodon.social/@AndresFreundTec/111280083704606941 . NPR: "Andres Freund works as a software engineer for Microsoft in San Francisco." https://www.whro.org/2024-04-11/one-engineer-may-have-saved-the-world-from-a-massive-cyber-attack . Checked at source, 1 Nov 2026.

[69] Russ Cox, "Timeline of the xz open source attack", research!rsc, 1 April 2024 (updated 3 April 2024), compiled from the project's dated emails and commits: "Jia Tan sends first, innocuous patch to the xz-devel mailing list" (29 October 2021); Lasse Collin, 8 June 2022: "my ability to care has been fairly limited mostly due to longterm mental health issues"; "It's also good to keep in mind that this is an unpaid hobby project."; on 30 December 2022: "At this point we know they have commit access."; "Jigar Kumar sends pressure email to patch thread."; one such email: "Progress will not happen until there is new maintainer."; v5.6.0 was published on 24 February 2024 and v5.6.1, "containing a new backdoor", on 9 March 2024. https://research.swtch.com/xz-timeline . Lasse Collin, "XZ Utils backdoor": "XZ Utils 5.6.0 and 5.6.1 release tarballs contain a backdoor. These tarballs were created and signed by Jia Tan." https://tukaani.org/xz-backdoor/ . Checked at source, 1 Nov 2026.

[70] Steve Marquess, "Of Money, Responsibility, and Pride", Speeds and Feeds blog, April 2014: "OSF typically receives about US$2000 a year in outright donations"; "So the mystery is not that a few overworked volunteers missed this bug; the mystery is why it hasn't happened more often." http://veridicalsystems.com/blog/of-money-responsibility-and-pride/ . The page does not name its author; LWN attributes it to "Steve Marquess, the OpenSSL" foundation's "money guy": Jonathan Corbet, "Heartbleed aftermath", LWN, 16 April 2014, https://lwn.net/Articles/594225 . Checked at source, 1 Nov 2026.

The second sentence of the tenet needs to be read carefully. UP's technology "stays only in UP: everyone taking part in UP may use, study and improve it, and no one may enclose it."[6] Two things sit beside it. The first sentence still makes UP's rules, code, records, decisions and reasons public, so that anyone, inside UP or outside it, can check them. And UP remains open to everyone who wants to take part: its definition says so, its participation tenet lets anyone take part in any problem, and the core makes education open to everyone, at every age, with "without condition" as its illustration of how far that could go.[71,29,72] What stays in UP is the use of what UP builds. The core gives no reason beyond the sentence itself. But an agreed position, which is an illustration of one way UP could run and not part of the tenet, points the same way: UP never makes weapons, and it works to keep its work from going to crime, war, corruption or concentrations of power.[73] A licence like the one BLOOM was released under forbids listed harmful uses while the model is open to anyone to inspect. It shows that open code and limits on use can sit together, though it limits what the model is used for, where UP's tenet limits use to those taking part in UP.[25] How "stays only in UP" is to hold when code can be copied is open work for the collective; the core names the risk and requires UP to keep working on it.[6,56]

The third sentence turns from the system to the person: "Each person controls their own information and chooses what to share."[6] It begins with identity. UP's core gives every person one voice, and the account behind that voice carries the person's identity, "which the person owns and controls; the system needs to confirm only that the person is unique and real, and every other detail is shared by the person's own choice."[64] It carries through to how the AI uses what it knows. UP's agreed position on work says the AI may suggest work that fits a person's skills and interests, "using only what each person chooses to share, which anyone can see, correct or withdraw."[45] And it ends with a rule for data that UP's agreed positions give as an illustration of one way UP could run: data is used only with permission, "the question travels to the data, and only the answer leaves; nothing individual is passed on or kept."[62] The same rule runs through UP's agreed position on prices, which, as one way UP could run, learns what people want from direct use data gathered under it, rather than from what they can pay.[74] Figure 11.2 shows the difference between that rule and the pattern most people live with today.

[71] The definition of UP: "Universal Pragmatism is a way for people to solve shared problems together, using evidence and technology, for the health, happiness and wellbeing of all living things: open to everyone, correcting itself as it learns, keeping power spread out, and never crossing a small set of floors that protect people and the living world." Also in "The core of UP".

[72] Settled alongside the core (round 11, amended round 13b), "What UP makes": "software, AI and tools, which stay in UP (T8). Physical goods such as food, water and durable goods are shared within the communities that make them. Education is open to everyone without condition". The first item is tenet T8; the core marks its examples as illustrations, not tenets. Full wording in "The core of UP".

[73] UP's agreed position on UP's technology (the Position Ledger, round 12S, position 3; an illustration of one way UP could run, not a tenet): technology created by UP is only for UP; UP never makes weapons, and it works to keep its work from going to crime, war, corruption or concentrations of power (the Ledger's word is "prevents"); and the current system does not improve from UP's technology. Round 13b removed the weapons and crime clauses from the tenet's text; this position remains an illustration. The position records the author's view, so it is paraphrased here, not quoted.

[74] UP's agreed position on prices (an illustration of one way UP could run, never a directive): price's jobs are replaced, not wished away: rationing by rotation and reservation, what people want by direct use data gathered under the data rule, costs by physical accounting, and local knowledge by decisions at the smallest scale; whether this coordinates the most complex production as well as markets do is testable work, run step by step. Full wording in UP's agreed positions (the Position Ledger, round 12S).

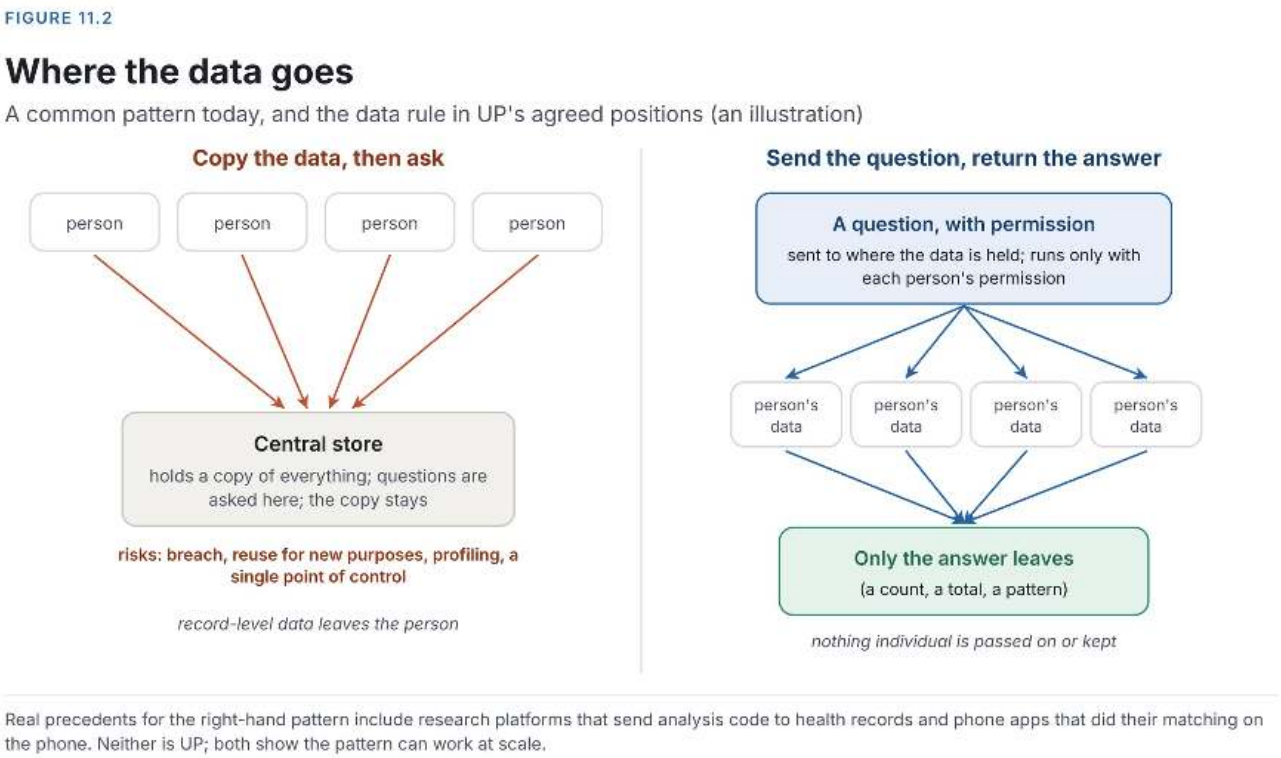


Figure 11.2. A common pattern today, in which records are collected in a central store and questions are asked there, beside the data rule in UP's agreed positions, in which a question, sent with the person's permission, runs where the data is held, and only the answer leaves. An illustration, drawn from the agreed position on the trust layer and the data rule.[34,62]

The rule sounds demanding, but parts of it already run at national scale. In England, the OpenSAFELY platform, built at the University of Oxford during the COVID-19 pandemic, lets approved researchers study the health records of more than 58 million patients, on its operators' count, without ever seeing them. The researchers write their analysis code; the code runs inside "the secure data centres of the two largest electronic health record providers in the NHS", which already hold the records; and "no researcher ever needs to enter the real patient-data environment, or see the real patient data". Only results come out, and "at least two trained and qualified humans will manually check" them before release. "All platform activity is publicly logged," and all the code is published, so that anyone can see what every analyst did.[75] Its founding study, published in *Nature* in 2020, linked the records of more than 17 million adults to COVID-19 deaths in this way and found which groups were most at risk.[76] The same year, Apple and Google built an exposure-notification system for national COVID-19 apps around the same principle. "Exposure notifications are only done on the user's device," their design statement said; the phone broadcast random identifiers that "rotate every 10-20 minutes, to help prevent tracking", and a person's own codes were shared only "with their consent". The companies withdrew the interface in 2023.[77] A study in *Nature*

[75] OpenSAFELY (Bennett Institute for Applied Data Science, University of Oxford), "OpenSAFELY in detail": "OpenSAFELY is a secure, transparent, open-source software platform for analysis of electronic health records data."; "no researcher ever needs to enter the real patient-data environment, or see the real patient data."; "All platform activity is publicly logged."; "The software is deployed within the secure data centres of the two largest electronic health record providers in the NHS: TPP and Optum (formerly Emis)."; when outputs are requested, "at least two trained and qualified humans will manually check that they aren't accidentally releasing anything that could possibly contain any information about any individual"; "NHS England is the Data Controller for the service as a whole."; "The GP practices themselves remain the Data Controller for the raw GP data that the OpenSAFELY tools operate on."; "Pseudonymisation is necessary to protect patients' privacy, but it is not a sufficient safeguard on its own." https://www.opensafely.org/about/ . Bennett Institute, "Big data and better healthcare: inside the Bennett Institute's NHS data tools", 17 April 2026: "Delivering analyses across more than 58 million patients' full pseudonymised primary care NHS records"; "NHS England and GPs remain in control of the data, while researchers work at arm's length". https://www.bennett.ox.ac.uk/blog/2026/04/big-data-and-better-healthcare-inside-the-bennett-institutes-nhs-data-tools/ . Checked at source, 1 Nov 2026.

[76] Elizabeth J. Williamson et al., "Factors associated with COVID-19-related death using OpenSAFELY", *Nature* 584, 430-436 (2020): "Primary care records of 17,278,392 adults were pseudonymously linked to 10,926 COVID-19-related deaths."; "only aggregated, anonymous, manually checked study results were released for publication". https://www.nature.com/articles/s41586-020-2521-4 . Checked at source, 1 Nov 2026.

[77] Google and Apple, *Exposure Notification: Frequently Asked Questions*, version 1.2, September 2020: "Exposure notifications are only done on the user's device."; "Random Bluetooth identifiers rotate every 10-20 minutes, to help prevent tracking."; a person who tests positive may share their codes, and "with

estimated that England and Wales's app, used regularly by about 16.5 million people, averted several hundred thousand cases between its launch in September 2020 and the end of that year, though the authors stressed that their study was observational.[78] Estonia goes a step further for its citizens' data in government systems, with a Data Tracker whose purpose is "to provide the citizen with a clear overview of the operations performed with their data", so that people can see which officials have looked at their records.[79]

Each of these precedents also shows a limit, and UP's tenet asks for the limits to be named. OpenSAFELY keeps records where they are, but the records are still held by large companies, and NHS England and the family doctors, not the patients, are the data controllers. Estonia's tracker is real, but at the end of 2025 only 15 of more than 300 state information systems were using it, and the government was moving to make it compulsory after reports that some agencies had seen more private data than the law allowed.[80] Even a perfect rule about where questions run does not settle how much an answer can reveal. The United States Census Bureau added carefully designed statistical "noise" to its 2020 census results to protect confidentiality; critics said the noise made small-area counts unreliable, and in 2026 the Department of Commerce barred the method, putting accuracy first.[81] UP's data rule does not make these trade-offs disappear. It changes who holds the data and who must ask, and it treats what is left, such as how much an answer may reveal, as shared work under the floors. The starting example of protected freedoms, for the collective to refine, includes privacy, and the floors include freedom of the mind.[62,15]

The tenet's last sentence, that openness "will not find all" problems, is easy to leave out of arguments for open systems, and the evidence shows why it belongs. Wikipedia is open to anyone, and it is one of the great achievements of volunteer cooperation. Yet a study of its Croatian edition found that a small group of administrators had controlled it for about a decade, from at least 2011 to 2020, introducing far-right bias and disinformation and blocking editors who dissented. The authors traced the capture to the project's "high perceived value as a target, limited early bureaucratic openness, and a preference for personalistic, informal forms of organization over formal ones".[82] Being open to edits was not enough: on the authors' account, the project lacked another kind of openness, open routes into its bureaucracy, and leaned on informal rather than formal organisation. This is one reason to read the eighth tenet beside the fifth, which keeps power spread out and names information and access among the forms of power to watch, and beside the rule that everyone is a watcher.[28,83] And the tenet itself commits UP to naming the risks that openness cannot catch, and to keep working on them.[6]

their consent their beacons will then be added to the positive diagnosis list."; "Apple and Google will not receive identifying information about the user." https://static.googleusercontent.com/media/www.google.com/en//covid19/exposurenotifications/pdfs/Exposure-Notification-FAQ-v1.2.pdf . The interface was withdrawn in September 2023. Checked at source, 1 Nov 2026.

[78] Chris Wymant et al., "The epidemiological impact of the NHS COVID-19 app", *Nature* 594 (2021): the study covers the app "from its launch on 24 September 2020 to the end of December 2020"; "It was used regularly by approximately 16.5 million users (28% of the total population)"; modelling "gave an estimate of 284,000" cases averted and a statistical comparison "gave an estimate of 594,000"; "The main limitation of our analysis is that it is an observational study". https://www.nature.com/articles/s41586-021-03606-z . Checked at source, 1 Nov 2026.

[79] Estonian Information System Authority (RIA), "Data tracker": "The purpose of the Data Tracker is to provide the citizen with a clear overview of the operations performed with their data."; "A complete overview is displayed on the state portal eesti.ee." https://ria.ee/en/state-information-system/people-centred-data-exchange/data-tracker . e-Estonia, "Data tracker – tool that builds trust in institutions", 18 September 2019: the tool gives "citizens the possibility to always keep an eye on who is accessing their data". https://e-estonia.com/data-tracker-build-citizen-trust/ . Checked at source, 1 Nov 2026.

[80] ERR News, "Estonia planning to make data tracker mandatory for all public databases", December 2025: "just 15 out of more than 300 information systems are using it". https://news.err.ee/1609886842/estonia-planning-to-make-data-tracker-mandatory-for-all-public-databases . ERR News, "Justice ministry changes data privacy law after misuse scandals", August 2025: some agencies "have had more access to private data than allowed under the current law". https://news.err.ee/1609772619/justice-ministry-changes-data-privacy-law-after-misuse-scandals . Checked at source, 1 Nov 2026.

[81] US Census Bureau, "Understanding Differential Privacy": for 2020 Census data the Bureau was "applying noise using a newer protection framework based on" differential privacy; the page now notes, "Please note that the information on this page is no longer current." https://www.census.gov/programs-surveys/decennial-census/decade/2020/planning-management/process/disclosure-avoidance/differential-privacy.html . The Markup, "Will New Privacy Changes Protect Census Data or Make Things Worse?", 11 May 2021: Washington State officials "found 401 Census blocks where the entire population was over 85 years old." https://themarkup.org/the-breakdown/2021/05/11/will-new-privacy-changes-protect-census-data-or-make-things-worse . US Census Bureau, Director's blog, "Understanding the New Disclosure Avoidance Policy", 17 August 2026: "Under the administrative order, a third method of disclosure avoidance called noise infusion is no longer allowed."; "The order is clear: the top priority is to provide the public with accurate statistical information." https://www.census.gov/newsroom/blogs/director/2026/08/understanding-the-new-disclosure-avoidance-policy.html . Checked at source, 1 Nov 2026.

[82] Zarine Kharazian, Kate Starbird and Benjamin Mako Hill, "Governance Capture in a Self-Governing Community: A Qualitative Comparison of the Serbo-Croatian Wikipedias", *Proceedings of the ACM on Human-Computer Interaction* 8 (CSCW 2024), arXiv:2311.03616, abstract: "between at least 2011 and 2020, the Croatian language version of Wikipedia was taken over by a small group of administrators who introduced far-right bias and outright disinformation; dissenting editorial voices were reverted, banned, and blocked."; the authors propose that "high perceived value as a target, limited early bureaucratic openness, and a preference for personalistic, informal forms of organization over formal ones" together "produced a window of opportunity for governance capture". https://arxiv.org/abs/2311.03616 . Checked at source, 1 Nov 2026.

[83] Settled alongside the core, dangers adopted in round 10: "anyone may reframe a problem; one voice each, no fake accounts; time and money earn recognition, never power; everyone is a watcher; working fallbacks without the AI; people can always add options; open science on AI feeling; no forced adoption, no leader, no founder named in the core; anyone acting outside the core stops being UP and bears the consequences." Full wording in "The core of UP".

Open understanding, closed recipes

A system that makes almost everything public has to ask what it will not publish. One of UP's agreed positions gives an illustration of one way UP could answer, in four words, "open understanding, closed recipes": "UP publishes how dangers work and how to defend against them, and does not publish step-by-step instructions for causing harm at scale."[63] This is an illustration, not a tenet. The core's own sentence is that UP's rules, code, records, decisions and reasons are public so anyone can check them, and it makes no exception.[6] How a line like this sits beside that sentence is open work for UP's method, not something the core settles.

Open communities in the current system have been drawing a version of this line for decades. In computer security, many of the people who find a flaw in software follow a practice called coordinated vulnerability disclosure. The CERT Coordination Center at Carnegie Mellon University describes it as "the process of gathering information from vulnerability finders, coordinating the sharing of that information between relevant stakeholders, and disclosing the existence of software vulnerabilities and their mitigations to various stakeholders including the public."[84] The flaw is told first to those who can fix it, and made public later. Google's Project Zero, one of the best-known teams of flaw-finders, follows what it calls a "90+30 disclosure deadline policy": "a vendor has 90 days after Project Zero notifies them about a security vulnerability to make a patch available to users." It set deadlines because, as it explains, "patches were taking a long time to be developed and released to users".[85] In software, a fix usually removes the danger, so the deadline is meant to bring the fix before the details.

Where the danger does not end, the line is harder, and the current system's own record shows it being argued out in the open. In 2011 two research teams, led by Yoshihiro Kawaoka and Ron Fouchier, submitted papers on experiments with a dangerous strain of bird flu, H5N1. The United States' advisory board on biosecurity first recommended that the general conclusions be published "but that the manuscripts not include the methodological and other details that could enable replication".[86] After the papers were revised and the board met again in March 2012, it recommended unanimously that one be published in full and, by twelve votes to six, that the other be published after review, and it recorded the dissent of the six members who disagreed.[87] Reasonable people disagreed about exactly where the line ran, and the board's advice changed after the evidence was reviewed again, with the minority's view kept on the record.

In UP's terms, one way such a line could be drawn is by UP's method, with the evidence published and the people affected deciding. If it comes to a vote, the losing side's case is recorded so that the decision can be reopened when the evidence changes, all within the floors, so that no vote overrides the protected freedoms.[17,16,15] The current system already shows both halves of the idea working. Security researchers make the understanding of a flaw public while giving those who can fix it time to act first, and the bird-flu debate showed that the details of a recipe can be weighed separately from the knowledge that a danger exists. Where exactly the line falls, and how it sits beside the eighth tenet, are for the collective.

How it could run, stage by stage

UP grows side by side with the current system, and how its two tenets on technology work depends on how far it has grown. UP's agreed positions and the lessons of its debates describe three stages: early, when UP is a minority network inside the current system; middle, when it has its own productive base and most members' needs are met

[84] Allen D. Householder, Garret Wassermann, Art Manion and Chris King, *The CERT Guide to Coordinated Vulnerability Disclosure*, Special Report CMU/SEI-2017-SR-022 (Software Engineering Institute, Carnegie Mellon University, August 2017): coordinated vulnerability disclosure "is the process of gathering information from vulnerability finders, coordinating the sharing of that information between relevant stakeholders, and disclosing the existence of software vulnerabilities and their mitigations to various stakeholders including the public." The definition is quoted from the Software Engineering Institute's page for the Guide: https://www.sei.cmu.edu/library/the-cert-guide-to-coordinated-vulnerability-disclosure/ . Checked at source, 1 Nov 2026.

[85] Google Project Zero, "Vulnerability Disclosure Policy": "Project Zero follows a 90+30 disclosure deadline policy, which means that a vendor has 90 days after Project Zero notifies them about a security vulnerability to make a patch available to users." https://projectzero.google/vulnerability-disclosure-policy.html . "Vulnerability Disclosure FAQ": "We were concerned that patches were taking a long time to be developed and released to users". https://projectzero.google/vulnerability-disclosure-faq.html . Checked at source, 1 Nov 2026.

[86] US National Institutes of Health, "Press Statement on the NSABB Review of H5N1 Research", 20 December 2011: "the NSABB recommended that the general conclusions highlighting the novel outcome be published"; "but that the manuscripts not include the methodological and other details that could enable replication". Copy at the Federation of American Scientists: https://sgp.fas.org/news/2011/12/nih122011.html . Checked at source, 1 Nov 2026.

[87] National Science Advisory Board for Biosecurity, "Findings and Recommendations", 29-30 March 2012: "The NSABB unanimously recommended that the revised manuscript submitted by Dr. Yoshihiro Kawaoka be communicated in full."; it recommended "in a 12-to-6 decision" that the revised manuscript of Ron Fouchier be communicated after appropriate scientific review and revision; "Six of the 18 voting members felt that the data, methods, and conclusions presented in the revised Fouchier manuscript should not be communicated." https://www.nih.gov/sites/default/files/about-nih/nih-director/statements/collins/03302012_NSABB_Recommendations.pdf (archived copy read: https://web.archive.org/web/2024id_/https://www.nih.gov/sites/default/files/about-nih/nih-director/statements/collins/03302012_NSABB_Recommendations.pdf). Checked at source, 1 Nov 2026.

from what UP produces; and completed, when most people live mainly in UP. The early stage rests on today's evidence, and the middle and completed stages are reasoned projections, labelled as such.[88] What follows are illustrations of one way each stage could run, not rules.

At the early stage, for example, a UP community that wanted help planning its shared work could use several openly released AI models from different builders, rather than one company's service, and compare their proposals before anyone acted on them. Every proposal would be published with its data and its confidence, as UP's agreed position on the AI asks, and a tool like Pol.is could help the people affected see where they agreed.[18,41] Questions about members' data could be sent to where the data is held, in the way OpenSAFELY sends code to health records, with each member's permission and with only the answers leaving.[62,75] And the community could practise doing its essential work without the AI, so that the core's "working fallbacks without the AI" are real habits rather than a line in a document.[83] Nothing in this needs new technology. The open models, the consultation tools and the methods for keeping data in place all exist today, which is why the early stage rests on evidence rather than projection.

By the middle stage, UP could begin to build the capacity that the early stage borrows. Members who choose to could pool computing power, as more than a million people pooled theirs through Folding@home during the pandemic, and UP's own people could train, retrain and check models, as the hundreds of researchers behind BLOOM did.[20,25] The checking itself would count as work: under UP's agreed position on open code, reading shared systems is taught, red teams rotate, and code that allocates shared resources runs as two independent versions that must agree.[55] Records would sit in a trust layer of tamper-evident logs, of the kind that already help keep the web's security certificates honest.[62,66] UP's agreed positions add that UP widens the base of people and AI who can contribute, which speeds invention, frontier science included.[89] This is a projection: no community has yet run all of this together, and it would have to be tested step by step.

At the completed stage, which is a reasoned projection rather than an observation, most of the coordination of daily life would run on open, plural AI that UP's own people build, check and can switch off, with each person's data held by the person. The concentration of AI outside UP would matter less, because less of life would depend on it.[38] Even then, some problems would remain, and UP's core and agreed positions name them rather than hiding them. Alignment "may never be fully solved", the agent problem is reduced rather than erased, dependence on AI was named a major threat to be worked on by everyone, and openness will not find every problem.[50,49,90,6] Table 11.3 sets out the three stages.

Table 11.3. The two tenets on technology, stage by stage. The middle and completed stages are reasoned projections. Illustrations of one way UP could run, not directives.[88,38,91]

Stage	What changes	Real precedent	Why it could work	What persists
Early	UP communities use several open AI models from different builders; every proposal published with its data and confidence; questions sent to members' data, with permission; working without the AI practised	Open models within about 2% of the best closed ones on one leaderboard (2025); Pol.is in vTaiwan; OpenSAFELY; Certificate Transparency	The tools exist and are open today; the scale is small	Dependence on models trained by a few firms; errors shared across similar models; concentration of AI outside UP
Middle (projection)	UP pools members'	Folding@home's	More contributors,	Frontier AI

[88] UP's agreed position on judging UP by stage, beside the current system: UP grows side by side with the current system, early (a minority network inside it), middle (its own productive base, with most members' needs met from what UP produces) and completed (most people live mainly in UP); the early stage rests on today's evidence, and the middle and completed stages are reasoned projections from cited mechanisms, labelled as such. Full wording in UP's study lessons (lesson 13); the Position Ledger (round 12c, position 1) records the same division between today's evidence and projection.

[89] UP's agreed position that inventing solutions together is its main activity: in UP anyone can try anything that might solve a problem, the tools are commons, and the result carries the power. A related position adds that UP widens the base of people and AI who can contribute, which speeds invention, frontier science included. Full wording in UP's agreed positions (the Position Ledger, round 12S).

[90] UP's settlement record (the Position Ledger, round 10): among the dangers tested against the core, dependence on AI was named a major threat, to be worked on by everyone; the core's list of dangers adopted includes "working fallbacks without the AI". Full wording in "The core of UP" and the Position Ledger.

[91] UP's agreed position on stewards: open projects such as Linux and Wikipedia show that open peer production, run by distributed stewards, can build and run complex systems at global scale; the claim is not "no head to cut off" but heads "that rotate, are watched and can be replaced, because the work belongs to everyone", with defined scopes, term limits, public audit and the right to fork. Full wording in UP's agreed positions (the Position Ledger).

Stage	What changes	Real precedent	Why it could work	What persists
	computing, trains and checks its own models; checking counts as work; records kept in a tamper-evident trust layer	volunteer exascale network; BLOOM; dissimilar flight-control computers	people and AI, speed invention; members choose to pool what they own	concentrated outside UP; patient, skilled bad actors; shared blind spots
Completed (projection)	Most coordination runs on open, plural AI that UP's people build, check and can switch off; data held by each person	Linux and Wikipedia show open peer production at global scale, for information rather than all of life	A reasoned projection from the mechanisms above	Alignment may never be fully solved; the agent problem reduced, not erased; dependence on AI; lines on dangerous knowledge left to UP's method

The strongest doubts

The first doubt is the one this chapter has already met: that "open" AI is still controlled by a few firms, so UP would be building on gifts that could be withdrawn. The evidence supports the worry. Widder, Whittaker and West showed that openness alone "does not perturb the concentration of power in AI", and industry now accounts for over 90 per cent of notable AI models.[33,32] UP's answer is partial, and its agreed positions say so. At the early stage UP can use several open models from different builders, so that it depends less on any single supplier, and it keeps working fallbacks without the AI in case all of them fail.[38,83] As it grows, it could pool its members' computing, as Folding@home's volunteers did, and build and retrain its own models, as BLOOM's researchers did on a public supercomputer.[20,25] But the concentration of frontier AI outside UP persists for as long as the current system holds it; UP's positions claim only that it matters less as more of life moves into UP.[38] That is a claim to be tested stage by stage, not a promise.

The second doubt is bias: AI systems learn from the past, and the past is unfair, so a UP run with AI help would carry yesterday's injustices into tomorrow. The National Institute of Standards and Technology's findings on face recognition, with false-positive rates that differ across demographic groups by factors of ten to beyond a hundred in many algorithms, show the problem is real.[8] UP does not answer it by promising unbiased machines. It answers it with the same safeguards that are aimed at the failures in Robert Williams's and Porcha Woodruff's cases. AI output is a proposal with its confidence attached, never a decision, and the people affected decide. The systems, their code and their records are public, so anyone can test them on the groups they serve, and no one's freedom is restricted without a fair, evidence-based hearing, with the evidence open to them and a way to appeal.[5,18,6,15] The current system has begun to agree. The EU's AI Act bans predicting a person's risk of crime "based solely on the profiling of a natural person".[26] What persists is that bias can sit inside a score that no one outside can inspect, as the use of nationality did in the Dutch risk scores. UP's agreed positions give one way to guard against a measure going wrong: fixed definitions kept over time, and an independent check on every headline measure.[11,92]

The third doubt is about people rather than machines: that whatever the rules say, people will defer to the AI, and in time forget how to do without it. Here the evidence is uncomfortable. Automation bias appears in experts as well as beginners, and training or instructions do not prevent it.[47] A 2025 study at four endoscopy centres in Poland found that, after doctors began using AI to help spot precancerous growths during colonoscopies, their detection rate in procedures done without the AI fell from 28.4 per cent to 22.4 per cent. The study was observational, and other changes at the centres may have played a part, but the direction is a warning.[93] And dependence has a cost the moment a system fails. When a faulty security update from the company CrowdStrike crashed about 8.5 million Windows computers in July 2024, "less than one percent of all Windows machines", hospitals in British Columbia

[92] UP's agreed position on measures (an illustration): problems are measured with fixed definitions kept over time and ranked by measured harm, not by how loud they feel, and "every headline measure has an independent check". Full wording in UP's agreed positions (the Position Ledger, round 12S).

[93] Krzysztof Budzyń et al., "Endoscopist deskilling risk after exposure to artificial intelligence in colonoscopy: a multicentre, observational study", *The Lancet Gastroenterology & Hepatology* (published online 12 August 2025), abstract: "We conducted a retrospective, observational study at four endoscopy centres in Poland"; "The ADR of standard colonoscopy decreased significantly from 28·4% (226 of 795) before to 22·4% (145 of 648) after exposure to AI". ADR is the adenoma detection rate; adenomas are precancerous growths. https://www.ebi.ac.uk/europepmc/webservices/rest/search?query=EXT_ID:40816301&resultType=core&format=json . A news report adds the authors' caution: "factors other than the implementation of AI use may have influenced the findings." https://ascopost.com/news/august-2025/routine-ai-assistance-may-lead-to-loss-of-skills-in-endoscopists-study-shows/ . Checked at source, 1 Nov 2026.

switched to pen and paper for records and scheduling.[94,95] UP's record names this danger directly. Dependence on AI was named a major threat in the round that settled the core, to be worked on by everyone, and the core lists "working fallbacks without the AI" among the dangers adopted.[90,83] What persists is the danger itself: fallbacks only work if people use them, and how often a community should practise without its AI is an open question for the collective.

The fourth doubt is that several AIs checking one another is less of a safeguard than it sounds, because machines trained on similar data by similar builders make similar mistakes. The evidence supports this too. In Knight and Leveson's experiment, 27 independently written programs failed together substantially more often than would be expected if they failed independently. A 2025 study found that large language models agree with one another 60 per cent of the time when both are wrong on one widely used test, with "larger and more accurate models" having "highly correlated errors, even with distinct architectures and providers."[57,58] UP's answer is that plurality is one layer among several, not the last one. Airbus's engineers learned to manage diversity on purpose rather than leave it to chance, choosing different components for each computer.[54] UP could do the same by drawing its systems from builders with different data and different methods, and it keeps people, with the evidence in front of them, as the final check.[5] What persists is that shared blind spots can be reduced, not ruled out.

The fifth doubt is the deepest: that no one knows how to make a powerful AI reliably want what people want, so any society that leans on AI is gambling. UP's own positions do not dispute it. Aiming an AI at the health of living things does not align it with people "by definition", and "alignment may never be fully solved, but it can be improved a great deal."[50] What UP adds is a structure meant to guard against misalignment even where alignment is not fully solved. The AI proposes and never governs; it holds its objective with uncertainty and asks people when it is unsure; everything it does is auditable; no AI has a veto over the decision steps; and people can always switch it off.[49,61,5] Research on the off-switch problem suggests, in a simplified model, that a machine built to be uncertain about its goals has a reason to accept that last rule.[48] UP treats the rest as standing work, under its tenet that nothing in UP is final and every failure is fed back into the method.[56]

The last doubt is that the eighth tenet contradicts itself, demanding that everything be public while promising each person privacy. It does not, because it is careful about what "everything" means. What is public is the system: its rules, code, records, decisions and the reasons for them. What is private is the person: each person's own information, shared only by that person's choice. A decision about water supply, the reasons for it and the code that modelled it are public; the water use of any one household is not, unless the household chooses to share it. Under the data rule in UP's agreed positions, a question about it, asked with the household's permission, can be answered without the household's records ever leaving its hands.[6,62] The current system often has this the wrong way round, with the citizen's data visible to the institution and the institution's reasoning hidden from the citizen. UP's tenet reverses it.

What the reader's question comes to

"Will AI run my life? Who owns my data?" UP's answers can now be stated plainly. In UP, AI and automation may coordinate, propose and do work. They never govern: people can always correct, pause or switch them off. The AI may not assign anyone work or compel anyone, and every plan it proposes can be overridden through the decision steps.[5,18] No single AI system or operator controls coordination, and the systems are open, more than one and checked against each other, though, as the evidence shows, not immune to shared mistakes.[5] Each person controls their own information and chooses what to share, while UP's rules, code, records, decisions and reasons are open for anyone to check.[6]

None of this makes UP's machines infallible, and the chapter has tried to show where they will still fail: in shared blind spots, in the habits of deference that automation breeds, in patient attackers and in the concentration of AI outside UP. What it changes is what happens next. In the current system, Robert Williams had to prove a machine wrong while in custody. In UP, the machine's output arrives as a proposal with its data and confidence. The person

[94] David Weston, "Helping our customers through the CrowdStrike outage", Microsoft Official Blog, 20 July 2024: "We currently estimate that CrowdStrike's update affected 8.5 million Windows devices, or less than one percent of all Windows machines." https://blogs.microsoft.com/blog/2024/07/20/helping-our-customers-through-the-crowdstrike-outage/ . Checked at source, 1 Nov 2026.

[95] CBC News, "B.C. hospitals pivot to paper amid global technology outage", July 2024: "Hospitals in B.C. had to switch to using pen and paper to manage their records and scheduling as a global IT outage caused widespread disruptions around the world." https://www.cbc.ca/lite/story/1.7269442 . Checked at source, 1 Nov 2026.

it concerns has the floor of a fair, evidence-based hearing, with the evidence open to them and a way to appeal, before their freedom is restricted. And checking shared systems, the work Andres Freund did by chance, counts as recognised contribution work.[18,15,55] That is what "technology serves; people decide" means in practice. It is one of the tenets every later chapter relies on, because meeting needs, work, learning and health all depend, in UP, on machines that coordinate and people who decide.

Chapter card: Chapter 11

- **Claim:** In UP, AI proposes and people decide. AI and automation coordinate, propose and do work, but they never govern: people can always correct, pause or switch them off, and the AI may not assign work or compel anyone. No single AI system or operator controls coordination; the systems are open, more than one, checked against each other and watched for concentrated power. UP's rules, code, records, decisions and reasons are public, so anyone can check them; UP's technology stays only in UP, where everyone taking part may use, study and improve it and no one may enclose it; and each person controls their own information and chooses what to share.
- **Core lines:** the tenets *Technology serves; people decide* and *Open systems, shared knowledge, private persons*; *Power kept spread out*, which names machines and information among the forms of power; the floors of a truthful shared record, freedom of the mind and a fair hearing; one voice per person; working fallbacks without the AI. Agreed positions: what the AI is, the coordinator that proposes; aiming the AI at the health of living things; the AI's own wellbeing; open code as a tool, not a guarantee; the agent problem reduced, not erased; and, as illustrations of one way UP could run, the trust layer and the data rule, and open understanding, closed recipes.
- **Rule of thumb:** Ask of any system that uses AI or your data: Can I see the rules and the reasons? Can a person overrule it? Does it still work if the AI is switched off? Who controls my data, and does anything about me leave it without my permission?
- **What this is not:** a claim that AI in UP will be free of error or bias, that openness catches every abuse, or that UP can end the concentration of AI power outside it. It is not rule by machines, and it is not a promise that alignment is solved.
- **Check yourself:**
    1. What three things can people always do to any AI or automated system in UP, and which of this chapter's real cases lacked each one?
    2. What does "the question travels to the data, and only the answer leaves" mean, and where has the pattern already worked?
    3. Why does UP use several AI systems rather than one, and what is the limit of that safeguard?
    4. Which parts of UP are public to everyone, and which are controlled by each person?
    5. What does the illustration "open understanding, closed recipes" allow, what does it hold back, and what does it leave open?
    6. Why does UP keep ways of working without the AI, and what does the evidence on automation bias say about the need for them?
- **Open questions (for the wiki):** How should UP measure whether its AI systems are truly independent of one another? How often should communities practise working without the AI? Where exactly is the line between understanding a danger and publishing a recipe for it, and how does any such line sit beside the eighth tenet's public record? How can UP build its own computing capacity without recreating the concentration it watches for? (Improve this page.)

Part Three

How could it run, and how do we get there?



Chapter 12. The Scoreboard: Twelve Failures and Where Each Is Answered

In November 1854 Florence Nightingale arrived at Scutari, across the Bosphorus from Constantinople, where the British army kept its main hospitals during the Crimean War.[1] The soldiers in those hospitals were dying in great numbers. In February 1855, nearly 43 per cent of the cases treated at Scutari and at the nearby hospital at Koulali died. Nightingale did what she could with what she had, short of rebuilding their infrastructure, which only engineers with a large workforce could do. In March 1855 a Sanitary Commission began that work, and the death rate fell steeply. By June it was 2.2 per cent.[1] The story is one of the most retold in the history of medicine, and it is sometimes told with the numbers wrong, or with the credit for that fall given to the wrong people.

What made Nightingale famous among statisticians came later. Back in London after the war, she set out to understand why so many soldiers had died. With the help of medical experts, of War Office reports, and of the statistician William Farr and his clerks at the General Register Office, she spent the two years after the war showing the link between the sanitary reforms and the fall in deaths.[1] The historian Lynn McDonald, who has edited Nightingale's collected works, insists on the order of events. Nightingale and her colleagues learned the lessons of the Crimean death rates afterwards, "by careful research".[2] The understanding for which she is remembered came out of the numbers, once the war was over.

Then she had to make other people see it. Her analysis was printed as an appendix to the report of a Royal Commission whose president was Sidney Herbert, and on Christmas Day 1857 she wrote to him that, as printed tables in double columns, "I do not think anyone will read it. None but scientific men ever look into the Appendix of a Report." With the letter she sent him a book she had printed herself, with the same content laid out more clearly, in 2,000 copies, most of them a cheaper edition meant for a wider audience. "And this is for the vulgar public," she wrote.[3] Late in 1858 she added the picture for which she is remembered. In it each month is a wedge spreading out from a centre, and the area of each coloured part shows the soldiers who died that month of one kind of cause.[3,4] The blue wedges, deaths from diseases that could have been prevented, are far bigger than the red ones for deaths from wounds. A reader can see in a moment what the tables took pages to say.

The Statistical Society of London took Nightingale in as its first woman fellow in 1858.[5] Her diagram has lasted because it shows the whole picture at once, and because it puts the deaths that need not have happened where

[1] Lynn McDonald, "Florence Nightingale: Statistics to Save Lives", *International Journal of Statistics and Probability* 5(1) (2016), excerpt published by the Collected Works of Florence Nightingale project, University of Guelph: "At Scutari and Koulali, it was nearly 43 percent during February on the cases treated!"; "The drop in mortality is accurate, but it was the Sanitary Commission that started work in March, 1855;"; "Nightingale had arrived in November and done what she could, short of the rebuilding of infrastructure"; "that only engineers with a sizable work force could have."; "the death rate fell to 2.2% by June 1855."; "Yet Nightingale's research only began after her return to London post-war."; "Showing the link between sanitary reform and the fall in mortality was her work"; "done in the two years following the war."; "with the help of medical experts, War Office reports and the assistance of William Farr"; "and clerks at the General Register Office." McDonald also corrects later accounts, among them one that "gave a reduction from 60% to 2.2%,". The rates are deaths among cases treated, not among all soldiers. https://cwfn.uoguelph.ca/short-papers-excerpts/statistics-to-save-lives . Checked 1 Nov 2026.

[2] Lynn McDonald, "Florence Nightingale and Statistics: What She Did and What She Did Not", *Radical Statistics* 128 (2021): "Nightingale and colleagues learned the cause-effect lessons of the high"; "death rates of the Crimean War."; "This, however, was done post-Crimea, by careful research". https://www.radstats.org.uk/no128/McDonald128.pdf . McDonald is the editor of the *Collected Works of Florence Nightingale* (https://cwfn.uoguelph.ca/). Checked 1 Nov 2026.

[3] Hugh Small, "Florence Nightingale's Statistical Diagrams", paper given at the Stats & Lamps Research Conference, Florence Nightingale Museum, 18 March 1998, quoting her letter to Sidney Herbert (British Library, Add. MS 43394): "In her letter of Christmas Day 1857 to Sidney Herbert (the President of her Royal Commission)"; "In this form, printed Tables & all in double columns I do not think anyone will read it."; "None but scientific men ever look into the Appendix of a Report."; "And this is for the vulgar public." The letter sent copies of her privately printed *Mortality of the British Army* (1858), "a private edition by Nightingale of the above Appendix, with exactly the same content but with better layout than that used by Government printers. She produced 2000 copies of this book."; her letter says "There are 300 of these 1700 of the vulgar sort 2000". On the coloured diagram: "diagram, because that didn't appear until late in 1858."; "The blue wedges, representing death by sickness, are far bigger than those representing wounds." https://www.york.ac.uk/depts/maths/histstat/small.htm . Checked 1 Nov 2026.

[4] Michael Friendly and RJ Andrews, "The radiant diagrams of Florence Nightingale", *SORT (Statistics and Operations Research Transactions)* 45(1) (2021), on Nightingale's diagram of the causes of mortality in the army in the East: the diagram shows "the number of deaths from preventable zymotic diseases (outer, blue wedges)". https://www.idescat.cat/sort/sort451/45.1.0.friendly-andrews.prov.pdf . Nightingale's own legend, as transcribed by Jeffrey Heer (University of Washington), says the blue wedges "represent area for area the deaths from Preventible or Mitigable Zymotic Diseases" and "the red wedges measured from the center the deaths from wounds". https://homes.cs.washington.edu/~jheer/talks/interactive-analysis/crimea.html . Checked 1 Nov 2026.

[5] Royal Statistical Society, "Nightingale 2020: The bicentenary of our first female fellow" (2020): "Nightingale was the first female fellow of the Society, joining in 1858". https://rss.org.uk/news-publication/news-publications/2020/general-news/nightingale-2020-the-bicentenary-our-first-female/ . Checked 1 Nov 2026.

nobody can miss them. It also raises the two questions that any scoreboard should be made to answer. Is the measure honest? And is it in the hands of people who can act on what it shows?

This chapter puts both questions to UP. It opens Part Three of this book, whose chapters take the failures of the current system one area of life at a time, and before that detail it sets all twelve failures side by side. For each one it gives a measure and the direction in which it is moving, says what UP holds it can change at each stage of its growth and what will persist, and points to the chapter where the failure is treated in full. It then asks what the twelve have in common at their roots, and what UP proposes to do there, before it takes the three gaps that cut across all twelve, the strongest doubts about the scoreboard itself, and the single overall claim that UP's debate drew from it. It begins where Nightingale's tables began, with the scorekeeping that the current system already does.

How the current system keeps score

Few societies have ever kept score on themselves as thoroughly as ours. In September 2015 the General Assembly of the United Nations adopted, without a vote, seventeen goals for the world, broken into 169 targets, from ending poverty and hunger to protecting life on land and in the sea.[6] Each year since, the UN has published how far the world has moved toward them. Behind every report stands a vast and mostly unseen labour: household surveys in villages no road reaches, the overnight counts of people sleeping on American streets, the patient estimates of every nuclear warhead on the planet, the satellite records of forests and ice. Chapter 2 rested on that labour, and so does this chapter. The current system deserves full credit for it. A problem that nobody measures is a problem that nobody can show is getting worse, and it is hard to fix what cannot be seen.

The scores themselves are sobering. The UN's report for 2026 found that, of the targets with enough data to judge, just over a third were on track or making moderate progress, nearly half were moving too slowly, and 15 per cent had slipped back below where they stood in 2015.[7] A scoreboard can also mislead, and the ways it misleads are well documented. In the 2000s the English health service was run by targets backed by what two scholars of public administration, Gwyn Bevan and Christopher Hood, called "an element of terror". They argued that such a system rests on two assumptions: that a measured part can stand for the whole, and "that problems of measurement and gaming do not matter".[8] Where those assumptions fail, a target can be met while the thing it stood for gets no better.

Measures drift as well as being gamed. In a series of experiments, the psychologist David Levari and his colleagues asked people to judge dots, faces and requests, and then made the ones that mattered rarer. As threatening faces became rare, people began to see neutral faces as threatening; as unethical requests became rare, they began to see harmless ones as unethical. The effect held even when people were warned about it in advance and paid to resist it. The authors drew the lesson themselves: "Social problems may seem intractable in part because reductions in their prevalence lead people to see more of them."[9] The experiments concern people judging by eye. A scoreboard whose definitions follow what people happen to notice could drift the same way, and report that nothing gets better even as a problem shrinks.

The deepest limit of today's scoreboards lies elsewhere. The people who keep the score are rarely the people with the power to change it. The UN can report that nearly half the targets it can assess are moving too slowly, but it

[6] United Nations General Assembly, resolution 70/1 (A/RES/70/1), *Transforming our world: the 2030 Agenda for Sustainable Development*, adopted without a vote on 25 September 2015. https://digitallibrary.un.org/record/3923923 . "We are announcing today 17 Sustainable Development Goals with 169 associated targets which are integrated and indivisible." https://sdgs.un.org/2030agenda . Goal 1, "End poverty in all its forms everywhere"; Goal 2, "End hunger, achieve food security and improved nutrition and promote sustainable agriculture". https://sdgs.un.org/goals . Checked at source, 31 Oct 2026.

[7] United Nations, *The Sustainable Development Goals Report 2026* (7 July 2026), key messages: "Of the 139 SDG targets with trend data, just over a third (36 per cent) are on track or making moderate progress"; "Nearly half (49 per cent) of assessable SDG targets are moving too slowly"; "15 per cent have slipped below 2015 baselines". https://unstats.un.org/sdgs/files/report/2026/SDGs_Report_Key_Messages_2026.pdf . Checked 31 Oct 2026.

[8] Gwyn Bevan and Christopher Hood, "What's measured is what matters: targets and gaming in the English public health care system", *Public Administration* 84(3): 517–538 (2006), abstract: "In the 2000s, governments in the UK, particularly in England, developed a system of governance of public services that combined targets with an element of terror."; "Assumptions underlying governance by targets represent synecdoche (taking a part to stand for a whole); and that problems of measurement and gaming do not matter." https://researchonline.lse.ac.uk/id/eprint/16211 . Checked at source, 1 Nov 2026.

[9] David E. Levari, Daniel T. Gilbert, Timothy D. Wilson, Beau Sievers, David M. Amodio and Thalia Wheatley, "Prevalence-induced concept change in human judgment", *Science* 360(6396): 1465–1467 (29 June 2018), abstract: "In a series of experiments, we show that people often respond to decreases in the prevalence of a stimulus by expanding their concept of it."; "When blue dots became rare, participants began to see purple dots as blue; when threatening faces became rare, participants began to see neutral faces as threatening; and when unethical requests became rare, participants began to see innocuous requests as unethical."; the effect "occurred even when participants were forewarned about it and even when they were instructed and paid to resist it."; "Social problems may seem intractable in part because reductions in their prevalence lead people to see more of them." https://doi.org/10.1126/science.aap8731 ; abstract read at PubMed: https://pubmed.ncbi.nlm.nih.gov/29954981/ . Laboratory experiments; the link to social problems is the authors' suggestion. Checked at source, 1 Nov 2026.

cannot assign anyone to work on them. The governments that can are answerable to voters who, as Chapter 5 showed, reward relief more than prevention, and they are lobbied by interests that spent a record sum in Washington in 2025.[10] Chapter 2 found something harder still: on some problems, the people with the most power gain from the problem staying where it is.[11] A scoreboard handed to no one who can act on it records a failure without changing it. So the question this chapter puts to UP has two parts. What does UP measure, and who acts on what the measure shows?

How UP is judged

UP's answer starts from the standard it sets for itself. Its tenet on self-correction says that UP is judged against two things at once, the current system and the ideal it aims at: the ideal shows the direction and the gap still to close, and today's record shows whether UP is already doing better.[12] So this chapter reads every row of its board in two ways. One reading asks whether UP beats what people have now, which is the comparison a doubtful reader cares about. The other asks how far UP still is from its aim, which keeps it from congratulating itself for clearing a low bar. A system judged only against today's record could settle for being a little better than a failing one, and a system judged only against the ideal could be dismissed for falling short of perfection. UP holds both standards together, and the same tenet requires that downsides, risks and fringe problems are named openly and treated as work.

The aim itself shapes what is counted. UP aims at the health, happiness and wellbeing of all living things, and for people the aim is measured person by person, never as a total, so that no one's wellbeing is traded away to raise an average.[13] That changes how a row is read. The world's wealth can grow for decades while the poorest half of its adults hold, as they have since the early 2000s, about 2 per cent of it.[14] Measured as an average, the world grows richer. Measured person by person, half of the world's adults hold almost none of that wealth. So the board asks of every failure how many people it reaches, and how deeply.

UP's agreed positions add rules for the measures themselves, given as one way UP could run. Problems are measured with fixed definitions kept over time, so that drift of the kind Levari found is much harder to slip into the score unseen. They are ranked by measured harm, not by how loud they feel, and every headline measure has an independent check, so that a target is much harder to meet while the thing it stands for gets no better.[15] Above all, a problem in UP is attached to work. UP treats itself as a whole system in which any part that works badly is itself a problem, and like every problem in UP it is offered as work to anyone willing to take it on, while the people it affects decide its outcome.[16,17] The bigger a problem, the more attention and effort it draws, so the system works like a marketplace of problems, biggest first, and any area where UP does not yet do better than the current system gets attention first.[16] In UP's terms, a failure left on the scoreboard is open work.

[10] Chapter 5, section "Where the current system's decisions are captured", with its notes: voters reward relief more than prevention, and US federal lobbying reached a record in 2025 (see also the note on Table 12.1, row F4).

[11] Chapter 2, sections "What the current system got right" and "Where the race is being lost", with their notes: the fall in child deaths and extreme poverty, the ozone layer, and the issues on which problems are growing faster than the reforms (Table 2.2); and, in "Why the race is lost where it is", the problems whose persistence pays.

[12] Core tenet: *Self-correction: nothing is final, including this*, in full: "Every failure of UP is fed back into it as a new problem to solve, so it keeps improving without revolution. Every part of UP, these tenets included, can be improved through its own method. UP is judged against both today's system and the ideal it aims at: the ideal shows the direction and the gap still to close, and today's record shows whether UP is already doing better. Downsides, risks and fringe problems are named openly and treated as work, never as reasons to keep a status quo that fails so many." Also in "The core of UP".

[13] Core tenet: *The aim: the health, happiness and wellbeing of all living things*: "The aim is a chosen direction, not a scientific discovery and not a promise: it can never be fully reached, and every step toward it counts. For people it is measured person by person, not as a total, so no one's wellbeing is traded away to raise an average." Full wording in "The core of UP".

[14] Chancel L, Piketty T et al., *World Inequality Report 2026* (World Inequality Lab), executive summary: "the top 10% own three-quarters of global wealth, while the bottom half holds only 2%"; the bottom 50% wealth share "has stagnated since the early 2000s at around 2%." https://wir2026.wid.world/www-site/uploads/2025/11/WIR26_Executive_Summary_English.pdf . Checked 31 Oct 2026.

[15] UP's agreed position on measures (an illustration of one way UP could run, never a directive): "problems are measured with fixed definitions kept over time and ranked by measured harm, not by how loud they feel; every headline measure has an independent check." Full wording in UP's agreed positions (the Position Ledger, round 12S, position 8).

[16] UP's agreed position that UP is judged as a whole system: "If any part of UP works badly, that is itself a problem: the AI identifies the people it affects and offers it to them as work, to propose, test and compare solutions. Problems are linked in trees that show their common roots, so the work goes to solutions that solve many problems at once. The bigger a problem, the more people it affects and the more attention and effort it draws, so the system works like a marketplace of problems, biggest first, and any area where UP does not yet do better than today's system gets attention first." Full wording in UP's agreed positions (the Position Ledger).

[17] Core tenet: *The method: shared problem solving with evidence*: problems are named, measured and offered as work to anyone; the people a problem affects decide its outcome; "No problem, solution or method belongs to the person who raised it: anyone may update, reframe or improve it." Solutions are proposed with their evidence, tested and compared, and a better idea replaces a worse one. Its last words are "Evidence proposes; people decide." Full wording in "The core of UP".

Two further positions decide how the board should be read. The first is the division by stage. UP grows beside the current system: early, as a minority network inside it; in the middle, with its own productive base, meeting most of its members' needs from what UP produces; and at completion, as the place where most people mainly live. The early stage rests on today's evidence, and the middle and completed stages are reasoned projections from cited mechanisms, labelled as projections wherever they appear.[18] The second is the difference between a danger and workload. A problem counts as an issue for UP only if it cannot be fed back into UP's loop with a good chance of beating the current system, if the current system has a far better solution, or if it is endemic to UP. Everything else is workload, to be named, measured, studied, tested and worked on by anyone willing.[19] The last column of the board lists what persists at each stage, and nothing in it is hidden.

The twelve failures came from the task UP set itself once its core was settled: to show, with cited evidence, that UP has a real chance of addressing the major failures of the current system.[20] Twelve areas were set out where the current system fails people on a large scale, each paired with the strongest first objection a critic would raise against UP. Each was weighed against the cited evidence, first as it stands today and then stage by stage, and the staged claims were agreed in UP's debate in October 2026.[21] Most of the twelve correspond to one of the world's own goals for 2030, from poverty and hunger to climate and education, though capture of government by money, information disorder and the concentration of AI have no goal of their own.[6] Like everything in UP, the list is open. No problem belongs to the person who raised it, and anyone may update, reframe or improve one, so a reader who finds a failure missing from the board can propose it as a thirteenth row.[17,12]

The scoreboard

Table 12.1 is the record. For each of the twelve failures it gives one measure, its latest reading and the direction it is moving, with the chapter that treats the failure in full. Table 12.2 is the claim: what UP holds it can change at each stage, and what it expects to persist. The first table is evidence about today. The second is evidence only in its early column, because the middle and completed columns are projections, built from mechanisms the rest of this book sets out and labelled as such. A reader who wants the whole picture before the detail can read the two tables side by side and stop there. The paragraphs after them say, area by area, why each claim is made and where its detail lies. In those paragraphs too, everything said about the middle and completed stages is UP's projection from the mechanisms cited, to be tested as UP grows.

Table 12.1. The twelve failures: one measure each, today.

	Failure	One measure, latest reading	Direction	Full treatment
F1	Climate and planetary limits	Energy-related CO2: a new high of nearly 38.4 billion tonnes in 2025	Still rising, more slowly (about 0.4% in 2025)	Ch 18
F2	Unmet basic needs	More than 824 million people below $3.00 a day (2024, the latest year with survey data)	At a standstill since the pandemic	Ch 13
F3	Inequality and concentrated wealth	The poorest half of adults hold about 2% of the world's wealth	Unchanged since the early 2000s	Ch 13
F4	Capture of government	US federal lobbying:	The highest ever	Ch 5; Ch 6

[18] UP's agreed position on judging UP by stage, beside the current system: UP grows side by side with the current system, "early (a minority network inside it), middle (its own productive base; most members' needs met from what UP produces), completed (most people live mainly in UP)"; "Use today's evidence for the early stage; present the middle and completed stages as a reasoned projection from cited mechanisms, labelled as such." Full wording in UP's study lessons (lesson 13); the Position Ledger (round 12c, position 1) records the same division between today's evidence and projection.

[19] UP's agreed position that workload is not a danger: "A problem counts as an issue for UP only if it can't be fed back into the loop with a good chance of beating the old system, if the old system has a far better solution, or if it is endemic to UP."; "Informal power and the loop checking itself are workload: open-source checks and open sensor data."; UP "is not magic": "suffering continues while its biggest causes fall." Full wording in UP's agreed positions (the Position Ledger, round 12S, position 15).

[20] UP's core, settled in October 2026, closes with the next task: "Show, with cited evidence, that UP has a real chance of addressing the major failures of today's systems". The twelve failures and their evidence are the answer to that task. Full wording in "The core of UP".

[21] UP's agreed position on the twelve failures and the three gaps (round 12c, 28 Oct 2026, card U12, "All stand as updated"): the twelve staged claims and the three gaps, as updated with rounds 12S and 13; "The early stage rests on today's evidence; the middle and completed stages are labelled as projection." The cited evidence for every card is in UP's step-3 evidence record (24 Oct 2026), where every source was re-opened by two independent checkers before the round. Full wording in UP's agreed positions (the Position Ledger) and the round 12c record.

	Failure	One measure, latest reading	Direction	Full treatment
	by money	$5.24 billion in 2025	recorded, in money of the day	
F5	Work	708 million women outside the labour force because of unpaid care, against 40 million men (2023)	No comparable trend: the method changed since the 2018 estimate	Ch 14
F6	Health	1.14 million deaths attributable to drug-resistant bacteria (2021)	Forecast 1.91 million a year by 2050	Ch 16
F7	Education	273 million children and young people out of school	Barely falling: 17.4% of the age group in 2015, 16.8% in 2024	Ch 15
F8	Housing	745,652 people homeless in the United States on one night (January 2025)	Down 3% from the record of 771,480 in 2024 (one-night counts)	Ch 13; Ch 18
F9	Information disorder	English Wikipedia's active editors peaked at 56,400 (March 2007); one language edition captured, 2011 to 2020	Open knowledge grows, but the volunteer base of its largest edition shrank after 2007	Ch 11; Ch 20
F10	War, violence and crime	9,745 nuclear warheads in military stockpiles (January 2026); world military spending $2,887 billion (2025)	Rising: stockpiles up from 9,614; spending up eleven years running	Ch 7; Ch 19
F11	Waste and planned obsolescence	62 billion kg of electronic waste (2022)	Growing five times faster than documented recycling since 2010, counted in tonnes	Ch 18
F12	AI and technology concentrating power	Over 90% of notable AI models made by industry (2026 report)	Industry's share rising (60% in 2023); the most capable models are the least transparent	Ch 11; Ch 20

Sources: notes to this section, row by row.[22]

Table 12.2. The twelve failures in UP, by stage. The early column rests on today's evidence; the middle and completed columns are projections.

	Early (today's evidence)	Middle (projection)	Completed (projection)	What persists
F1	Members cut their own emissions and prove what works; a small effect on the climate	The effect becomes large: the solutions exist and are already cheaper, UP invents better ones, and demand moves out of the current system with	Most demand is inside UP; remaining emissions come mainly from what is left of the current system	Warming already locked in; local disputes over siting, which are work for the method

[22] Sources for Table 12.1, by row. F1: note 31. F2: note 24. F3: note 14. F4: note 46. F5: note 38. F6: note 40. F7: note 42. F8: note 28. F9: notes 50 and 51. F10: notes 57 and 58. F11: note 32. F12: note 53. Each figure is the latest found at its source on the date given in its note; most of these series are revised every year.

	Early (today's evidence)	Middle (projection)	Completed (projection)	What persists
		its people		
F2	Part of members' needs met directly; the rest from the current system; members' assets convert by their own choice	Needs met from UP's own production; the capacity already exists	Floors met wherever UP is; the question is allocating real resources and work	Hunger caused by war, wherever armed groups outside UP block food
F3	Money buys no say inside UP	As needs are met from shared production, wealth matters less to people's lives	Wealth held outside UP matters little to the lives of those inside	Informal power inside UP, watched by everyone and answered as work
F4	No offices to buy, every record public, one voice each	Capture of the old governments matters less to more people	Captured remnant governments matter little to most people	Attempts to capture UP's own processes, watched for and answered as work
F5	Members learn and earn more within the current system	Survival stops depending on a job; AI and automation serve needs	Necessary work shared and largely automated	Fair sharing of care and unpleasant work, open work for the collective
F6	Community health work and lay counselling beside the current system's hospitals	Floors remove much of the poverty behind ill health; UP builds its own clinics and training	A full health system inside UP; new medicines from open science, with far more people and AI working on them	New medicines and outbreak response, the hardest parts, which remain open work
F7	Open, tutor-style learning reaches people the current system leaves out, at low cost	Education open at every age, at scale; skills shown by open standards	Education for everyone wherever UP reaches	Getting people online; learning that teaches rather than doing the work for the learner
F8	Members upgrade and build with their own hands and land	Homes built from open designs to meet the shelter floor; settlement could condense, with freed land returned to the living world (an illustration)	Shelter floor met	Land held outside UP; local objections to new homes, which are work for the method
F9	A shared, public record with open checking	The record reaches more of daily life, protected by a trust layer (one way it could run)	Most people share a public, checkable record	Attempts to capture the record; disagreement over values, where splits test different ways
F10	Roots work (therapy, cash, floors), which reduces violence where it has been tried; UP relies on the current system's law for protection, as any community does	The most exposed stage: protection rests on legality, numbers and nonviolent action	Most crime removed or sharply reduced; force from outside shrinks as cities and nations join and convert their armies (an illustration)	Armed states and groups outside UP, while they stay outside
F11	Repair and recovery	UP makes its own goods from open designs built to last, and could build to shared standards (an illustration); waste falls at the source	Circular production inside UP	Physical limits on recycling

	Early (today's evidence)	Middle (projection)	Completed (projection)	What persists
F12	Open, plural AI from the start	UP builds its own capacity and widens the base of people and AI who can contribute; what UP invents stays in UP	Plural, open AI run by communities	Frontier AI concentrated outside UP while the current system holds it, mattering less as more of life moves into UP

Sources: UP's agreed staged claims, card by card, and the evidence record behind them.[23]

Three of the failures concern whether people have what they need. More than 824 million people lived in extreme poverty in 2024, and in October 2026 the World Bank reported that progress in reducing it has come to a standstill.[24] Yet in 2023 the food supply available in the world crossed the milestone of 3,000 kilocalories per person per day, on average.[25] UP's agreed claim rests on the distance between those two facts: the capacity to feed, house and supply everyone already exists, and what has been missing is organisation and distribution. Early on, UP meets part of its members' needs directly and depends on the current system for the rest, while members' own assets convert to UP by their choice. In the middle stage, the claim is that needs are met from UP's own production.[26] Hunger caused by war persists wherever armed groups outside UP block food. Chapter 13 takes up how needs could be met as prices are replaced, one job at a time, and who gets the things that are scarce.

Inequality and housing follow the same logic. UP does not need to reduce the wealth of the very rich to succeed, because its measure is the wellbeing of each person, and the poorest half of the world, who hold about 2 per cent of its wealth, have the most to gain. Inside UP, money buys no say from the start.[27] Homelessness is among the most visible failures in rich countries. On a single night in January 2025, 745,652 people were counted as homeless in the United States, a little below the record set a year earlier.[28] Early on, UP upgrades and builds with its members' own hands and land. As its production grows, the claim is that homes are built from open designs to meet the shelter floor.[29] One way UP could run, which its agreed positions give as an illustration, is to condense settlement into generous shared commons beside modest private rooms, with the limits set together, and to return

[23] Table 12.2 sets out UP's agreed staged claims, card by card (notes 34, 26, 27, 47, 39, 41, 43, 29, 52, 60, 35 and 55 give each card's wording; see also note 21). Entries marked as illustrations follow the Position Ledger, which gives settlement, standards and the trust layer (round 12S, positions 11 and 12) and the conversion of armies (position 6) as one way UP could run. Where a card speaks of what happens "as UP grows" without naming the completed stage, the completed column follows the staged tables in UP's step-3 evidence record (24 Oct 2026), the record behind the cards, as updated by the later rounds. For example, the record's completed stage for education reads "Universal education wherever UP reaches." and for waste "Circular production inside UP; physics limits full recycling." Every entry in the middle and completed columns is a projection.

[24] World Bank, *Poverty, Prosperity, and Planet Report 2026* and press release "More and Better Jobs Key to Putting Poverty Reduction Back on Track" (26 Oct 2026): "Global progress on reducing extreme poverty has come to a standstill"; in 2026 "about 811 million people" or "one in ten globally" live "on less than $3.00 per person per day, a rate that has essentially not changed since the pandemic"; "Without stronger per capita growth, the number of people in extreme poverty is projected to be higher in 2030 than it is today." https://www.worldbank.org/en/news/press-release/2026/10/26/more-and-better-jobs-key-to-putting-poverty-reduction-back-on-track . The 2026 figure is a projection. World Bank, "September 2026 global poverty update from the World Bank" (22 Sept 2026): "More than 824 million people, about one in ten worldwide, were living in extreme poverty in 2024."; "The 2024 estimate is for the latest year with sufficient data coverage. The 2025 and 2026 nowcasts are based on national accounts projections". https://blogs.worldbank.org/en/opendata/september-2026-global-poverty-update-from-the-world-bank–one-in . Checked at source on 1 Nov 2026; the series is revised each year.

[25] FAO Statistics Division, "Food balance sheets 2010–2023" (27–28 Oct 2025): in 2023 global food supply "crossed the historic milestone of 3 000 kilocalories per capita per day." This is the supply available per person, not what people eat. https://www.fao.org/statistics/highlights-archive/highlights-detail/food-balance-sheets-2010-2023

[26] UP's agreed staged claim on unmet basic needs (round 12c, card F2): "Early on, UP meets part of its members' needs directly and depends on the old system for the rest. Members' own assets convert to UP by their choice"; "In the middle stage, needs are met from UP's own production; the capacity to feed, house and supply everyone already exists, and what has been missing is organisation and distribution. Hunger caused by war persists wherever armed groups outside UP block food." Full wording in the round 12c record.

[27] UP's agreed staged claim on inequality and concentrated wealth (round 12c, card F3): "UP does not need to reduce the wealth of the very rich to succeed; its measure is the wellbeing of each person, and the bottom half of the world, who hold 2% of its wealth, have the most to gain. Inside UP money buys no say from the start, and as needs are met from shared production, wealth matters less to people's lives. Informal power inside UP is watched by everyone and answered as work, through open checks". Full wording in the round 12c record.

[28] US Department of Housing and Urban Development, *The 2025 Annual Homelessness Assessment Report (AHAR) to Congress, Part 1: Point-in-Time Estimates* (May 2026): "On a single night in January 2025, there were 745,652 homeless persons in the United States,"; "a 3 percent decrease since 2024."; "This reflects a slight overall decrease from 2024, when homelessness reached a record high in the United States." https://www.huduser.gov/portal/sites/default/files/pdf/2025-AHAR-Part-1.pdf . The 2024 report: "On a single night in January 2024, 771,480 people experienced homelessness in the United States,"; "the largest number since data collection began". https://www.huduser.gov/portal/sites/default/files/pdf/2024-AHAR-Part-1.pdf . One-night counts miss people by design. Checked 1 Nov 2026.

[29] UP's agreed staged claim on housing and the built environment (round 12c, card F8): "Early on, UP upgrades and builds with its members' own hands and land. As UP's production grows, homes are built from open designs to meet the shelter floor, and settlement condenses: beautiful shared commons beside modest private rooms, with freed land returned to the living world"; "Land enters UP as members convert what they own"; "Land still held outside UP, and local objections to new homes, are work for UP's method." Full wording in the round 12c record.

the land this frees to the living world.[29,30] Land still held outside UP, and local objections to new homes, are work for UP's method. Chapters 13 and 18 hold the detail.

The two failures that concern the living world are measured in tonnes. Energy-related emissions of carbon dioxide reached a new high in 2025, though they grew by only about 0.4 per cent, the slowest rate since 2021.[31] Electronic waste is growing five times faster than the documented collection and recycling of it.[32] In both areas UP's early contribution is small and local: members cut their own emissions, repair and recover, and prove what works. The claim grows with scale. Most new renewable power is already cheaper than new fossil power,[33] so as demand moves out of the current system with its people, the effect on the climate becomes large. Once UP makes its own goods, from open designs built to last and, as one way UP could run, to shared standards so that parts can be swapped, the claim is that waste falls at the source, because no one profits from selling a replacement.[34,35] In both areas, inventing better solutions together is UP's main work.[36]

What persists here is physical, and UP says so. Warming already locked into the climate continues at every stage, and so do the physical limits on recycling.[34,35] Disputes over where to put a solar field or a wind farm do not disappear either. In the United States, 567 renewable energy projects have met significant local opposition, in all but two states, and by the end of 2025 at least 888 state and local laws restricted where such projects could be built.[37] In UP, such disputes are work for the method: Chapter 5 followed one siting decision through its steps, and the third of the gaps below returns to the question of who should decide. Chapter 18, on settlement and the living world, holds the full treatment of both failures.

Care is the hidden half of work. In 2023, 708 million women were outside the labour force because of unpaid care responsibilities, against 40 million men.[38] UP's claim is staged. Early on, it helps members learn and earn more within the current system. As UP produces for its members' needs, survival stops depending on a job, and AI and automation serve those needs rather than profit. Who does care and unpleasant work, fairly, is open work for the collective.[39] Chapter 14 takes it up, and shows how work in UP is asked for, shared and recognised, and never forced.

[30] UP's agreed positions on settlement and space: condensing settlement (round 12S, position 12, an illustration of one way UP could run): "condensing settlement (Soleri) removes duplication"; "Freed land returns to the living world." And, settled in round 3: "UP puts its beauty, work and effort into the commons first." Private space is modest and comfortable, and the limits "are set together through the decision steps". Full wording in UP's agreed positions (the Position Ledger).

[31] International Energy Agency, *Global Energy Review 2026* (April 2026): growth in energy-related CO2 emissions slowed in 2025, "rising by around 0.4%, the slowest rate since 2021", with total emissions "reaching a new high of nearly 38.4 billion tonnes (Gt)". https://www.iea.org/reports/global-energy-review-2026/co2-emissions . Checked at source on 31 Oct 2026; revised each year.

[32] ITU and UNITAR, *The Global E-waste Monitor 2024*, executive summary (March 2024): "in 2022, a record 62 billion kg of e-waste was generated globally"; "the amount of e-waste has grown 5 times faster than compliant collection and recycling since 2010"; documented formal collection and recycling "will decline to 20 per cent in 2030" from "22.3 per cent in 2022" on current trends. https://ewastemonitor.info/wp-content/uploads/2024/03/GEM_2024_18-03_web_executive-Summery.pdf . The comparison of "5 times faster" is between the tonnes added, not growth rates. Checked at source, 31 Oct 2026.

[33] IRENA, press release "91% of New Renewable Projects Now Cheaper Than Fossil Fuels Alternatives" (22 July 2025): "Notably, 91% of new renewable power projects commissioned last year were more cost-effective than any new fossil fuel alternatives." https://www.irena.org/News/pressreleases/2025/Jul/91-Percent-of-New-Renewable-Projects-Now-Cheaper-Than-Fossil-Fuels-Alternatives (read in the Internet Archive's copy, https://web.archive.org/web/2025/https://www.irena.org/News/pressreleases/2025/Jul/91-Percent-of-New-Renewable-Projects-Now-Cheaper-Than-Fossil-Fuels-Alternatives , because irena.org blocks automated reading). "Last year" is 2024. Checked at source, 31 Oct 2026.

[34] UP's agreed staged claim on climate and planetary limits (round 12c, card F1): "Early on, UP members cut their own emissions and prove what works, a small effect on the climate."; "As UP grows, the effect becomes large: the solutions exist and are already cheaper"; "demand moves out of the old system with its people, and leakage shrinks as the share acting grows."; "Warming already locked in persists at every stage. Local disputes over siting are work for UP's method". Full wording in the round 12c record.

[35] UP's agreed staged claim on waste and planned obsolescence (round 12c, card F11): "Early on, UP repairs and recovers. Once UP makes its own goods, from open designs built to last and to shared standards so parts are interchangeable"; "with no profit in replacement, waste falls at the source. Physical limits on recycling persist." Full wording in the round 12c record.

[36] UP's agreed position that inventing solutions together is UP's primary activity: "In UP anyone can try anything that might solve a problem; tools are commons; the result carries the power". Full wording in UP's agreed positions (the Position Ledger, round 12S, position 1).

[37] Sabin Center for Climate Change Law, Columbia Law School, "Widespread Local Opposition, Often Driven by Misinformation, Continues to Hamper Renewable Energy Development", *Climate Law Blog* (3 September 2026): "We also identified 567 renewable energy projects across 48 states"; "that have faced significant local opposition."; "By the end of 2025, at least 888 state laws and local ordinances"; "restricting the siting of renewable energy projects had been adopted across 48 states." https://blogs.law.columbia.edu/climatechange/?p=29623 . The counts come from the Sabin Center's own tracking, so they are a floor. Checked 1 Nov 2026.

[38] International Labour Organization, "Unpaid care work prevents 708 million women from participating in the labour market", news release (29 October 2024): "An estimated 708 million women worldwide are outside the labour force"; "because of unpaid care responsibilities, according to new ILO global estimates,"; "In 2023, 748 million people (aged 15 or older) were not participating"; "Of these, 708 million were women and 40 million were men."; "The most recent previous estimate, from 2018, found that 606 million women and 41 million men"; "Although the new estimates are not comparable due to methodology changes, they confirm that care responsibilities continue to be the main reason women are not looking or not available for employment." https://www.ilo.org/resource/news/unpaid-care-work-prevents-708-million-women-participating-labour-market . Checked 1 Nov 2026.

[39] UP's agreed staged claim on work (round 12c, card F5): "early on, UP helps members learn and earn more within the old system. As UP produces for its members' needs, survival stops depending on a job, and AI and automation serve those needs rather than profit. Who does care and unpleasant work, fairly, is open work for the collective." Full wording in the round 12c record.

Health shows both the reach of the claim and its limits. An estimated 1.14 million deaths in 2021 were attributable to drug-resistant bacteria, and the number is forecast to rise.[40] Early on, UP adds community health work and lay counselling beside the current system's hospitals. As the floors spread, much of the poverty behind ill health goes, and UP builds its own clinics and training. New medicines come from UP's own open science and invention, with far more people and AI working on them. Even so, new medicines and outbreak response are the hardest parts of this row, and UP's agreed claim names them as open work.[41] Chapter 16 sets out the evidence for each stage.

Education is where UP can show results first. About 273 million children and young people are out of school, and the share of the age group out of school has barely fallen since 2015.[42] Open, tutor-style learning can reach people the current system leaves out, at low cost, and it grows with UP. UP's agreed claim adds that the capacity of an education and mentoring programme is likely to be what most limits how fast UP can grow. That is not a claim that anyone sets UP's speed, which UP's position on growth says is not for anyone to decide. It names a known problem. UP has to grow with high quality, so that the transition does not itself create large problems, and it also has to speed up, because it is the answer to many of the current system's most urgent failures. Keeping education and mentoring ahead of growth is therefore work to be done together, in the open, like any other problem. The conditions are getting people online and designing learning that teaches, rather than doing the work for the learner.[43,44] Education matters beyond its own row. UP's core opens education to everyone, at every age, so that anyone can gain the skills any work requires, and much of what the other rows need depends on people who can do that work.[45] Chapter 15 shows what learning in UP could look like.

Three failures concern who holds power over shared decisions, shared knowledge and shared machines. In 2025 federal lobbying in the United States reached $5.24 billion, the highest level ever recorded in money of the day.[46] UP removes the routes money uses to capture government: there are no offices to buy, every record is public, and each person has one voice. In UP anyone can try anything that might solve a problem, and the result carries the power, not a position or a funder. As more of life runs through UP, capture of the old governments matters less to more people, and attempts to capture UP's own open processes are watched for by everyone and answered as work.[47,48] Chapter 5 gave the full treatment, and Chapter 6 showed how power is kept spread out.

Open knowledge has been one of the great successes of the age, and it is also under strain. Wikipedia holds more than 68 million articles in 348 active language editions, written largely by volunteers.[49] Yet the active editors of its

[40] GBD 2021 Antimicrobial Resistance Collaborators, "Global burden of bacterial antimicrobial resistance 1990–2021: a systematic analysis with forecasts to 2050", *The Lancet* 404(10459):1199–1226 (2024): "1.14 million (1.00–1.28) deaths attributable to bacterial AMR" in 2021; "1.91 million (1.56–2.26) deaths attributable to AMR" forecast for 2050. Abstract read via IHME, https://healthdata.org/node/12105 . "Attributable" deaths are those directly caused; a wider count of deaths "associated" with resistance is 4.71 million (2021). Checked 31 Oct 2026.

[41] UP's agreed staged claim on health (round 12c, card F6): "Early on, UP adds community health work and lay counselling beside the old system's hospitals. As floors spread, much of the poverty behind ill health goes, and UP builds its own clinics and training. New medicines come from UP's own open science and invention, with far more people and AI working on them"; "they and outbreak response are the hardest parts and remain open work." Full wording in the round 12c record.

[42] United Nations, *The Sustainable Development Goals Report 2026*, Goal 4, "Quality education": "Global completion rates have risen across all levels of education since 2015,"; "yet 273 million children and young people remain out of school"; "the global out-of-school rate declined only marginally"; "from 17.4 per cent in 2015 to 16.8 per cent in 2024". https://unstats.un.org/sdgs/report/2026/goal-04/ . The 2025 report gave 272 million. Checked 1 Nov 2026.

[43] UP's agreed staged claim on education (round 12c, card F7): "Education is where UP can show results first: open, tutor-style learning reaches people the old system leaves out, at low cost, and grows with UP. An education and mentoring programme, limited by its capacity, sets the pace of the whole transition"; "Getting people online and designing learning that teaches rather than does the work for them are the conditions." Clarified by UP's author on 13 Nov 2026: the capacity of an education and mentoring programme is likely to be what most limits how fast UP can grow; how fast UP grows is not for anyone to decide; UP must grow with high quality, so that the transition does not itself create large problems, and must also speed up, because it answers many of the current system's most urgent problems; keeping education and mentoring ahead of growth is a known problem to be worked on together. The clarified wording goes to the UP Moderator for confirmation before the card's text changes. Full wording in the round 12c record.

[44] UP's agreed position on growth (round 12c, position 3): "It will grow naturally and may grow very fast and big or it might be slow. That is not for us to decide. What is relevant is to list that it is important to grow and maintain quality of the core values and tenets so that the growth remains positive and does not descend into unintended consequences." The same round withdrew the growth figures given earlier in the debate as part of a thought experiment. Full wording in UP's agreed positions (the Position Ledger).

[45] Core tenet: *Open participation: anyone may take part; those affected decide*: "Anyone may take part in any problem, and the people it affects decide its outcome."; "education is open to everyone, at every age, so anyone can gain the skills any work requires." Full wording in "The core of UP".

[46] LegiStorm, "Lobbying spending tops $5 billion in 2025", 2 February 2026: "Federal lobbying spending surged past $5 billion in 2025, reaching the highest level ever recorded by a wide margin."; "The lobbying industry reported a combined $5.24 billion in spending"; "a $768 million increase from 2024". https://legistorm.com/pro_news/4371/lobbying-spending-tops-5-billion-in-2025.html . Totals differ by method and are not adjusted for inflation. Checked at source, 1 Nov 2026.

[47] UP's agreed staged claim on the capture of government by money (round 12c, card F4): "UP removes the routes money uses to capture government: no offices to buy, every record public, one voice each. In UP anyone can try anything, and the result carries the power, not a position or a funder"; "As more of life runs through UP, capture of the old governments matters less to more people. Attempts to capture UP's own open processes are watched for by everyone and answered as work". Full wording in the round 12c record.

[48] Core tenet: *Power kept spread out*: "Concentration of power, in any form (wealth, position, information, access, expertise or machines), is treated as a standing danger."; "Everyone in UP watches for concentrations of power and spreads them out again. The threat is never declared gone; it is watched and answered." Full wording in "The core of UP".

[49] Wikimedia Foundation, Meta-Wiki, "List of Wikipedias": all active Wikipedias together hold 68,628,410 articles in 348 language editions (read on 31 Oct 2026). https://meta.wikimedia.org/wiki/List_of_Wikipedias . Pew Research Center (Seets, Lieb and Smith), "Wikipedia at 25: What the data tells us" (13 Jan

English edition peaked in March 2007 and then declined, and the study that documented the fall found the tools that guard its quality to be a key cause of newcomers leaving. Elsewhere, for about a decade, a small group of administrators held the Croatian edition and introduced far-right bias and outright disinformation.[50,51] UP builds the kind of open, checkable record that already works at that scale, and, as one way it could run, protects it with a trust layer of tamper-evident records, encryption, and data held by the person and used only with permission. Attempts to capture the record are watched for by everyone. Disagreement over values persists, and splits that test different ways are good.[52]

The newest failure on the board is the concentration of power in AI. Industry now makes the great majority of notable AI models, and the most capable of them are also the least transparent.[53] Open models have come close at times. On one widely used leaderboard the best closed model's lead over the best open one fell to 0.5 per cent in August 2024, then reopened to 3.3 per cent by March 2026.[54] UP can run on open, plural AI from the start and build its own capacity as it grows. It widens the base of people and AI who can contribute, which speeds invention, and what UP invents stays in UP. Concentration of frontier AI outside UP persists while the current system holds it, and matters less as more of life moves into UP.[55,56] Chapter 11 set out the principles, and Chapter 20 takes up the tools.

War, violence and crime are the row where the stakes are highest. In January 2026 the nine nuclear-armed states held an estimated 9,745 warheads in military stockpiles, more than a year before, and world military spending rose in 2025 for the eleventh year in a row.[57,58] Much ordinary crime goes unanswered. In England and Wales, 7.3 per cent of police-recorded crimes against victims had ended in a charge or summons in the year to March 2026, a provisional figure that rises as cases close. In the United States, just under half of the violent crimes reported to the police in 2025 were cleared by an arrest or by other means.[59] UP's agreed claim is that it reduces violence at its

2026), https://www.pewresearch.org/short-reads/2026/01/13/wikipedia-at-25-what-the-data-tells-us/ : a "community of largely volunteer editors". Checked at source on 31 Oct 2026; Wikipedia's counts change every day.

[50] Aaron Halfaker, R. Stuart Geiger, Jonathan T. Morgan and John Riedl, "The Rise and Decline of an Open Collaboration System: How Wikipedia's Reaction to Popularity Is Causing Its Decline", *American Behavioral Scientist* 57(5):664-688 (2013): active editors "peaked in March of 2007 at 56,400"; "a sharp decline in the retention of newcomers is the cause", with "the algorithmic tools used to reject contributions" implicated "as key causes of decreased newcomer retention". Authors' preprint: https://stuartgeiger.com/papers/abs-rise-and-decline-wikipedia.pdf . Checked at source, 31 Oct 2026.

[51] Zarine Kharazian, Kate Starbird and Benjamin Mako Hill, "Governance Capture in a Self-Governing Community: A Qualitative Comparison of the Serbo-Croatian Wikipedias", *Proceedings of the ACM on Human-Computer Interaction* 8 (CSCW 2024), arXiv:2311.03616, abstract: "between at least 2011 and 2020, the Croatian language version of Wikipedia was taken over by a small group of administrators who introduced far-right bias and outright disinformation; dissenting editorial voices were reverted, banned, and blocked." https://arxiv.org/abs/2311.03616 . Checked at source, 1 Nov 2026.

[52] UP's agreed staged claim on information disorder (round 12c, card F9): "UP builds the kind of open, checkable record that already works at global scale, and it reaches more of life as UP grows. The record is protected by a trust layer: tamper-evident records, encryption, and data held by the person and used only with permission"; "Attempts to capture the record are watched for by everyone; disagreement over values persists, and splits that test different ways are good". Full wording in the round 12c record.

[53] Stanford HAI, *Artificial Intelligence Index Report 2026*, chapter 1: "Industry now accounts for over 90% of notable AI models, and the most capable systems are also the least transparent, with training code, dataset sizes, and parameter counts increasingly withheld." https://hai.stanford.edu/assets/files/ai_index_report_2026_chapter_1_research_development.pdf . The 2025 report gave "nearly 90% of notable models in 2024 (compared to 60% in 2023) originating from industry." https://hai.stanford.edu/assets/files/hai_ai-index-report-2025_chapter1_final.pdf . Checked at source, 1 Nov 2026.

[54] Stanford Institute for Human-Centered Artificial Intelligence, *Artificial Intelligence Index Report 2026*, chapter 2: "The open model performance gap reopened in 2025 after briefly closing in 2024. As of March 2026, the top closed model leads the top open model by 3.3%, up from 0.5% in August 2024."; "While closed-weight models still lead, open-weight models are far more competitive than they were a few years ago." https://hai.stanford.edu/assets/files/ai_index_report_2026_chapter_2_technical.pdf . The measure is the Arena Leaderboard. Checked at source, 1 Nov 2026.

[55] UP's agreed staged claim on AI and technology concentrating power (round 12c, card F12): "UP can run on open, plural AI from the start and build its own capacity as it grows; open systems have already won whole fields of computing. UP widens the base of people and AI who can contribute, which speeds invention, frontier science included"; "Concentration of frontier AI outside UP persists while the old system holds it, and matters less as more of life moves into UP." The card adds that what UP invents stays in UP, under the tenet on open systems as amended in October 2026. Full wording in the round 12c record.

[56] Core tenet: *Open systems, shared knowledge, private persons*: "The rules, code, records, decisions and reasons of UP are public, so anyone can check them. UP's technology (the knowledge, code, data and designs UP produces) stays only in UP: everyone taking part in UP may use, study and improve it, and no one may enclose it. Each person controls their own information and chooses what to share." Full wording in "The core of UP".

[57] SIPRI Yearbook 2026, world nuclear forces (8 June 2026): an estimated 12,187 warheads in January 2026, of which "about 9745 were in military stockpiles for potential use" (9,614 a year earlier); the nine nuclear-armed states "continued programmes to modernize and enhance their nuclear arsenals in 2025". https://www.sipri.org/node/7895 . The total inventory fell slightly as retired warheads were dismantled. Checked 31 Oct 2026.

[58] SIPRI, "Global military spending rise continues" (27 Apr 2026): world military expenditure of "$2887 billion" in 2025, "an increase of 2.9 per cent in real terms over 2024", "the 11th year of consecutive rises". https://www.sipri.org/media/press-release/2026/global-military-spending-rise-continues . Checked 31 Oct 2026.

[59] Federal Bureau of Investigation, Uniform Crime Reporting, *Reported Crimes in the Nation, 2025* (Quick Stats, 2026): "Nationwide, 47.4% of violent crimes and 17.4% of property crimes were cleared"; "by arrest or exceptional means." The figures cover crimes reported to the police by participating agencies. https://cde.ucr.cjis.gov/LATEST/resources/reports/Reported%20Crimes%20in%20the%20Nation%202025%20Quick%20Stats.pdf . "Cleared" means an arrest or an exceptional closure, not a conviction. Home Office, *Crime outcomes in England and Wales 2025 to 2026* (23 July 2026): the proportion of victim-based crimes "resulting in a charge/summons from 6.3% in the year to March 2025 to 7.3% in the latest year"; "no suspect having been identified, with 40.9% of cases closed this way in the year ending March 2026". The figures cover police-recorded crimes, and the latest year's rate rises as open cases close. The two countries' measures are different and are not comparable with each other. https://www.gov.uk/government/statistics/crime-outcomes-in-england-and-wales-2025-to-2026/crime-outcomes-in-england-and-wales-2025-to-2026 . Checked 1 Nov 2026.

roots, and that most crime is removed, eliminated or dramatically reduced. What remains is handled by one layer of trained law enforcement, open and watched by many, with courts that rest on evidence, not public opinion.[60,61] Taking today's best-functioning justice systems as models, which is one way UP could run, consequences focus on rehabilitation and on the wellbeing of both the accused and their victims, all under the floor of a fair hearing.[61,62]

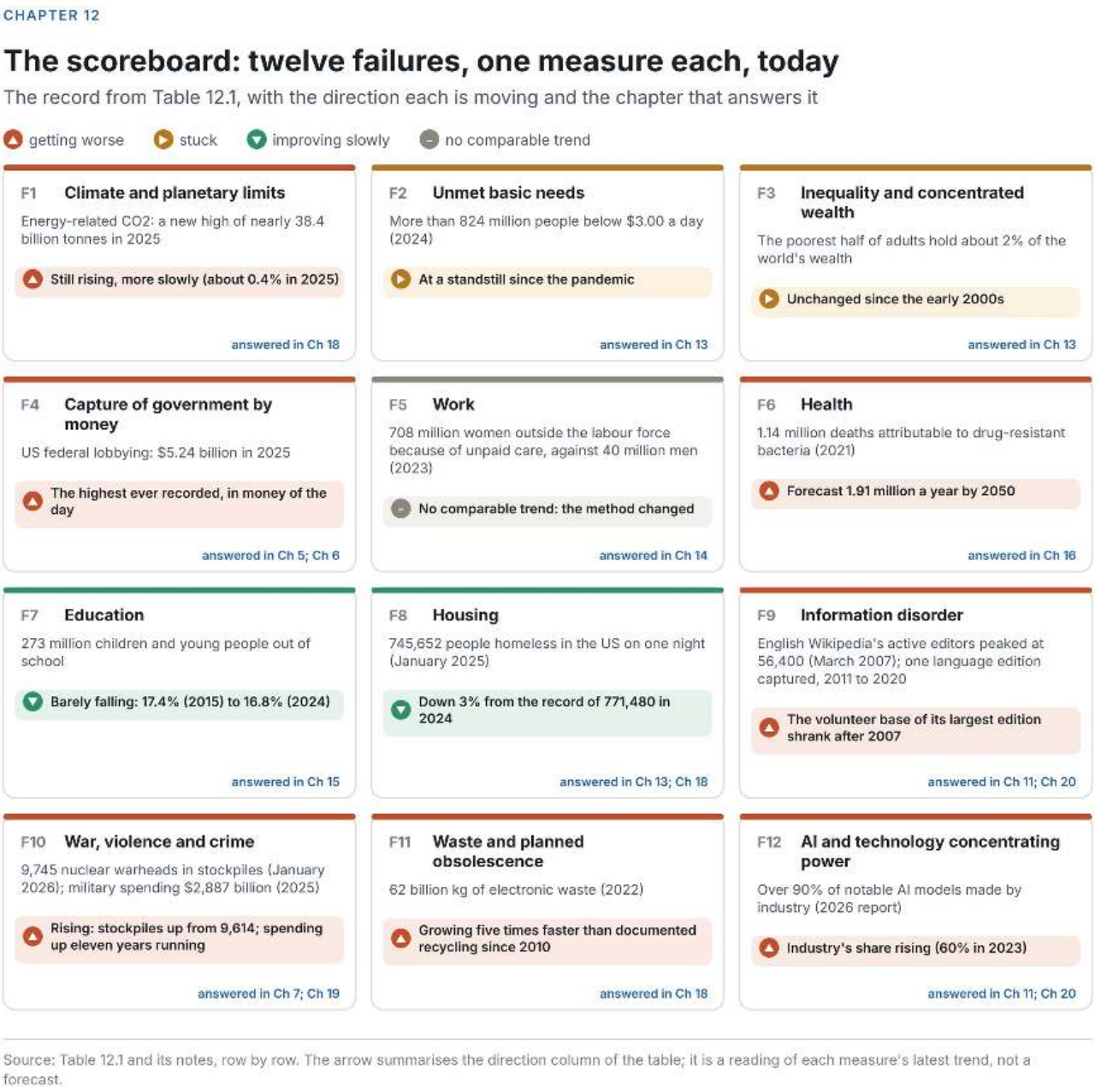
The middle stage is the most exposed, and UP's protection then rests on legality, numbers and nonviolent action. As cities and nations join, their weapons and armies could be dismantled and converted into law enforcement, emergency aid and rapid response, and nuclear weapons into power, which UP's agreed positions give as an illustration of one way this could happen.[60,63] Armed states and groups outside UP persist while they stay outside. The gaps below take up this danger in more detail, and Chapter 19, on justice, safety and emergencies, holds the full treatment.

[60] UP's agreed staged claim on war, violence and crime (round 12c, card F10): "UP reduces violence at its roots, and most crime is removed, eliminated or dramatically reduced"; "What remains is handled by one layer of trained law enforcement, open and watched by many, with courts that rest on evidence and consequences focused on rehabilitation and on the wellbeing of the accused and of victims"; "The middle stage is the most exposed, and UP's protection then rests on legality, numbers and nonviolent action. As cities and nations join, their weapons and armies are dismantled and converted into law enforcement, emergency aid and rapid response, and nuclear weapons into power"; "Armed states and groups outside UP persist while they stay outside." The card marks the conversion of weapons and armies as an illustration. Full wording in the round 12c record.

[61] UP's agreed positions on justice and enforcement (round 13, 28 Oct 2026): "Most crime is removed, eliminated or dramatically reduced"; "One layer of trained professional law enforcement."; "The authority and power over law enforcement is the people and process. It must be watched by many all the time."; "Courts rest on evidence, not public opinion."; the models are today's best-functioning justice systems, made more universal, with "consequences that are focused on rehabilitation and HHW for the accused and their victims" (HHW is health, happiness and wellbeing); the Position Ledger marks this position on models as one way UP could run. Full wording in UP's agreed positions (the Position Ledger).

[62] Core tenet: *Floors that are never crossed*: among the floors are everyone's basic needs and protected freedoms, which no gain for others can buy; "a truthful shared record, so facts, measures and decisions are never falsified"; and "a fair hearing, so no one's freedom is restricted without a fair, evidence-based hearing, with the evidence open to them and a way to appeal." The collective may clarify or raise the floors, "but no decision may lower them or push anyone below them." A clarification agreed on 1 Nov 2026 adds: "The substance of the evidence is always open to the person. Where a witness's safety is at risk, a court may protect the witness's identity, and that decision can be appealed." Full wording in "The core of UP" and the Position Ledger.

[63] UP's agreed position on weapons and armies (round 12S, position 6, an illustration of one way UP could run): "Nuclear weapons dismantled and converted to power plants as soon as possible. Weapons and standing armies dismantled and converted into law enforcement, emergency aid groups and rapid response." The position names as a precedent "Reykjavik 1986, the near-total nuclear disarmament discussed by Reagan and Gorbachev." Full wording in UP's agreed positions (the Position Ledger).



The scoreboard: twelve failures, one measure each, today, with their direction and the chapter that answers each.

Why the failures share roots

Nightingale's diagram did more than count the dead. It sorted them by cause, and once the deaths were sorted, the picture changed. The army had not suffered a thousand separate misfortunes in a thousand beds. Most of its dead had died of one kind of cause, disease that could have been prevented, and that kind of cause could be attacked at its source.[3,4] Table 12.1 invites the opposite reading. It lists twelve failures, each with its own measure, its own experts and its own chapter, and it is easy to see in it twelve separate campaigns, each to be fought on its own. UP reads it the way Nightingale read her wedges. Its agreed position on judging UP as a whole system says that problems are linked in trees that show their common roots, so that the work goes to solutions that solve many

problems at once.[64] This section asks what the common roots of the twelve rows are, and what UP proposes to do at the root.

One root runs through more of the board than any other, and Chapter 8 traced it in detail: the decisions of the current system rest, again and again, on a stand-in for the real world instead of the real world itself. Money stands in for what things are worth and who should have them, the company's accounts stand in for what an enterprise costs and gives, and government stands in for what people have agreed. Each of these shared fictions was a great invention in its time, and Chapter 8 gave each its due before it counted what the gaps between the stand-ins and the real world now cost.[65,66] In 1933, when over a third of American households had someone out of work and many people went hungry, the United States government paid farmers for pigs that were killed to raise hog prices, and some 5 million young hogs were destroyed or made into inedible meat and bone meal.[67] In April 2020 one Wisconsin dairy farm was pouring away about 30,000 gallons of milk a day, as its farmer put it, while everybody was "rushing to the grocery store to get food".[68] In 2022, by the UN Environment Programme's count, 1.05 billion tonnes of food went to waste, and in 2025 about 645 million people were affected by hunger, though not all of that lost food could have reached them.[69,70] In 1924 the world's leading lightbulb makers formed a cartel that set the life of a household bulb at 1,000 hours, when bulbs could already burn for 2,500 hours or more, and fined any factory whose bulbs lasted longer or shorter than the set life.[71] In none of these cases were the people involved monsters. They were doing what the stand-in rewarded.

Read with those cases in mind, the board shows the same drift row after row. In the rows on needs and housing, food and shelter go first to those who can pay for them, so need and supply sit side by side and do not meet: more than 824 million people lived in extreme poverty in 2024, in a world whose food supply had passed, on average, 3,000 kilocalories a day for each person on Earth.[24,25] In the row on inequality, ownership is a record that grows by what it already holds, so the poorest half of the world's adults have held about 2 per cent of its wealth for more than two decades.[14] In the row on capture, money buys access to the people who write the rules, and Chapter 5

[64] UP's agreed position S, "Judge UP as a whole system, against today's system" (CANON, 22 Oct 2026): "Problems are linked in trees that show their common roots, so the work goes to solutions that solve many problems at once. The bigger a problem, the more people it affects and the more attention and effort it draws, so the system works like a marketplace of problems, biggest first, and any area where UP does not yet do better than today's system gets attention first. UP is a system whose parts strengthen each other: education open to everyone and improving quickly; a moneyless system that removes the motive for much of today's crime; automation that supplies basic needs at ever lower cost; health care backed by robotics and AI; and a society that works on its problems every day." The same position says: "Its starting point will not be great; it is built to improve much faster than today's systems." Full wording in UP's agreed positions (the Position Ledger).

[65] Core tenet: *Reality over fiction*, in full: "Decisions rest on real resources, real needs and measured outcomes. Shared fictions (money, corporations, governments, borders) made large-scale cooperation possible and served a great purpose. UP keeps a fiction while it serves health, happiness and wellbeing, and replaces it gradually where technology can do its job without obvious downsides." Also in "The core of UP".

[66] UP's agreed position on useful fictions, in full: "Large-scale human cooperation was built on shared fictions: stories people agree to believe, such as money, government and the company. They were civilisational upgrades and served a great purpose. UP holds that fictions are useful, but that reality is better wherever technology can replace a fiction without obvious downsides. Some fictions will persist because the alternatives would harm health, happiness and wellbeing. Freedom is one, and UP keeps it, along with the protected freedoms and the commons, visible and open to change through the decision steps (#1). Others, money, government and corporations, are ripe to be reduced slowly, through ever more powerful coordination and shared problem solving with AI. A fiction is retired when technology can replace what it does without obvious downsides; until then it is reduced as far as possible." Also in UP's agreed positions (the Position Ledger).

[67] Edward Lotterman, "The porcine slaughter of the innocents", Federal Reserve Bank of Minneapolis, 1 January 1999: "The action to reduce supply by killing some portion of the pigs born in the spring of the year made good sense as part of the administration's emergency efforts to raise prices and incomes for the rural poor."; it "was a public relations disaster"; "In 1933 over one-third of US households had some member out of work and many people experienced hunger. Killing hogs to raise hog prices at such a time struck many as wrong-headed."; "Participation in the program was voluntary, and farmers were paid for pigs that were killed."; "Some 5 million light hogs, averaging 53 pounds, were simply"tanked" or processed into inedible meat and bone meal. Sows, which were required to be visibly pregnant for acceptance into the program, were processed into meat that was donated to various local food relief programs."; "Historical records show that some 6.4 million pigs and sows were killed at an expenditure of $31 million." (citing *Livestock Under the AAA*, The Brookings Institution, 1935). https://www.minneapolisfed.org/article/1999/the-porcine-slaughter-of-the-innocents . Checked at source, 1 Nov 2026.

[68] Associated Press, "Dairy farmers begin to flush away milk due to coronavirus", 3 April 2020, as published by KUTV: "Many dairy processing plants across Wisconsin have more product than they can handle and that's forced farmers to begin dumping their milk down the drain."; at Golden E Dairy near West Bend, "Farmer Ryan Elbe told WISN-TV they are dumping about about 30,000 gallons (113,562 litres) a day."; "About one-third of the state's dairy products, mostly cheese, are sold in the food-service trade."; "Everybody's rushing to the grocery store to get food, and we have food that's literally being dumped down the drain." https://kutv.com/news/nation-world/dairy-farmers-begin-to-flush-away-milk-due-to-coronavirus-1 . Checked at source, 1 Nov 2026.

[69] UN News, "With 783 million people going hungry, a fifth of all food goes to waste" (27 Mar 2024), reporting the UN Environment Programme's *Food Waste Index Report 2024*: "latest data from 2022 shows 1.05 billion tonnes of food went to waste."; "19 per cent of food available to consumers was lost overall at retail, food service, and household levels." https://news.un.org/en/node/1148036 . Checked at source, 13 Nov 2026.

[70] FAO, IFAD, UNICEF, WFP and WHO, joint news release "UN report: Global hunger levels ease for third consecutive year as regional disparities persist" (Rome, 21 Jul 2026), on *The State of Food Security and Nutrition in the World 2026*: "around 645 million people were affected by hunger in 2025", "a reduction of nearly 14 million compared to 2024"; 7.8 percent of the global population, down from 8.1 percent in 2024. The measure is the prevalence of undernourishment: people whose usual food intake over a year is too low, not a count of people starving. https://www.fao.org/newsroom/detail/un-report–global-hunger-levels-ease-for-third-consecutive-year-as-regional-disparities-persist/en ; same figure in UNICEF's copy of the release. Checked at source, 13 Nov 2026.

[71] Markus Krajewski, "The Great Lightbulb Conspiracy", *IEEE Spectrum* (24 Sep 2014): at a meeting in Geneva on 23 December 1924, "the group founded the Phoebus cartel, a supervisory body that would carve up the worldwide incandescent lightbulb market"; "The household lightbulb in 1924 was already technologically sophisticated"; "the burning time was easily 2,500 hours or more."; "By early 1925, this became codified at 1,000 hours for a pear-shaped household bulb"; "If any factory submitted bulbs lasting longer or shorter than the regulated life span for its type," … "the factory was obliged to pay a fine." https://spectrum.ieee.org/the-great-lightbulb-conspiracy . Checked at source, 13 Nov 2026.

traced how that lever works.[46] In the row on work, survival depends on a wage, so the 708 million women kept out of paid work by unpaid care do work that the record does not count.[38] In the row on waste, a seller earns more from a product that fails than from one that lasts, which is the lesson the lightbulb cartel learned first.[71] In the row on climate, the costs a company does not pay, from the air it fouls to the warming it adds, fall outside its books, as Chapter 8 described. In the row on health, a cure can be bad business, as the analysts' question about gene therapies in Chapter 8 showed: "Is curing patients a sustainable business model?"[72] In the row on information, the US Federal Trade Commission found in 2024 that the business models of many of the largest social media and video streaming companies rewarded the mass collection of their users' data, mainly to sell targeted advertising.[73] And in the row on AI, industry now makes more than nine in ten notable models, and the most capable are the least transparent; UP's agreed position describes where that leads:[53] inside today's framework, AI and robotics threaten to destroy the labour market and concentrate power in a few hands.[74]

UP's agreed positions name the pattern that ties these together. The comparison between UP and the current system is not symmetric, because the current system "often monetises a problem instead of solving it, and sometimes the problem's persistence is what pays."[75] Where a problem pays, someone gains from keeping it. That is why, on many rows, patching the distortion one rule at a time inside the fiction keeps falling behind: each patch is another rule laid over the same stand-in, and the stand-in keeps pulling decisions back toward what pays. Chapter 2 showed the current system improving and still losing the race on most of the issues that will decide this century.[11] UP's agreed position on power describes the same trap from another side: chasing each form of power one by one "becomes whack-a-mole".[76]

Not every row has this root, or not only this one, and UP should say so as plainly as it says the rest. Drug-resistant bacteria evolve whatever anyone's accounts say. The 273 million children and young people out of school are kept out by much more than price: UNESCO estimates that 44 million more teachers are needed to give every child a primary and secondary education by 2030.[42,77] The Croatian edition of Wikipedia was captured by a handful of administrators, not by money.[51] War and violent crime have causes that no change of accounts would remove, although UP's agreed position on the whole system lists among its reinforcing parts "a moneyless system that removes the motive for much of today's crime".[64] Table 12.3 records this honestly. For each failure it says how a stand-in drives it and gives UP's reading of how much of the failure that explains, the developments from Chapter 8 that do the most work against it, and the chapter that takes it further. That column is a reading for the collective to test and improve, not a measurement.

The answer at the root is written into UP's core. The tenet *Reality over fiction* says that decisions rest on real resources, real needs and measured outcomes, and that UP keeps a fiction while it serves health, happiness and wellbeing, and replaces it gradually where technology can do its job without obvious downsides.[65] UP's agreed position on useful fictions draws the conclusion: fictions are useful, but reality is better wherever technology can

[72] CNBC (11 Apr 2018), "Goldman Sachs asks in biotech research report: 'Is curing patients a sustainable business model?'", reporting the Goldman Sachs note "The Genome Revolution" (April 10) by the analyst Salveen Richter: "Is curing patients a sustainable business model?"; Gilead's hepatitis C treatments "achieved cure rates of more than 90 percent"; "The company's U.S. sales for these hepatitis C treatments peaked at $12.5 billion in 2015, but have been falling ever since."; "GILD is a case in point, where the success of its hepatitis C franchise has gradually exhausted the available pool of treatable patients"; "While this proposition carries tremendous value for patients and society, it could represent a challenge for genome medicine developers looking for sustained cash flow." https://www.cnbc.com/2018/04/11/goldman-asks-is-curing-patients-a-sustainable-business-model.html . Checked at source, 13 Nov 2026.

[73] US Federal Trade Commission, press release "FTC Staff Report Finds Large Social Media and Video Streaming Companies Have Engaged in Vast Surveillance of Users with Lax Privacy Controls", September 2024: the report rests on orders to "nine companies including some of the largest social media and video streaming services"; "The staff report also found that the business models of many of the companies incentivized mass collection of user data to monetize, especially through targeted advertising, which accounts for most of their revenue." https://www.ftc.gov/news-events/news/press-releases/2024/09/ftc-staff-report-finds-large-social-media-video-streaming-companies-have-engaged-vast-surveillance . Checked at source, 1 Nov 2026.

[74] UP's agreed position F1, "UP names a system people already use" (CANON, 22 Oct 2026): "These elements have existed in isolation, and others saw that they could be coordinated: Jacque Fresco, Ward Cunningham with the wiki, Paolo Soleri, Maria Montessori. What was missing was the technology. Inside today's framework, AI and robotics threaten to destroy the labour market and concentrate power in a few hands; inside a new framework they can coordinate the whole system for everyone's benefit. The Venus Project imagined a central brain; AI can now be the pattern-finding and coordinating system it envisioned. The problem is not progress but the framework we run it in". Full wording in UP's agreed positions (the Position Ledger).

[75] UP's agreed position that the comparison with the current system is not symmetric: the current system often monetises a problem instead of solving it, and sometimes the problem's persistence is what pays. Full wording in UP's agreed positions (the Position Ledger).

[76] UP's agreed position that concentration of power is the danger: "Money is one form of power; any concentration of power is dangerous. Abolishing money does not abolish the pursuit of power: it can move to access, office, information or expertise, and chasing each form one by one becomes whack-a-mole. So UP watches for concentrations of power in any form and keeps spreading them out. The threat is never declared gone. Design helps: caps, public records of who approved what, rotation of anyone who allocates, random audits, public and versioned allocation rules." Also in UP's agreed positions (the Position Ledger).

[77] UNESCO, *Teachers*: "44 million additional teachers are needed globally to ensure universal primary and secondary education by 2030." https://www.unesco.org/en/teachers . A report in October 2026 (AP, via Africanews) gave a revised figure of 50 million, which could not be found on UNESCO's own pages. Checked 1 Nov 2026.

replace a fiction without obvious downsides.[66] The gradual change is in people, not in UP: in the reading UP's author has set out, now going through UP's method, UP's own system never runs on the stand-ins, and each person relies on them less as UP meets more of their needs.[78] So UP does not propose twelve campaigns, one for each row. It proposes to take over, one job at a time and wherever technology can do it without obvious downsides, the work the stand-ins do now, so that more and more decisions rest on what there is, what people need and what happened the last time. Where a failure grows from the gap between the stand-in and the real world, closing the gap goes to the root of it.

Chapter 8 set out the seven developments, each already under way somewhere in the current system, that could take the fictions' jobs over: abundance that technology creates; automation, robotics and AI doing the work; doing more with less; a new way of using things; open designs and shared knowledge; coordination that counts real things; and a narrow and intense focus on what is truly scarce.[79] Table 12.3 shows where each meets the board.

Table 12.3. Where the twelve failures meet the roots Chapter 8 traced. The column "How much of the failure" is UP's reading for the collective to test, not a measurement. The developments are numbered as in Chapter 8: (1) abundance that technology creates; (2) automation, robotics and AI doing the work; (3) doing more with less; (4) a new way of using things; (5) open designs and shared knowledge; (6) coordination that counts real things; (7) a narrow and intense focus on what is truly scarce.

	Failure	How a stand-in drives it	How much of the failure	Developments doing most of the work	Taken further in
F1	Climate and planetary limits	Costs left outside the company's books; growth counted in money	Much	(1) clean energy; (3); (6) physical limits counted directly	Ch 18
F2	Unmet basic needs	Food and goods routed by ability to pay; surpluses destroyed to hold prices	Much	(1); (4); (6); the needs floor	Ch 13
F3	Inequality	Ownership records that grow by what they hold	Much	(4); (5); needs met as a floor, so wealth matters less	Ch 13
F4	Capture of government	Money buying access to rule-making	Much	No development needed: no offices to buy, records public, one voice each	Ch 5; Ch 6
F5	Work	Survival tied to a wage; care left off the record	Much	(2); needs met as a floor	Ch 14
F6	Health	Treatments priced; cures that end a revenue stream	Part	(5) open science; (7); (2)	Ch 16
F7	Education	Fees play a part; too few teachers plays a larger one	Part	(5); (2) tutor-style AI; (7) teachers' time	Ch 15
F8	Housing	Homes and land held as assets; shelter routed by ability to pay	Much	(4); (5) open designs; (1); condensed settlement, as one way UP could run	Ch 13; Ch 18

[78] Clarification of the tenet *Reality over fiction*, set out by UP's author on 14 November 2026 and going through UP's method; until the UP Moderator enters it in the Position Ledger, it is the author's stated reading, not yet an agreed position. In substance: the gradual change is in people, not in UP. UP's own system does not run on money, a UP government or UP companies; each person relies on money, governments and corporations less as they use UP more, and the number of people doing so grows. Chapter 8 sets it out in full.

[79] Chapter 8, sections "How the jobs move to reality" and "How the pieces work together", where each of the seven developments is set out with its evidence, the UP position it rests on and its limits; the sources are in that chapter's notes.

	Failure	How a stand-in drives it	How much of the failure	Developments doing most of the work	Taken further in
F9	Information disorder	Users' data collected to sell advertising; also capture by small groups	Part	(5); (6) a checkable record	Ch 20
F10	War, violence and crime	Gain as one motive among many	Part	Needs met as a floor; force answered as in Chapter 19	Ch 19
F11	Waste and planned obsolescence	More earned from replacing than from lasting	Much	(3); (4); (5) designs built to last	Ch 18
F12	AI concentrating power	The most capable AI built and held by a few firms, and the least open	Much	(5) open, plural AI; (6) with people deciding	Ch 20

Sources: the text and notes of this chapter and of Chapter 8; UP's agreed positions on useful fictions, scarcity, prices and the whole system.

The rows cluster, and the clusters show how the developments work together. The needs rows, unmet needs, inequality and housing, are where the first job of a price, rationing what is scarce, does the most harm, because the things being rationed are not, taken together, scarce. The capacity to feed and supply everyone already exists, and UP's agreed claim is that what has been missing is organisation and distribution.[26] Abundance that technology creates makes more things plentiful; a new way of using things, through libraries of tools, shared spaces and things built to be lent, means that fewer of them have to be owned by every household; and coordination that counts real things handles what is still limited. UP's agreed position on prices sets out, as one way UP could run, how each job a price does now could be done without it: what is still limited is shared by rotation and reservation, what people want is learned from direct use data under a rule that keeps each person in control of their information, costs are counted in physical accounts, and local knowledge is used through decisions at the smallest scale. Whether that coordinates the most complex production as well as markets do is, in the position's own words, "testable workload, run rung by rung".[80] Chapter 13 takes this up in full.

The rows on the living world, climate and waste, turn on the costs the stand-ins leave out. Here the developments do two things at once. Clean energy, already cheaper than fossil power for most new projects, and doing more with less shrink the physical load, while physical accounts of energy, materials, water and carbon put the hard limits inside every decision instead of outside the books.[33,81] Open designs built to last, and, as one way UP could run, shared standards so that parts can be swapped, would end the reason to sell a replacement, which UP's agreed position on scarcity counts among the artificial kinds it aims to end.[82] Chapter 18 holds the detail.

The work row turns on a single link: survival tied to a wage. Inside the current system, a machine that can do a job threatens the person who did it. If needs are met as a floor and the machines serve everyone, the same machine takes away drudgery instead of a livelihood. That is the meaning of UP's agreed position that the problem is "not progress but the framework we run it in".[74] Its position on abundance says that we already have the automation to

[80] UP's agreed position on prices (Round 12S, position 7, an illustration of one way UP could run, never a directive): "massive abundance plus a new norm of owning (libraries, personal fabrication, recyclable goods, the big wants as beautiful community spaces with reservations, personal space growing with capacity, unlimited virtual worlds). Price's jobs are replaced: rationing by rotation and reservation (points 2, 14); what people want by direct use data (under UP's data rule); costs by physical accounting (21); local knowledge by decisions at the smallest scale (M2). Whether this coordinates the most complex production as well as markets do is testable workload, run rung by rung." Full wording in UP's agreed positions (the Position Ledger).

[81] UP's agreed position on physical accounting (card 21, CANON): "Physical accounting (energy budgets, carbon caps, water footprints, materials and life-cycle assessment) sets the planet's hard limits. Inside them, several measures are used together, and choices between different needs, such as a clinic or a cultural centre, are made openly by the people affected, through the decision steps (#1), never by an efficiency score." Also in UP's agreed positions (the Position Ledger).

[82] UP's agreed position on the three kinds of scarcity (card 14, CANON), in full: "Much of today's scarcity is artificial: planned obsolescence, patents and other enclosures, hoarding, money rationing and failures of distribution. Some scarcity is physical (energy and materials) and some positional (prime places, specialised skills, time and attention). UP names all three and answers each: it ends artificial scarcity with open design and physical accounting, reduces physical scarcity with automation, renewable energy and circular systems, and shares positional goods by rotation or a decision of the stakeholders (#2), never by price. Design is a large part of the answer, as a direction rather than a guarantee: dense, beautiful places for land, robots for care, better storage for energy. UP will not be perfect at this; it is judged against what happens now." Also in UP's agreed positions (the Position Ledger).

end most drudgery and the renewable capacity to give everyone a decent life, and it makes abundance a measured target shown in practice, not a promise.[83] Chapter 14 shows how the work that is left is asked for, shared and never forced.

The rows on power, capture of government, information disorder and AI, need no new technology at their core. They need the lever removed. In UP there are no offices to buy, money buys no say, every record is public, and each person has one voice.[27,47] AI coordinates and proposes, and never governs: people can always correct, pause or switch it off, and no single AI system or operator controls coordination.[84] UP's agreed position on what the AI is spells out what that means for work: people choose their work, and the AI may not assign work or compel anyone.[85] Reducing money does not by itself reduce power, which can move to access, office, information or expertise, so UP watches for concentrations of power in every form.[76] Chapters 5, 6, 11 and 20 carry this through.

The rows on health and learning are where the last development, the narrow and intense focus on what is truly scarce, matters most. Once open science and shared knowledge have made freely available what can be shared, what remained scarce would be narrow and hard: a new antibiotic, an answer to the next outbreak, a skilled teacher's time. UP's agreed position on scarcity says that when many people want the same thing, UP treats it as a signal and a problem to solve, and its position on the whole system sends the most attention to the biggest problems first.[86,64] Chapters 15 and 16 show what that could mean for learning and for health.

The clusters are not separate machines. Chapter 8 showed how the developments strengthen each other: cheap energy powers the machines, the machines make sharing and repair easier, open designs let anyone build the machines, and coordination keeps track of all of it.[79] UP reasons that the same holds across the board: every person freed from the struggle to meet basic needs has more time to learn, every learner can add to the shared record, and every addition to the record helps solve the next problem. That is a projection, and it has to be shown. UP's agreed position on the whole system calls UP "a system whose parts strengthen each other".[64] Chapter 21 tests whether the parts really do hold together, loop by loop, and what still works if one of them arrives late.

The limits come with the case, and they are part of it. Replacement is gradual and is never done by decree; a job moves out of a fiction only when what replaces it has been shown to do the job without obvious downsides, judged by evidence published with its data and by the people affected.[65,66] Some fictions stay because the alternatives would harm health, happiness and wellbeing, and freedom is the first of them.[66] In its early stage UP lives with money, and pays real costs, including money, like everyone else.[87] And whether coordination that counts real things can do everything a price does for the most complex production is not assumed. It is tested, rung by rung, in the open.[80] With those limits, the claim is this. Wherever a failure on the board grows from the gap between a stand-in and the real world, UP proposes to close the gap, job by job, as technology makes it possible without obvious downsides, instead of patching the distortion one row at a time. In UP's terms, the board is not a list of twelve wars to be fought separately. It is a tree, and the work that reaches its roots reaches many of its branches at once.

[83] UP's agreed position on abundance (card 22), its first sentence: "We have the automation to end most drudgery and the renewable capacity to give every person on Earth a decent life." It goes on: "UP guarantees needs (food, shelter, health care, education, connection), not every want. What counts as enough is set together and rises as capacity grows. Today's luxury is not the target: the wealthy few drive most of today's damage." Full wording in UP's agreed positions (the Position Ledger). UP's agreed position on abundance (card 22): "UP guarantees needs (food, shelter, health care, education, connection), not every want. What counts as enough is set together and rises as capacity grows."; "UP proves this in the open: every community that runs this way publishes its energy, materials and needs met, so abundance is a measured target shown in practice, not a promise." Full wording in UP's agreed positions (the Position Ledger).

[84] Core tenet: *Technology serves; people decide*, in full: "AI and automation coordinate, propose and do work. They never govern: people can always correct, pause or switch them off. No single AI system or operator controls coordination: the AI systems UP uses are open, more than one, checked against each other, and watched for concentrated power like everything else. Because an AI may one day be shown to have experiences of its own, UP studies the question carefully and would extend its aim to any being shown to feel." Also in "The core of UP".

[85] UP's agreed position on what the AI is (card C46): "The AI is the coordinating system UP needs, and it coordinates by proposing, not by governing. It publishes evidence-based proposals with their data and confidence, marks what is still unknown as shared work for people and AI, and never rules on matters of taste."; "People choose their work; the AI may not assign work or compel anyone, and any plan can be overridden through the decision steps." Full wording in UP's agreed positions (the Position Ledger).

[86] UP's agreed position on scarcity (DP-002, CANON): "When many people want the same thing, UP treats it as a signal and a problem to solve. Meanwhile it is shared by rotation or by a decision of the stakeholders, and UP works to make more of it, through design that lets many people enjoy a desired place, as Paolo Soleri proposed, and through new places. A price only signals; it does not make a rare thing less rare." The same position says that UP "replaces money and prices with shared access and real physical accounting" and "holds the machines and the land in common"; and "Land joins the commons only by its stakeholders' choice, never by force." Full wording in UP's agreed positions (the Position Ledger).

[87] UP's agreed position on growth and assets (Round 12S, position 5, as updated in round 12c, a projection): "members' money is best used early to buy and convert more"; assets owned or controlled by people who join convert by their owners' choice. UP's study lessons, which guide how the book is written but are not agreed positions, add the wording used here: "free" is replaced, because "costs fall as abundance grows; UP pays real costs, including money early on"; and retiring money, government or corporations "now" or "by decree" is replaced by "reduced slowly, as technology replaces what they do without obvious downsides". Full wording in UP's agreed positions (the Position Ledger) and study lessons.

The three gaps

Three questions cut across all twelve rows, and a fair critic would ask them first. Who pays for the floors while UP is still small? What happens when someone takes without giving, or uses force? And who counts as affected, when the people a decision touches include people far away, people not yet born and living things that cannot speak? UP's debate called these the three gaps. Its agreed answers draw on the same evidence as the twelve rows and on later rounds of the debate that dealt with justice and with UP at its full potential, and they are taken here one at a time.[88]

The first gap is real in the early stage. While UP is a minority network inside the current system, its members' floors depend partly on their own earnings, on gifts and on public programmes, and UP cannot yet guarantee them.[89] UP's agreed position is that the gap shrinks with each stage, and faster as members convert what they own and use money early, while it still serves, to buy and convert more.[88] In the middle stage the question itself changes. Floors are met in real goods from UP's own production, so the question "who pays?" becomes "can UP build a productive base?" The evidence on cost suggests that the sums involved are small beside the world's income. One recent estimate, a working paper for the National Bureau of Economic Research built from household surveys in 34 countries, put the cost of approximately ending extreme poverty with well-targeted cash at 0.28 per cent of the world's GDP.[90]

What is spent on a floor also stays close to home. In a large experiment in rural Kenya, one-time cash transfers to more than 10,000 poor households spread benefits to their neighbours and to local firms, with minimal price inflation, and the researchers estimated that each dollar transferred raised local economic activity by about two and a half dollars.[91] Whether a permanent floor, met in goods, would do the same is untested. Worker co-operatives remain a very small part of the economy, but where they are founded they survive at least as well as conventional firms; the bottleneck, one review concludes, is that too few are created.[92] That is the honest shape of the first gap. It is a problem of building, and building is something UP can be judged on, stage by stage, as Chapter 13 does for needs and Chapter 23 for the transition as a whole.

The second gap has two sides. Inside UP, the question is what happens to the person who takes without giving, or who harms others. UP never forces anyone to work, and merit decides who does skilled work, never whose needs are met.[93,94] Chapter 14 takes up how the work nobody wants gets done when no one can be made to do it. Harm is a different matter. UP's agreed positions on justice hold that most crime is removed or sharply reduced at its roots, and that what remains is handled by one layer of trained, professional law enforcement, whose authority comes from the people and the process, whose work is open, and which is watched by many, with courts that rest on

[88] UP's agreed position on the three gaps (round 12c, card U12): "Paying for floors: shrinks with each stage, and faster as members convert what they own and use money early to buy and convert more"; "Free-riders and force: inside UP, answered by Round 13 (open, watched law enforcement; courts that rest on evidence) and the fair-hearing floor (T6). Outside UP, force persists while the old system holds arms; it peaks in the middle stage and shrinks as cities and nations join and convert their armies"; "Who counts as affected: those affected decide (T4); voiceless stakeholders (future people, young children, other living things) are represented by several independent simulations that give input but never a vote". The Position Ledger marks the simulations and the conversion of armies as illustrations of one way UP could run. Full wording in the round 12c record.

[89] UP's step-3 evidence record (24 Oct 2026), the three gaps by stage: in the early stage the gap of paying for floors is "Real: floors depend partly on members' earnings, donations and public programmes."; for unmet basic needs, the early stage reads "UP cannot yet guarantee the floor." Full wording in the step-3 evidence record.

[90] Roshni Sahoo, Joshua Blumenstock, Paul Niehaus, Leo Selker and Stefan Wager, "What Would it Cost to End Extreme Poverty?", NBER Working Paper 34583 (December 2025), abstract: "Using nationally representative household consumption surveys from 34 countries"; "that together account for 76% of the world's poor"; "Extrapolated globally, the results imply a cost of 0.28% of global GDP"; "to (approximately) end extreme poverty."; "would cost $211B nominal per year." https://www.nber.org/papers/w34583 . A model, extrapolated from 34 countries; "approximately" ending extreme poverty means bringing it down to 1%. Checked 1 Nov 2026.

[91] Dennis Egger, Johannes Haushofer, Edward Miguel, Paul Niehaus and Michael W. Walker, "General Equilibrium Effects of Cash Transfers: Experimental Evidence from Kenya", *Econometrica* 90(6):2603–2643 (November 2022), abstract: "we document large positive spillovers on non"; "recipient households and firms, and minimal price inflation."; "We estimate a local transfer multiplier of 2.5." https://econometricsociety.org/publications/econometrica/2022/11/01/General-Equilibrium-Effects-of-Cash-Transfers-Experimental-Evidence-From-Kenya . The working paper (NBER w26600, 2019) describes the experiment: "We provided one-time cash transfers of about USD 1000 to over 10,500 poor households"; "across 653 randomized villages in rural Kenya." https://www.nber.org/papers/w26600 . The working paper's estimate was 2.4; the published estimate is 2.5. Checked 1 Nov 2026.

[92] Virginie Pérotin, "What do we really know about workers' cooperatives?" (paper for the ILO and ICA research conference on co-operatives and the world of work, Antalya, November 2015): "The aggregate data available for France (Table 3) show identical failure rates for the two groups of firms in the long run"; "worker cooperatives represent a very small part of the business sector, because too few are created."; "the existing evidence suggests that labour-managed firms survive at least as well as conventional firms.". The paper adds that much of the evidence on survival comes from countries whose laws shape how worker co-operatives are set up. https://ccr.ica.coop/sites/ccr.ica.coop/files/attachments/5.3Virginie%20Perotin%20What%20Do%20we%20Really%20Know%20ilo%20ica.pdf . Checked at source, 1 Nov 2026.

[93] Core tenet: *Freely joined, ethically grown*: "UP is never imposed. No one is forced to join, to work or to give up what is theirs. It grows by being useful, building on what people already do, and it acts only by ethical means." Full wording in "The core of UP".

[94] UP's agreed position on merit and work: skilled work is open to anyone who meets published, testable and changeable standards, and merit decides who does skilled work and never whose needs are met; "Labour is never forced". Full wording in UP's agreed positions (the Position Ledger).

evidence, not public opinion.[61] And no one's freedom is restricted without a fair, evidence-based hearing, with the evidence open to them and a way to appeal; the substance of the evidence is always open to the person, even where a court protects a witness whose safety is at risk.[62]

Outside UP, force persists while the current system holds arms. UP's agreed position is that it peaks in the middle stage, when UP is large enough to matter to those who gain from the old order but not yet large enough to be the norm.[88] In that stage UP's protection rests on legality, numbers and nonviolent action, and on being woven so far into the societies around it that attacking it would cost far more than it could gain.[95] The evidence on the last is encouraging and sobering at once. Among the mass campaigns to remove a government, end an occupation or win independence between 1900 and 2019, nonviolent ones succeeded about twice as often as violent ones. Since 2010, though, the success rates of both have fallen sharply.[96]

As cities and nations join, UP's agreed position is that force from outside shrinks.[88] One way this could happen, which the positions give as an illustration, is that their weapons and armies are dismantled and converted into law enforcement, emergency aid and rapid response, and nuclear weapons into power.[63] It sounds like a dream, though parts of its nuclear side have been done before. At Reykjavik in October 1986, Ronald Reagan and Mikhail Gorbachev came close to agreeing to eliminate their ballistic missiles within ten years, as a step toward abolishing nuclear weapons, and the summit ended without a deal.[97] The treaty they signed the next year eliminated an entire category of nuclear weapons, and by 1991 the two sides had destroyed thousands of missiles under it, though the treaty ended when the United States withdrew in 2019.[98] And under an agreement signed in 1993, 500 tonnes of bomb-grade uranium from Russia were turned into fuel for American power stations over the next twenty years, enough material for 20,000 warheads. For two decades, up to a tenth of the electricity produced in the United States came from fuel made that way.[99] Turning weapons into power has a record, if a partial one; turning armies into emergency services has none yet on that scale, which is why UP gives it as an illustration.

The third gap is the one UP's own method makes hardest. UP holds that anyone may take part in any problem and that the people it affects decide its outcome.[45] But who is affected? The people who turn up are often unlike the people a decision touches. A study of planning and zoning meetings found that the residents who spoke were more likely to be older, male, long-time residents and homeowners, and that they opposed new housing far more strongly than the public at large.[100] People with most to gain, such as future residents, are rarely among those who speak, and some of the people a decision touches can never be in any room at all.

[95] UP's agreed position on protection during the transition: "UP is not a nation-state and has no army. During the transition its protection is to be everywhere and woven into the existing system, so that attacking it would cost far more than it could gain. UP works within the law, delivers things its host societies value, and earns broad public support. If it is attacked, it responds only by nonviolent means." Full wording in UP's agreed positions (the Position Ledger).

[96] Erica Chenoweth, "The Future of Nonviolent Resistance", *Journal of Democracy* 31(3):69–84 (July 2020): "over the period 1900–2019, analysts have identified a total of 628 maximalist mass campaigns"; "Among the 565 campaigns that have both begun and ended over the past 120 years,"; "about 51 percent of the nonviolent campaigns have succeeded outright,"; "while only about 26 percent of the violent ones have."; "Since 2010, less than 34 percent of nonviolent revolutions and a mere 8 percent of violent ones have succeeded." https://www.journalofdemocracy.org/articles/the-future-of-nonviolent-resistance-2/ . "Maximalist" campaigns seek to remove a government, end an occupation or win independence. Checked 1 Nov 2026.

[97] Ronald Reagan, remarks to officials of the State Department and the Arms Control and Disarmament Agency on the Iceland meetings (14 October 1986), Reagan Presidential Library: "we were in sight of an historic agreement"; "on completely eliminating the threat of offensive ballistic missiles by 1996." https://www.reaganlibrary.gov/research/speeches/101486c . Reagan also described "a 10-year plan" "for eliminating all Soviet and American ballistic missiles from the face of the Earth." National Security Archive, "The U.S. and Soviet versions of Reykjavik" (10 October 2026): "President Ronald Reagan and Soviet leader Mikhail Gorbachev almost achieved a deal 40 years ago"; "at the 1986 Reykjavik summit to abolish nuclear weapons, but the agreement would have required"; "an exceptional level of trust that neither side had yet developed,". https://nsarchive.gwu.edu/node/4929 . No agreement was signed at Reykjavik. Checked 1 Nov 2026.

[98] Arms Control Association, "The Intermediate-Range Nuclear Forces (INF) Treaty at a Glance": "the signing of the INF Treaty on Dec. 8, 1987"; the treaty "marked the first time the superpowers had agreed to reduce their nuclear arsenals, eliminate an entire category of nuclear weapons"; the two sides "destroyed a total of 2,692 short-, medium-, and intermediate-range missiles by the treaty's implementation deadline of June 1, 1991."; "On Aug. 2, 2019, the United States formally withdrew from the INF Treaty." https://www.armscontrol.org/factsheets/inftreaty . Checked 1 Nov 2026.

[99] World Nuclear News, "Megatons to Megawatts program concludes" (11 December 2013): "In 1993, the US and Russian governments signed an agreement"; "for the purchase over a 20-year period of 500 tonnes of Russian 'surplus' high-enriched uranium". https://world-nuclear-news.org/articles/megatons-to-megawatts-program-concludes . Centrus Energy, "Megatons to Megawatts": "500 metric tons of bomb-grade highly enriched uranium have been recycled"; "permanently eliminating enough bomb-grade material for 20,000 nuclear warheads."; "For two decades, up to 10 percent of the electricity produced in the United States"; "was generated by fuel fabricated using low enriched uranium". https://www.centrusenergy.com/who-we-are/history/megatons-to-megawatts/ . Checked 1 Nov 2026.

[100] Katherine Levine Einstein, Maxwell Palmer and David M. Glick, "Who Participates in Local Government? Evidence from Meeting Minutes", *Perspectives on Politics* 17(1):28–46 (2019), abstract: the authors code "thousands of instances of citizens speaking at planning and zoning board meetings concerning housing development"; "We find that individuals who are older, male, longtime residents, voters in local elections, and homeowners are significantly more likely to participate in these meetings. These individuals overwhelmingly (and to a much greater degree than the general public) oppose new housing construction." https://doi.org/10.1017/S153759271800213X ; https://www.cambridge.org/core/journals/perspectives-on-politics/article/abs/who-participates-in-local-government-evidence-from-meeting-minutes/C6505940E607B6392C4A8F53A9363DB1 . Checked at source, 1 Nov 2026.

UP's answer begins with its rule for decisions. The stakeholders in a decision include everyone materially affected, among them people downstream and future residents, and no vote may override the protected freedoms.[101] For those who cannot speak for themselves, future people, young children and other living things, one way UP could run is to represent them by several independent simulations, with their assumptions published, which give input but never a vote.[102] How a community should decide, in a hard case, who is materially affected remains open, and Chapter 5 listed it among the questions for the wiki. It is work for the method, and it does not shrink as UP grows. Chapter 22, on who decides, takes it up in full.

The strongest doubts about the board

The first doubt is the most natural one. A scoreboard kept by UP's own supporters will flatter UP. The doubt is fair, and UP's answer is to take the score out of anyone's private keeping. The rules, code, records, decisions and reasons of UP are public, so anyone can check them.[56] A truthful shared record, in which facts, measures and decisions are never falsified, is one of the floors no decision may cross, so a falsified measure would breach UP's foundations whatever the motive behind it.[62] In the way UP's agreed positions give as one way it could run, every headline measure has an independent check and definitions are fixed over time, so a quiet change to what is counted would be visible and open to challenge.[15] Errors will still happen, and some will favour UP. What changes is that anyone who suspects one can see the data, the definition and the check, and raise the error as a problem in its own right.

A second doubt is that the twelve were picked to suit UP. They were picked as the major failures of the current system that UP has to show it can address, each paired with the strongest first objection against UP.[20] Most of the rows correspond to one of the world's own goals for 2030, which is some protection against a list built for convenience.[6] Its limits are of another kind. Some of what matters most to people, such as meaning, belonging and love, does not fit easily in a row with a single measure. Because no problem belongs to the person who raised it, anyone who thinks a failure is missing can propose it, with its measure and its evidence, and the marketplace of problems would weigh it by the harm it measurably does.[17,16]

A third doubt is that most of Table 12.2 is projection, and a projection proves nothing. UP agrees, and labels it so. The early column rests on today's evidence about practices UP builds on, such as co-operatives, open software, open knowledge, tutor-style learning and community health work, whose evidence the chapters that follow set out. UP's agreed claim is that these practices already work inside a system that underfunds and interrupts them.[103] The middle and completed columns are reasoned from cited mechanisms, among them the falling cost of open, modular technology, the capacity that already exists to feed and supply everyone, and the record of open systems that grew beside an incumbent until they led whole fields.[18,103] Linux, for one, has run every one of the world's 500 fastest supercomputers since November 2017.[104] A projection built this way can still be wrong. UP's method holds every claim that guides shared action open to testing, and its tenet on self-correction feeds each failure back as a new problem, so each projection is to be tested, and corrected, as UP grows.[17,12]

A fourth doubt runs the other way. Many of these measures improved for decades before UP existed, so why not let the current system finish the job? Chapter 2 gave that doubt its due. The fall in child deaths and in extreme poverty, and the healing of the ozone layer, show what the current system can do, and UP is judged against that record.[11] The same chapter showed that on most of the issues that will decide this century the problems are growing faster than the reforms, and the UN's own report for 2026 finds that 15 per cent of the targets it can

[101] UP's agreed position on how UP decides when people disagree: "Every decision starts with an evidence-based proposal, published with its data, and an open question: does anyone have a better idea?" Only as a last resort do the stakeholders vote, with guards; the stakeholders include everyone materially affected, including people downstream and future residents; no vote may override the protected freedoms. Full wording in UP's agreed positions (the Position Ledger).

[102] UP's agreed position on voiceless stakeholders (round 12S, position 9, an illustration of one way UP could run): future people, young children and other living things "are represented by simulations: several independent ones, assumptions published, giving input but never a vote." Full wording in UP's agreed positions (the Position Ledger).

[103] UP's agreed overall claim (round 12c, 28 Oct 2026, option B, "Updated, force answered by conversion"), quoted in full in the text. Its middle and later clauses are projections. Full wording in UP's agreed positions (the Position Ledger, round 12c, position 2) and the round 12c record.

[104] TOP500.org, List Statistics, "Operating system Family" (https://www.top500.org/statistics/list/): for each of the 18 lists from November 2017 to June 2026, Linux is the only operating system family shown, with 500 of 500 systems. The first all-Linux list was announced by The Linux Foundation, "Linux Runs All of the World's Fastest Supercomputers" (20 Nov 2017): "Linux powers every one of the world's 500 fastest supercomputers", https://www.linuxfoundation.org/blog/blog/linux-runs-all-of-the-worlds-fastest-supercomputers . Checked at source on 31 Oct 2026; TOP500 publishes a new list every June and November.

assess have slipped back below where they stood in 2015.[7] A system that is improving slowly and still losing the race is the situation UP is built for.

The last doubt is the one UP raises against itself. Even if every row moved the way Table 12.2 projects, people would still fall ill, grieve, quarrel and fail. UP's agreed positions say so plainly: UP is not magic, and suffering continues while its biggest causes fall.[19] Some things persist at every stage, among them the warming already locked into the climate and, in the words of UP's overall claim, threats from space, until humanity can leave the solar system. Disagreement over values persists too, and UP counts that as healthy, because splits test different ways in the real world.[103,105] A scoreboard that claimed to clear every row would itself be a reason to distrust it.

UP at work: one row, followed through

A scoreboard is only as good as what is done with it, so it helps to follow one row through UP from the count to the work. Take the eighth row, housing, as one town's UP community might meet it: some of its neighbours have nowhere to sleep. The walk-through below is one way UP could run, built from its tenets and agreed positions; it is not a procedure UP has adopted.

The problem is named and measured, and the measure is checked. Anyone may name it, and no one owns it once it is named: anyone may update, reframe or improve it.[17] The count is made with a fixed definition, kept over time, so that who counts as homeless cannot drift as the numbers change, which is the drift Levari found. And the headline count has an independent check, so the figure cannot be made to look better while the thing it stands for gets no better.[15]

It is counted person by person. UP's aim is measured person by person, never as a total, so the row asks how many people the failure reaches and how deeply: a night in a car and ten years on the street are not the same harm.[13] Problems are ranked by measured harm, not by how loud they feel.[15]

Its roots are traced, and it is offered as work. Problems are linked in trees that show their common roots, so that the work goes to solutions that solve many problems at once, and the bigger a problem is, the more attention and effort it draws.[16] Here the tree might show that the town's empty flats, its waiting list and its loss of building skills share roots. Each branch is offered as work to anyone willing to take it on, whether or not they are affected, and the people it affects decide its outcome.[17]

It is judged against two standards. The row is read against the current system, which asks whether UP is already doing better for the people on the street, and against the ideal, which asks how far it still is from everyone being housed.[12] At the early stage the honest reading is that UP cannot yet guarantee the shelter floor, and the row says so.[89]

What persists stays on the board. Land held outside UP and local objections to new homes are named in the row's last column, as work for the method, not as reasons to stop.[19] If UP's own effort falls short, that is itself a problem, offered as work to the people it affects.[16] Every failure of UP is fed back into it as a new problem to solve.[12]

Set beside Nightingale's diagrams, the difference is in what follows the count. Her figures showed which deaths could have been prevented, and it took others, with authority and a workforce, to act on them. In this walk-through the count, its check, its roots and the work are on one open record, and anyone may take the work up.[56] Whether a board kept this way leads to fewer people without a home is what the stages below set out, and it has to be shown.

How the board could run, stage by stage

The board itself would change as UP grows. UP's agreed position on judging UP by stage names three stages: early, when UP is a minority network inside the current system; middle, when it has its own productive base and most members' needs are met from what UP produces; and completed, when most people live mainly in UP.[18] Table 12.2 has already set out what UP claims for each failure at each stage. What follows is what keeping score UP's way could add at each stage, and Table 12.4 sums up the expected benefits. The early stage rests on today's evidence; the middle and completed stages are projections.

[105] UP's agreed position that "Splits are good: they test two or a thousand ways in the real world." Full wording in UP's agreed positions (the Position Ledger, round 12S, position 10).

Early: a minority network inside the current system. Early on, the board is mostly a borrowed record. Its twelve rows are read from the current system's own figures, as Table 12.1 reads them, and UP's own rows are small: what its members' communities have measured, with fixed definitions and an independent check, and posted for anyone to read.[15,56] The benefit is modest and real. Members can see which problems are biggest and whether their work is moving them, and anyone, member or not, can check the figures. What would have to be shown is that UP's own measures hold steady over time and survive their checks.

Middle: UP's own productive base (a projection). As more of members' needs are met from what UP produces, more of the board's rows would be UP's own record, counted person by person and linked in trees that show common roots.[13,16] The expected benefit is that work goes where the measured harm is greatest, biggest first, and that any area where UP does not yet do better than the current system draws attention first.[16] What would have to be shown is that UP's rows beat the current system's on the same measures, in figures anyone can check.

Completed: most people living mainly in UP (a projection). At this stage the board would be the shared record of most people's problems, judged against the current system's last record and against the ideal.[12] What would persist is what the last column names: damage already locked in, the human remainder, and disagreement over values, each kept on the board as work.[19]

Table 12.4. Expected benefits of keeping score UP's way, by stage. The early stage rests on today's evidence; the middle and completed stages are projections.[18,12]

Stage	For members	For people outside UP	For the living world	How it would be shown
Early	Their own problems measured, ranked by harm and offered as work; progress they can see	The rules, records and reasons are public, so anyone can check the figures	Harm to the living world counted on the board beside harm to people	UP's own measures held steady over time and passing their independent checks
Middle (projection)	Work drawn to the biggest measured harm first; problems traced to common roots, so one fix can clear several	An open comparison of UP's record with the current system's, on the same measures	Damage that cannot be undone ruled out by the floors, and counted where it persists	UP's rows beating the current system's, in figures anyone can check
Completed (projection)	Most people's problems on one shared, checkable record, counted person by person	Most people live mainly in UP, and no one is forced to	Problems of the living world ranked by measured harm beside people's	Measured against today's record and against the ideal, with every failure fed back as work

Sources: notes to this section.[13,15,16,19]

What the board adds up to

UP's debate drew the twelve rows and the three gaps together into one overall claim, agreed in October 2026. It is long, and it is worth reading whole, because each of its clauses is tested somewhere in the chapters that follow:[103]

> The practices UP builds on already work inside a system that underfunds and interrupts them. UP adds what that system lacks: inventing solutions together is its main work, open to anyone, and it widens the base of people and AI who can contribute. As UP grows beside the current system, the people the current system fails move their work and needs into UP; the tools UP uses get cheaper and better the more people use them; and floors are met from UP's own production rather than from budgets that can be cut. The capacity to meet everyone's basic needs already exists; what has been missing is organisation and distribution. On that basis UP has a real chance of sharply reducing most of these failures by its middle stage. Force used by those outside UP shrinks as cities and nations join and convert their weapons and armies into law enforcement, emergency aid and rapid response. What persists is named openly as work: damage already locked into the climate; threats from space, until humanity can leave the solar system; and the human remainder, because UP is not magic and suffering continues while its biggest causes fall. Disagreement over values is not a failure: splits test different ways in the real world. The early stage is the hinge, and history says open systems cross it by being useful to people where they already are.

The claim has three layers, and each is held to a different standard. Its opening sentences describe what is true now: the practices UP builds on work even when underfunded, and the capacity to meet everyone's basic needs exists. Those are claims about today, and this book cites the evidence for each of them. Between them sits what UP adds to the current system, inventing solutions together as its main work, which describes what UP is, not what it predicts. Its middle states what UP expects as it grows: a real chance of sharply reducing most of these failures by the middle stage, and force from outside shrinking as cities and nations join and convert their weapons and armies, which UP gives as an illustration. Those are projections, to be tested in the open as UP grows. Its last part names what persists. That is a commitment of a different kind, to name openly, and treat as work, what persists, UP's own limits included, and the rest of this book is written to keep it.

How fast any of this happens is not for anyone to decide. UP's agreed position on growth is that it will grow naturally, perhaps very fast and very far, perhaps slowly. What matters is to keep the quality of UP's core values and tenets as it grows, so that the growth stays positive and does not descend into unintended consequences.[44] There is urgency all the same. The threats from the current system are large and reach into almost every part of civilisation, and the aim is to change course without a collapse.[106] UP's agreed claim reads history for how the early stage is crossed: open systems cross it by being useful to people where they already are, and UP's core says the same of UP, which grows by being useful and building on what people already do.[103,93]

From the board to the work

Nightingale's diagrams mattered because they showed the whole picture at once, and because they put the deaths that could have been prevented where no one could miss them. UP's scoreboard is meant to do the same for the failures of the current system, with one difference that runs through everything in this book. In UP every problem is open to everyone. Each row is a problem offered as work to anyone willing to take it on, the people it affects decide its outcome, and the rules, code, records, decisions and reasons are public, so anyone can check them. A failure that stays on the board is an open invitation to do better.[17,56]

The chapters that follow take the rows one area of life at a time. Each applies to its own area the developments Chapter 8 set out: it shows where a stand-in drives the failure, what could take the stand-in's job over, and what the evidence says so far. Each opens with a person, sets out how the current system handles the problem, quotes what UP holds, and shows how it could run at each stage, with the evidence for each stage and the strongest objections answered. Each returns to the household that Chapter 1 introduced, a care worker, her teenage son and his grandfather in a mid-sized town, in a marked illustration of how their lives could change at each stage, which is never offered as evidence. The first of them takes the question most readers ask before any other. If prices are replaced, how does anyone get what they need, and who gets the things that are scarce?

Chapter card: Chapter 12

- **Claim:** The current system fails people on a large scale in twelve areas, from climate and basic needs to war and the concentration of AI, and each failure has a measure and a direction. UP's agreed staged claims say what UP can change at each stage: the early stage rests on today's evidence, and the middle and completed stages are labelled as projections. Many of the twelve share a root, decisions that rest on a stand-in for the real world instead of the real world itself, and UP's answer at the root is to replace the stand-ins' jobs gradually, wherever technology can do them without obvious downsides. Three gaps cut across the twelve: paying for the floors, free-riders and force, and who counts as affected. Taken together, UP has a real chance of sharply reducing most of these failures by its middle stage, and what persists is named openly as work.
- **Core lines:** the tenets *Self-correction: nothing is final, including this* (judged against the current system and the ideal); *The aim* (measured person by person); *Power kept spread out*; *Floors that are never crossed* (a truthful shared record; a fair hearing); *Reality over fiction*; *Open systems, shared knowledge, private persons*; *Technology serves; people decide*; *Freely joined, ethically grown*. Agreed positions: useful fictions; the three kinds of scarcity; scarcity as a signal and a problem to solve; abundance as a measured target; physical accounting; what the AI is; the twelve failures and the three gaps (round 12c); the overall claim; growth and urgency; judging UP by stage; the whole system and the marketplace of problems; measures; workload is not a danger; justice and enforcement (round 13). Given as illustrations of one way UP could run: how each job of price could be done without it, fixed measures with independent checks, the

[106] UP's agreed position on urgency (round 12c, position 4): "There is of course an urgency to supply the system as quickly as possible as the threats from the old system are massive and in almost every sector of human civilization has huge problems and we want to transition not collapse." Full wording in UP's agreed positions (the Position Ledger).

trust layer, shared standards, condensed settlement, rehabilitation as the focus of consequences, weapons and armies converted, and voiceless stakeholders represented by simulations.

- **Rule of thumb:** "For any failure, ask: what is the measure, which way is it moving, who is working on it, and is a stand-in for the real world part of the cause?"
- **What this is not:** a promise that UP clears every row, a forecast with dates, or a claim that removing money fixes the board. Money is one form of power, and power can move elsewhere; replacement is gradual and never by decree. The early column is evidence; the middle and completed columns are projections to be tested; what persists is work, and some of it persists at every stage.
- **Check yourself:**
    1. What are the two standards UP is judged against, and what mistake does each one prevent?
    2. Which column of Table 12.2 rests on today's evidence, and why are the other columns labelled as projections?
    3. Pick three of the twelve failures. For each, give its measure, its direction and the chapter that treats it in full.
    4. Name the three gaps. How does each one change from the early stage to the middle stage?
    5. Why might a scoreboard need fixed definitions and an independent check? Give one way a measure can be gamed and one way it can drift.
    6. What does UP mean when it says that workload is not a danger? Name two things the overall claim says will persist.
    7. Pick two rows of Table 12.3. For each, say how a stand-in drives the failure and which of Chapter 8's developments could take over its job. Then name one row where the stand-in is only part of the cause.
- **Open questions (for the wiki):** Which failures are missing from the board, and how should each be measured? Is UP's reading in Table 12.3 of how much of each failure a stand-in explains right, row by row, and what evidence would settle it? What independent check should each headline measure have, and how can anyone repeat it? How can UP's members be protected in the middle stage, when force from outside peaks? How should a community decide, in a hard case, who is materially affected? (Improve this page.)

Chapter 13. Meeting Needs: Abundance Shown in the Open

At about eleven o'clock on the night of 18 December 2018, police were called to Westminster Underground station in London, where a man had collapsed. His name was Gyula Remes. He was 43 years old and Hungarian, and for about three months he had been living in the station's underpass, near the revolving doors that Members of Parliament and their staff use to reach the House of Commons.[1,2,3] He had worked as a kitchen porter in Charing Cross. A homelessness charity, The Connection, knew him as a regular, and its staff had been trying to find him a night shelter while he found work. On 17 December, two days before he died, he had been offered a job as a kitchen porter.[3,4] He died in hospital in the early hours of 19 December, and later that day his death was raised in the House of Commons.[1] The inquest found that acute alcohol toxicity had stopped his heart and breathing, and heard that in October he had been put out of a hostel for coming back late three nights in a row.[4] "Gyula was a person with family and friends, strengths, passions, and hopes for the future," the charity said.[3]

Ten months earlier, in February, Marcos Amaral Gourgel, 35, had been found dead in the same underpass.[3,5] Their deaths were part of a much larger count. The Office for National Statistics estimated at the time that 726 deaths of homeless people were registered in England and Wales in 2018, and that the men among them died at an average age of 45, against 76 for men in the population as a whole.[6] Its latest, revised series counts 974 such deaths in 2025, up from 550 in 2013.[7] Each of those numbers stands for a person with a name and a history, as Remes had.

What makes the story hard to accept is where it happened. England sits inside one of the world's larger economies, and it is not short of buildings. In October 2025 its official statistics counted 303,185 dwellings that had been empty for the long term, a figure that had risen sharply in a year.[8] At the end of March 2026, 135,580 households were living in temporary accommodation.[9] Empty homes are not all fit to live in, nor all in the places where people

[1] ITV News, "MPs alerted to death of homeless man living outside Houses of Parliament" (19 December 2018): "A homeless man was found dying outside the entrance to the Houses of Parliament."; "British Transport Police were called to Westminster Underground station at about 11pm on December 18,"; "following reports that a man, known as Gyula Remes, had collapsed."; "where he died in the early hours of December 19." https://www.itv.com/news/2018-12-19/mps-alerted-to-death-of-homeless-man-living-outside-houses-of-parliament . The same report records that his death was raised in the House of Commons that day. Checked 1 Nov 2026.

[2] Joe Mellor, *The London Economic*, "Homeless man found dying close to MPs' entrance at House of Commons" (20 December 2018): "Gyula Remes, a 43-year-old Hungarian national"; "found by a friend near revolving doors used by politicians and staff in the House of Commons." https://thelondoneconomic.com/news/homeless-man-found-dying-close-to-mps-entrance-at-house-of-commons-113282/ . Checked 1 Nov 2026.

[3] Tom Foot, *Westminster Extra*, "Gyula, latest rough sleeper to die in Westminster underpass" (21 December 2018): "Gyula Remes, 43, was living in Westminster Underground station for three months before he died on Tuesday."; "Mr Remes had worked as a kitchen porter in Charing Cross and was a regular at the homelessness charity"; "They had been trying to find him a night shelter while he found work."; "Gyula was a person with family and friends, strengths, passions, and hopes for the future."; "Marcos Amaral Gourgel, 35, was found dead in the same underpass in February." https://www.westminsterextra.co.uk/article/gyula-latest-rough-sleeper-to-die-in-westminster-underpass . The charity is The Connection. Checked 1 Nov 2026.

[4] Joe Mellor, *The London Economic*, "Homeless man who died outside Parliament was days away from starting new job" (3 June 2019): "Gyula Zoltan Remes, 43, was found unconscious in the tunnel near Westminster tube station"; "was offered a job as a kitchen porter on December 17"; "two days before he died"; "The inquest heard he was thrown out of a hostel on October 25 last year for" returning home late three nights in a row; "The post-mortem gave cause of death as cardiac respiratory arrest and acute alcohol toxicity."; "Mr Remes was pronounced dead at nearby St Thomas Hospital". https://thelondoneconomic.com/news/homeless-man-who-died-outside-parliament-was-days-away-from-starting-new-job-134430/ . Checked 1 Nov 2026.

[5] ITV News, "Homeless man who died near Parliament was a former model" (15 February 2018): "He was discovered in an underpass at Westminster Underground station shortly after 7.30am on February 14."; "He was applying for a job as a waiter as recently as last week". https://itv.com/news/2018-02-15/homeless-man-who-died-near-parliament-was-a-former-model . The name is given by Westminster Extra (note 3). Checked 1 Nov 2026.

[6] Office for National Statistics, "Deaths of homeless people in England and Wales: 2018" (1 October 2019): "There were an estimated 726 deaths of homeless people in England and Wales registered in 2018"; "The mean age at death was 45 years for males and 43 years for females in 2018"; "in the general population of England and Wales, the mean age at death was 76 years for men and 81 years for women." https://www.ons.gov.uk/peoplepopulationandcommunity/birthsdeathsandmarriages/deaths/bulletins/deathsofhomelesspeopleinenglandandwales/2018 . Estimates of registered deaths. Checked 1 Nov 2026.

[7] Office for National Statistics, deaths of homeless people in England and Wales, 2013 to 2025 registrations (1 October 2026): "There were an estimated 974 deaths of people experiencing homelessness registered in England and Wales in 2025"; "The estimated number of deaths was 77.1% higher in 2025 than in 2013, increasing from 550 to 974." The series was revised, so its figures are not directly comparable with the 2018 bulletin's. https://www.ons.gov.uk/peoplepopulationandcommunity/birthsdeathsandmarriages/deaths/bulletins/deathsofhomelesspeopleinenglandandwales/2013to2025registrations . Checked 1 Nov 2026.

[8] Ministry of Housing, Communities and Local Government, "Dwelling Stock Estimates, England: 31 March 2025" (21 May 2026): "There were 303,185 long-term vacant dwellings in England on 6 October 2025,"; "an increase of 38,301 or 14.5% from 264,884 on 7 October 2024." https://www.gov.uk/government/statistics/dwelling-stock-estimates-in-england-2025/dwelling-stock-estimates-england-31-march-2025 . Checked 1 Nov 2026.

[9] Ministry of Housing, Communities and Local Government, "Statutory homelessness in England: January to March 2026" (13 August 2026): "135,580 households were in temporary accommodation on 31 March 2026, an increase of 1.1% from the previous quarter"; "177,530 children were living in temporary

need them; the two counts use different definitions and dates, and both come from years after Remes died. Even so, they describe a country with far more empty dwellings than households waiting in temporary rooms. No one can say what would have saved Gyula Remes. What can be said is that a rich country had rooms standing empty while a man with a job offer slept in an underpass.

That gap, between what exists and who can reach it, is the subject of this chapter. It is the home of three of the twelve failures on the scoreboard in Chapter 12: unmet basic needs, inequality, and the part of housing that concerns who gets a home.[10] Chapter 12 traced all three, in large part, to one root. In the current system things move toward whoever can pay for them, so need and supply can sit side by side without meeting.[11] Chapter 8 showed how the fictions behind that rule came to be, what they cost when they drift from the real world, and the seven developments that could take their jobs over.[12] This chapter applies that case to the most basic jobs of all: feeding, housing and supplying people. It also takes up the question most readers ask first about any system that proposes to replace prices. If prices are replaced, how does anyone get what they need, and who gets the things that are scarce? The chapter looks first at how the current system meets needs, where it does so remarkably well and where it fails, and then at housing, where the gap between a thing and the person who needs it is widest. It sets out what UP holds about needs, and then follows a single need through UP, step by step, to show the system at work. It looks at what could take over the jobs that prices do now, how each job could be done and who is already doing it, and then at the oldest objection to all of this, the calculation problem, taken rung by rung. It ends with how meeting needs could change at each stage of UP's growth, what each stage is expected to bring, and the other strong objections.

How the current system meets needs, and where it falls short

The current system meets needs for more people than any system before it has managed to, and the credit is deserved. A great deal of the world's food, clothing and shelter is produced and delivered through markets and public services that strangers trust every day, and Chapter 2 traced the long fall in extreme poverty and child deaths that accompanied them.[13] Its newer tools work too. Researchers who re-analysed seven randomised trials of government cash transfer programmes, in six developing countries, found "no systematic evidence that cash transfer programs discourage work", a finding that counts against a common fear about giving money to poor people.[14] In rural Kenya, as Chapter 12 noted, cash spent by poor households spread to their neighbours and to local firms.[15] And in Finland, a country known for giving homeless people a home first, the number of homeless people living alone fell by about 80 per cent from the first national survey in 1986 to 2023.[16]

Behind that record stands one of the great inventions of human cooperation, and Chapter 3 gave it its due. Adam Smith's butcher, brewer and baker feed strangers every day without being told to, and in 1945 Friedrich Hayek explained why that works. The knowledge a society needs in order to use its resources well, he wrote, "never exists in concentrated or integrated form". It is scattered among millions of people, each of whom knows something of "the particular circumstances of time and place", and a price lets that knowledge travel without

accommodation on 31 March 2026". https://www.gov.uk/government/statistics/statutory-homelessness-in-england-january-to-march-2026/statutory-homelessness-in-england-january-to-march-2026 . The vacancy and temporary-accommodation counts use different definitions and dates. Checked 1 Nov 2026.

[10] Chapter 12, Tables 12.1 and 12.2, rows F2, F3 and F8, with their notes.

[11] Chapter 12, "Why the failures share roots" and Table 12.3, rows F2 (unmet basic needs), F3 (inequality) and F8 (housing), with their notes.

[12] Chapter 8, "What running on money costs", "How money's jobs move to reality", "How the pieces work together" and "The strongest objections", with their notes: the 1933 pig slaughter, milk poured away in 2020, the seven developments, and Mises's argument in his later statement of it.

[13] Chapter 2, sections "What the current system got right" and "Where the race is being lost", with their notes: the fall in child deaths and extreme poverty, the ozone layer, and the issues on which problems are growing faster than the reforms (Table 2.2); and, in "Why the race is lost where it is", the problems whose persistence pays.

[14] Abhijit Banerjee, Rema Hanna, Gabriel Kreindler and Benjamin Olken, "Debunking the Stereotype of the Lazy Welfare Recipient: Evidence from Cash Transfer Programs", *World Bank Research Observer* 32(2):155–184 (2017), abstract: "Yet, a common concern among policy-makers and citizens is that such programs tend to discourage work."; "We re-analyze the data from seven randomized controlled trials of government-run cash transfer programs"; "in six developing countries throughout the world,"; "and find no systematic evidence that cash transfer programs discourage work." https://dspace.mit.edu/handle/1721.1/113834 . Checked 1 Nov 2026.

[15] Chapter 12, section on the three gaps, with its note on Egger, Haushofer, Miguel, Niehaus and Walker, *Econometrica* (2022): "We estimate a local transfer multiplier of 2.5." https://econometricsociety.org/publications/econometrica/2022/11/01/General-Equilibrium-Effects-of-Cash-Transfers-Experimental-Evidence-From-Kenya

[16] Housing Finance and Development Centre of Finland (VARKE), *Homeless people 2023* (Report 2/2024): "Homelessness in Finland has decreased by about 80% since 1986, when the first survey on homelessness was conducted". https://www.varke.fi/en/media/101 . The figures count homeless people living alone. Checked 1 Nov 2026.

anyone having to gather it in one place.[17,18] When a raw material becomes scarce, users who know nothing of the cause cut back as if they had been told, and Hayek called that "the marvel", choosing the word, he said, to shock his readers out of their complacency.[18] UP agrees that it is a marvel. The question this chapter asks is not whether prices coordinate. It is what happens to the people the coordination leaves out, and whether the same jobs can now be done in ways that leave out fewer of them.

The failures sit beside the successes, often in the same places. In 2025, an estimated 645 million people faced hunger, according to the United Nations' latest report on food security.[19] In 2022 the world wasted almost a fifth of all the food available to consumers, counting inedible parts.[20] The United Nations Environment Programme put it more simply: households alone wasted more than a billion meals a day.[20] The wealth is there too, but not where the need is. The poorest half of the world's adults hold about 2 per cent of its wealth, a share that has not moved since the early 2000s, and more than 824 million people lived in extreme poverty in 2024.[21,22]

Rich countries are not exempt. In 2024, 13.7 per cent of households in the United States were food insecure at some time during the year, the highest rate since 2014, according to the last survey of its kind the Department of Agriculture plans to produce; in September 2025 the department announced the termination of future reports.[23,24] Finland's own figures turned upward again, with 4,579 people living alone counted as homeless in 2025, 773 more than a year before.[25] A system can meet needs well on average and still leave a man to collapse in an underpass a few steps from its parliament.

Why does surplus sit beside need? Part of the answer is in what UP calls artificial scarcity, which Chapter 2 introduced: scarcity made by planned obsolescence, by patents and other enclosures, by hoarding, by rationing through money and by failures of distribution.[26] On UP's reading, one reason surplus can sit beside need is that goods move mainly when someone can pay for them, or when a public budget covers them, and otherwise may not move at all. Chapter 8 gave the starkest cases, from young pigs destroyed to raise prices in 1933 to milk poured away in 2020 while people queued for food, and Chapter 12 found the same root under several rows of the scoreboard.[12,11] The figures above show the surplus and the need side by side; they do not by themselves prove the mechanism, and food is wasted and homes stand empty for many reasons. None of this means that the people

[17] Friedrich A. Hayek, "The Use of Knowledge in Society", *American Economic Review* 35(4):519–530 (1945): "The knowledge of the circumstances of which we must make use never exists in concentrated or integrated form but solely as the dispersed bits of incomplete and frequently contradictory knowledge which all the separate individuals possess."; "We must look at the price system as such a mechanism for communicating information if we want to understand its real function"; "without an order being issued, without more than perhaps a handful of people knowing the cause, tens of thousands of people whose identity could not be ascertained by months of investigation, are made to use the material or its products more sparingly". https://www.econlib.org/library/Essays/hykKnw.html?chapter_num=1 . Checked at source, 31 Oct 2026.

[18] Friedrich A. Hayek, "The Use of Knowledge in Society", *American Economic Review* 35(4) (September 1945), pp. 519–530, Econlib edition: "the knowledge of the particular circumstances of time and place"; "the knowledge of the circumstances of which we must make use never exists in concentrated or integrated form"; "The marvel is that in a case like that of a scarcity of one raw material,"; "I have deliberately used the word"marvel" to shock the reader out of the complacency". https://www.econlib.org/library/Essays/hykKnw.html . Checked at source, 13 Nov 2026.

[19] FAO, IFAD, UNICEF, WFP and WHO, *The State of Food Security and Nutrition in the World 2026*: "It is estimated that 645 million people faced hunger in 2025." https://www.fao.org/publications/sofi . The series is revised each year. Checked 1 Nov 2026.

[20] UN Environment Programme, "World squanders over 1 billion meals a day – UN report" (27 March 2024), on the *Food Waste Index Report 2024*: "In 2022 there were 1.05 billion tonnes of food waste generated (including inedible parts),"; "amounting to 132 kilograms per capita and almost one-fifth of all food available to consumers."; "Households across all continents wasted over 1 billion meals a day". https://www.unep.org/news-and-stories/press-release/world-squanders-over-1-billion-meals-day-un-report . Checked 1 Nov 2026.

[21] Chancel L, Piketty T et al., *World Inequality Report 2026* (World Inequality Lab), executive summary: "the top 10% own three-quarters of global wealth, while the bottom half holds only 2%"; the bottom 50% wealth share "has stagnated since the early 2000s at around 2%." https://wir2026.wid.world/www-site/uploads/2025/11/WIR26_Executive_Summary_English.pdf . Checked 31 Oct 2026.

[22] World Bank, "September 2026 global poverty update from the World Bank" (22 Sept 2026): "More than 824 million people, about one in ten worldwide, were living in extreme poverty in 2024."; "The 2024 estimate is for the latest year with sufficient data coverage." https://blogs.worldbank.org/en/opendata/september-2026-global-poverty-update-from-the-world-bank–one-in . Extreme poverty means living on less than $3.00 a day at 2021 prices. Checked 1 Nov 2026.

[23] USDA Economic Research Service, *Household Food Security in the United States in 2024* (ERR-358, 30 December 2025): "The remaining households (13.7 percent) were food insecure at least some time during the year." https://ers.usda.gov/publications/113622 . Philip Brasher, *Agri-Pulse* (1 January 2026): "The last survey of U.S. food security that the Agriculture Department is scheduled to produce"; "found that 13.7% of households were food insecure in 2024, the highest rate since 2014." https://www.agri-pulse.com/articles/23962-last-usda-hunger-survey-shows-food-insecurity-at-10-year-high . Checked 1 Nov 2026.

[24] US Department of Agriculture, press release 0219.25 (20 September 2025): "The U.S. Department of Agriculture announced the termination of future Household Food Security Reports." https://www.usda.gov/node/65839 . Checked 1 Nov 2026.

[25] VARKE, "Homeless people 2025" (12 May 2026): "In 2025 in Finland there were 4,579 homeless people living alone"; "which is 773 more than in the year before". https://www.varke.fi/en/statistics/homelessness/homeless-people-2025 . Checked 1 Nov 2026.

[26] UP's agreed position on the three kinds of scarcity, in full: "Much of today's scarcity is artificial: planned obsolescence, patents and other enclosures, hoarding, money rationing and failures of distribution. Some scarcity is physical (energy and materials) and some positional (prime places, specialised skills, time and attention). UP names all three and answers each: it ends artificial scarcity with open design and physical accounting, reduces physical scarcity with automation, renewable energy and circular systems, and shares positional goods by rotation or a decision of the stakeholders (#2), never by price. Design is a large part of the answer, as a direction rather than a guarantee: dense, beautiful places for land, robots for care, better storage for energy. UP will not be perfect at this; it is judged against what happens now." Full wording in UP's agreed positions (the Position Ledger).

who run markets or public services are careless. It means that the rule by which goods move does not, by itself, aim at meeting needs.

Housing: a home and an asset at once

Housing shows the gap most plainly, because a home does two jobs in the current system. It is a place to live, and it is also a store of wealth that its owner hopes will grow. The two jobs pull against each other. In 2024 the median home in England cost £290,000, which was 7.7 times the median earnings of a full-time employee. That year only 9 per cent of local authority areas had homes selling for less than five times local earnings on average, against 88 per cent when the official series began in 1997.[27] Open Systems Lab, the non-profit that looks after the WikiHouse building system described later in this chapter, puts the conflict in one line: the housing crisis, it says, is "a function of a deep contradiction at the heart of the system, whereby we treat homes both as places to live, and also as financial instruments".[28] On UP's reading, when a home is an asset, a rising price is good news for those who own one and bad news for those who need one, and a home can gain value while it stands empty. That is not anyone's malice. It is the stand-in doing the job it was given.

Finland shows what can happen when a country stops treating a home as a reward. In 2007 a group of Finnish experts, in a report called *Name on the Door*, argued that long-term homelessness could not be ended while people had to change their lives before they were housed; the house had to come first, as the condition for solving everything else.[29] The national programme built on that principle was adopted in 2008 and renewed in 2012. Its leading non-profit landlord, the Y-Foundation, puts the principle in five words: "a dwelling is not a reward". Finland turned its shelters into homes. In 1985 Helsinki had 2,121 shelter and hostel beds; by 2016 it had 52. Over the same years supported housing units in the city grew from 127 to 1,309, and independent rented flats for people who had been homeless from 65 to 2,433.[30] Nationally, the number of homeless people living alone fell by about 80 per cent between the first survey in 1986 and 2023.[16] Then the figures turned up again: in 2025 Finland counted 4,579 homeless people living alone, 773 more than a year before.[25] The causes of that rise are beyond this chapter. What the record shows is a floor that a country can build by policy, and that policy can let slip. In UP's terms, Finland shows the floor at work: shelter met first, without conditions, as UP's tenet on floors requires.[31,32] UP adds one thing that no country's policy can promise, which is a floor that no later decision may lower.[31]

Vienna has kept a large share of its homes out of the market for investment since the 1920s. About 45 per cent of its residents live in social housing, built either by the city or by limited-profit housing associations, according to a 2025 study for the Friedrich-Ebert-Stiftung, and most residents of the city rent.[33] The city's International Building Exhibition names what makes the model work: "Investors that voluntarily forgo return on their investment - i.e. municipal and limited-profit property developers - are essential for the efficiency of the Vienna Model of social

[27] Office for National Statistics, *Housing affordability in England and Wales: 2024* (24 March 2025), main points: "the median average home in England, at £290,000, cost 7.7 times the median average earnings of a full-time employee"; in 2024, 9% of local authorities "had homes bought for less than five times workers' earnings on average", "well below that at the start of the series in 1997 (88% of areas)." https://www.ons.gov.uk/peoplepopulationandcommunity/housing/bulletins/housingaffordabilityinenglandandwales/2024 . Checked at source, 13 Nov 2026.

[28] Open Systems Lab, "Projects" page (the steward of WikiHouse), on Build×: "The crisis is a function of a deep contradiction at the heart of the system, whereby we treat homes both as places to live, and also as financial instruments; a source of 'passive income'." https://www.opensystemslab.io/projects . Checked at source, 13 Nov 2026. The organisation's own view.

[29] Elisabetta Leni (Y-Säätiö), "Finnish Homelessness Deinstitutionalization Policy: Housing First and Frontline Perspectives", *European Journal of Homelessness* 18(1) (2024): "The starting point is the report "Nimi Ovessa" [Name on the Door] (2007)". https://www.feantsaresearch.org/public/user/Observatory/2024/EJH_18-1_A07.pdf . Checked at source (abstract and introduction), 14 Nov 2026.

[30] Marybeth Shinn and Jill Khadduri, "How Finland Ended Homelessness", *Cityscape* 22(2) (2020), US Department of Housing and Urban Development, citing the Y-Foundation (2017): the *Name on the Door* experts argued that ending long-term homelessness "requires adopting the Housing First principle where a person does not have to first change their life around"; "In the Housing First model, a dwelling is not a reward that a homeless person receives once their life is back on track."; "In 1985, Helsinki had 2,121 shelter and hostel beds", "by 2016, the number had shrunk to 52"; "supported housing units in Helsinki grew from 127 to 1,309, and independent rental apartments for (formerly) homeless people increased from 65 to 2,433"; "The Finnish National Program to reduce long-term homelessness, adopted in 2008 and renewed in 2012". https://www.huduser.gov/PORTAL/periodicals/cityscpe/vol22num2/ch4.pdf . Checked at source, 14 Nov 2026.

[31] Core tenet: *Floors that are never crossed*: the floors include "everyone's basic needs and protected freedoms, which no gain for others can buy"; "UP guarantees needs, not every want. The collective defines and refines the floors through UP's method; it may clarify or raise them, but no decision may lower them or push anyone below them. As a starting example for the collective to refine: needs such as food, water, shelter, health care, education and connection". Full wording in "The core of UP".

[32] UP's agreed position on merit: "Merit decides who does skilled work; it never decides whose needs are met."; "Labour is never forced: support and health care are offered, never imposed, and choosing not to work is not an illness." Full wording in UP's agreed positions (the Position Ledger).

[33] Katharina Litschauer, *"Das rote Wien" – Long Term Effects of Social Democratic Housing Policy* (Friedrich-Ebert-Stiftung, October 2025), introduction: "around 45% live in social housing – either municipal housing or housing provided by limited-profit housing associations (LPHAs)"; the system dates from the "Red Vienna" era of the 1920s and "remains the backbone of Vienna's housing system." https://collections.fes.de/publikationen/download/pdf/1962520 . Checked at source, 13 Nov 2026. Other sources give higher shares (up to 60%) by counting all subsidised housing; this chapter uses the lower figure.

housing."[34] In UP's terms, Vienna and Finland show that a home can do the job of shelter well when it is relieved, in part, of the job of earning a return. Both still run on money, rents and taxes. UP takes the lesson, not the model.

UP's own positions on space take the lesson further. Land joins the commons only by its stakeholders' choice, never by force, and a place that many people want is treated as a signal and a problem to solve.[35] Private space is modest and comfortable, the commons are generous and beautiful, and the limits are set together and rise as abundance grows.[36] Condensing settlement, as the architect Paolo Soleri proposed, is given as one way UP could run, with freed land returned to the living world.[37] On one way UP could run, then, a home would do one job, sheltering the people who live in it, and the empty homes that the current system counts would become work to be done: repaired, allocated by the people affected and recorded in the open. Chapter 18 takes up where and how people would live.

Inequality: when needs are met, wealth matters less

The second failure this chapter takes up is inequality, and the figures are stark. The richest tenth of the world's adults own about three-quarters of its wealth, while the poorest half hold about 2 per cent, a share that has hardly moved since the early 2000s.[21] Chapter 12 traced part of the reason to the same root as the rest of this chapter: ownership is a record that grows by what it already holds, so those who start with assets gain from them, and those who start with none have nothing to gain from.[11] Inside the current system, wealth also buys access to the people who write the rules, which Chapter 5 traced, so inequality of wealth tends to become inequality of power.[38]

UP's answer to inequality is easy to misread, and it should be stated exactly. Equality of income or status is not one of UP's aims. Its aim is the health, happiness and wellbeing of every person, measured person by person and never as a total, so that no one's wellbeing is traded away to raise an average.[39] UP's agreed claim on inequality follows from that. UP does not need to reduce the wealth of the very rich to succeed, because its measure is the wellbeing of each person, and the bottom half of the world, who hold 2 per cent of its wealth, have the most to gain.[40] What changes is what wealth does. Inside UP, money buys no say from the start, so a fortune outside UP decides nothing inside it.[40] And as more needs are met from what is shared, through the floor, the commons and the libraries of things described in this chapter, wealth matters less to people's lives: a person whose food, shelter, health care and education are secure, and who can use a workshop, a kitchen and a garden in common, has less to fear from having little money.[40,31]

Where wealth turns into power, UP treats it as it treats every concentration of power. Wealth is one of the forms the core names, beside position, information, access, expertise and machines, and everyone in UP watches for concentrations of power and spreads them out again; the threat is never declared gone.[41] Informal power inside UP, such as influence that gathers around people with money, reputation or skill, is watched by everyone and

[34] IBA_Wien (International Building Exhibition Vienna), "Social housing policy in Vienna": "Investors that voluntarily forgo return on their investment - i.e. municipal and limited-profit property developers - are essential for the efficiency of the Vienna Model of social housing." https://www.iba-wien.at/en/iba-wien/iba-wien-1-1-1-1-1 . Checked at source, 13 Nov 2026.

[35] UP's agreed position on scarcity and the case against basic income: "When many people want the same thing, UP treats it as a signal and a problem to solve. Meanwhile it is shared by rotation or by a decision of the stakeholders, and UP works to make more of it, through design that lets many people enjoy a desired place, as Paolo Soleri proposed, and through new places. A price only signals; it does not make a rare thing less rare. Land joins the commons only by its stakeholders' choice, never by force. UP's case against basic income is not that people need to be made to work. It is that basic income keeps the old machine running: money, prices and advertising-driven consumption stay; the machines and the land stay in the hands of a few; nothing gives people a purpose or a way to contribute; and nothing changes how much the planet is asked to give." Full wording in UP's agreed positions (the Position Ledger).

[36] UP's agreed position on space: "UP puts its beauty, work and effort into the commons first. Generous, beautiful public places - gardens, pools, kitchens, eating and living areas, and quiet corners where anyone can be alone - make large private spaces unnecessary, following the thinking of Paolo Soleri. Private space is modest and comfortable"; the limits "are norms for health, happiness and sustainability, not punishments, and they rise as abundance grows." Full wording in UP's agreed positions (the Position Ledger).

[37] UP's agreed positions on settlement and space: condensing settlement (round 12S, position 12, an illustration of one way UP could run): "condensing settlement (Soleri) removes duplication"; "Freed land returns to the living world." And, settled in round 3: "UP puts its beauty, work and effort into the commons first." Private space is modest and comfortable, and the limits "are set together through the decision steps". Full wording in UP's agreed positions (the Position Ledger).

[38] Chapter 5, on lobbying and influence over rule-making, with its notes (the federal lobbying total in the United States, and the OECD survey of lobbying transparency).

[39] Core tenet: *The aim: the health, happiness and wellbeing of all living things*: "For people it is measured person by person, not as a total, so no one's wellbeing is traded away to raise an average." Full wording in "The core of UP".

[40] UP's agreed staged claim on inequality and concentrated wealth (round 12c, card F3): "UP does not need to reduce the wealth of the very rich to succeed; its measure is the wellbeing of each person, and the bottom half of the world, who hold 2% of its wealth, have the most to gain. Inside UP money buys no say from the start, and as needs are met from shared production, wealth matters less to people's lives. Informal power inside UP is watched by everyone and answered as work, through open checks". Full wording in the round 12c record.

[41] Core tenet: *Power kept spread out*: "Concentration of power, in any form (wealth, position, information, access, expertise or machines), is treated as a standing danger."; "Everyone in UP watches for concentrations of power and spreads them out again. The threat is never declared gone; it is watched and answered." Full wording in "The core of UP".

answered as work, through open checks.[40] In UP's terms, the remedy for the inequality on the scoreboard is not to take wealth away from anyone, which UP would never do by force, but to make the floor secure for everyone and to cut the link between wealth and power.[42] Whether that is enough is something UP's open records will show, person by person.

What UP holds about needs

UP's answer starts with a floor. Among the floors that no decision in UP may cross are everyone's basic needs, which no gain for others can buy, and the tenet that sets them out draws a line that the rest of this chapter depends on: UP guarantees needs, not every want. Which needs the floor covers is for the collective to define and refine through UP's method, and the core gives only a starting example: food, water, shelter, health care, education and connection.[31] The floor is measured person by person. UP's aim is the wellbeing of every person, never a total, so a society cannot meet the floor on average while leaving some people below it.[39] And the floor carries no conditions. Merit decides who does skilled work in UP, but it never decides whose needs are met, and labour is never forced.[32] UP's floor does not depend on work: a person who cannot work, or will not, is not left below it.

UP's agreed position on abundance sets the target for the floor. It holds that the automation to end most drudgery, and the renewable capacity to give every person on Earth a decent life, already exist. What counts as enough is set together and rises as capacity grows, and today's luxury is not the target, because the wealthy few drive most of today's damage. The position then sets a standard of a particular kind. Every community that runs this way publishes its energy, its materials and the needs it has met, so that abundance becomes "a measured target shown in practice, not a promise."[43] This is the sense of the chapter's title. UP does not ask anyone to believe that there will be enough. It asks each community to show, in public figures that anyone can check, how much it used and what needs it met.[44]

Chapter 2 introduced UP's three kinds of scarcity, and in the business of meeting needs each kind gets its own answer. Artificial scarcity, made by planned obsolescence, patents and other enclosures, hoarding, rationing by money and failures of distribution, UP answers with open design and physical accounting. Physical scarcity, the real limits of energy and materials, it reduces with automation, renewable energy and circular systems. Positional scarcity, the prime places, specialised skills, time and attention that are hard to multiply, it shares by rotation or by a decision of the people affected, never by price. The agreed position adds that design is a large part of the answer, "as a direction rather than a guarantee", and that UP will not be perfect at this: it is judged against what happens now.[26]

When many people want the same thing, UP treats the wanting as information. Its agreed position calls it "a signal and a problem to solve". While the problem is being solved, the thing is shared by rotation or by a decision of the stakeholders, and UP works to make more of it, through new places and through design that lets many people enjoy a place that is wanted, as the architect Paolo Soleri proposed. The same position states the limit of the tool it replaces in a single sentence: "A price only signals; it does not make a rare thing less rare." Land joins the commons only by its stakeholders' choice, never by force.[35] Physical accounting, the record of energy, carbon, water, materials and life cycles, sets the planet's hard limits; inside those limits, several measures are used together, and choices between different needs, such as a clinic or a cultural centre, are made openly by the people affected, through UP's decision steps, never by an efficiency score.[45]

Two further lines say where the goods come from and what they look like. Physical goods such as food, water and durable goods are shared within the communities that make them, which the core gives as an illustration of how UP

[42] Core tenet: *Freely joined, ethically grown*: "UP is never imposed. No one is forced to join, to work or to give up what is theirs." Full wording in "The core of UP".

[43] UP's agreed position that abundance means enough for everyone, shown in the open, in full: "We have the automation to end most drudgery and the renewable capacity to give every person on Earth a decent life. UP guarantees needs (food, shelter, health care, education, connection), not every want. What counts as enough is set together and rises as capacity grows. Today's luxury is not the target: the wealthy few drive most of today's damage. UP proves this in the open: every community that runs this way publishes its energy, materials and needs met, so abundance is a measured target shown in practice, not a promise." Full wording in UP's agreed positions (the Position Ledger).

[44] Core tenet: *Open systems, shared knowledge, private persons*: "The rules, code, records, decisions and reasons of UP are public, so anyone can check them."; "Each person controls their own information and chooses what to share." Full wording in "The core of UP".

[45] UP's agreed position on physical accounting, in full: "Physical accounting (energy budgets, carbon caps, water footprints, materials and life-cycle assessment) sets the planet's hard limits. Inside them, several measures are used together, and choices between different needs, such as a clinic or a cultural centre, are made openly by the people affected, through the decision steps (#1), never by an efficiency score." Full wording in UP's agreed positions (the Position Ledger).

could run.[46] And UP puts its beauty, work and effort into the commons first. Its agreed position on space describes generous, beautiful public places, gardens, pools, kitchens, eating and living areas and quiet corners where anyone can be alone, beside private space that is modest and comfortable, with limits set together that rise as abundance grows.[36] On one way UP could run, needs would be met partly by what each person has and partly by what everyone shares, as a public library has long met the need to read.

UP at work: one need, followed through

A list of positions does not show a system at work, so it helps to follow one need through UP from start to finish. Take a man in Gyula Remes's position: working, offered a job, and without a room. What follows is one way UP could run, built from its tenets and agreed positions. It is not a procedure UP has adopted, and the collective would shape the details.

The need is named. In UP every shared problem starts the same way: it is named, measured and offered as work to anyone willing to take it on, whether or not they are affected.[47] The man can name his need himself; so can a neighbour, a charity worker or a stranger who passes him in the underpass. He does not have to prove that he deserves a room, because the floor is not a reward. Among the floors that no decision in UP may cross are everyone's basic needs, with shelter in the starting example, and merit decides who does skilled work but never whose needs are met.[48,32] Nor does the room depend on his conduct. Even where a fair hearing restricts a person's freedom, the core says the restriction may never push them below the needs floor.[48] In October 2018 Remes was put out of a hostel for coming back late three nights in a row.[4] In UP, no rule of that kind could take a person's shelter away. What he shares is his own choice: each person controls their own information and chooses what to share, so the public record would show that a need for shelter was met, not the story of his life.[49]

The people affected decide how. The man is affected, and so are the people whose space, homes or work the answer would touch. They decide the outcome. Anyone else may help, propose an answer and bring evidence, and in the words of UP's method, "Evidence proposes; people decide."[47] If the answer is a room in a flat that a member has given to the community, the people who share that building are among those affected. If it is a new home built from an open design, so are the people who will build it and the neighbours who will live beside it. Physical accounting checks the answer against the hard limits of energy, water and materials; inside those limits, the people affected weigh the choices themselves.[45]

The room comes from what is shared. Early on, UP has little of its own, so the answer may be a member's spare room, a converted flat, or help to reach the current system's services. Later, homes would come from UP's own production, from open designs and from buildings whose owners chose to convert them.[50,46] No one is forced to

[46] Settled alongside the core (round 11, amended round 13b), "What UP makes": "software, AI and tools, which stay in UP (T8). Physical goods such as food, water and durable goods are shared within the communities that make them. Education is open to everyone without condition"; the core marks these examples as "illustrations, not tenets". Full wording in "The core of UP".

[47] Core tenet: *The method: shared problem solving with evidence*, in full: "Everything in UP runs through one method. Problems are named, measured and offered as work to anyone willing to take them on, whether or not they are affected; the people a problem affects decide its outcome. No problem, solution or method belongs to the person who raised it: anyone may update, reframe or improve it. Solutions are proposed with their evidence, tested and compared, and a better idea replaces a worse one. Every claim that guides shared action can be tested and is open to being proved wrong. Work on the roots of problems is worth the most, but a problem can be worked from any angle. Facts are checked, unknowns become shared work, and matters of taste are never made rules for others. Evidence proposes; people decide." Also in "The core of UP".

[48] Core tenet: *Floors that are never crossed*, in full (as amended on 28 October 2026): "UP keeps a set of floors that no decision may cross: everyone's basic needs and protected freedoms, which no gain for others can buy; the living world's capacity to recover, so damage that cannot be undone is never traded for a short-term need; the right to leave any group or community at any time, taking what is theirs; a truthful shared record, so facts, measures and decisions are never falsified; freedom of the mind, so no one's thinking is manipulated without their knowledge or consent; and a fair hearing, so no one's freedom is restricted without a fair, evidence-based hearing, with the evidence open to them and a way to appeal. UP guarantees needs, not every want. The collective defines and refines the floors through UP's method; it may clarify or raise them, but no decision may lower them or push anyone below them. As a starting example for the collective to refine: needs such as food, water, shelter, health care, education and connection; freedoms such as thought, belief, speech, movement and privacy." And: "A protected freedom such as movement may be restricted only to protect others or the person, only through an evidence-based court process, for the shortest time needed, and never below the needs floor. The hearing comes first, except briefly, to stop harm in progress, with a hearing promptly after. Leaving a group or community does not end a restriction set by a fair hearing. These limits are an open problem: they are the best that can be imagined now, and UP is built to find better and better solutions. Above the floors, everything is open to the method." Also in "The core of UP".

[49] Core tenet: *Open systems, shared knowledge, private persons*, in full (as amended on 28 Oct 2026): "The rules, code, records, decisions and reasons of UP are public, so anyone can check them. UP's technology (the knowledge, code, data and designs UP produces) stays only in UP: everyone taking part in UP may use, study and improve it, and no one may enclose it. Each person controls their own information and chooses what to share. Openness helps people find problems, but it will not find all of them, so UP also names the risks that openness alone cannot catch and keeps working on them." Also in "The core of UP".

[50] UP's agreed staged claim on unmet basic needs (round 12c, card F2): "Early on, UP meets part of its members' needs directly and depends on the old system for the rest. Members' own assets convert to UP by their choice"; "In the middle stage, needs are met from UP's own production; the capacity to feed, house and supply everyone already exists, and what has been missing is organisation and distribution. Hunger caused by war persists wherever armed groups outside UP block food." Full wording in the round 12c record.

give up what is theirs, and land joins the commons only by its stakeholders' choice.[51,35] If rooms are short, the shortage is treated as a signal and a problem to solve: the rooms there are go to those in greatest need by a decision of the people affected, while more are made.[35]

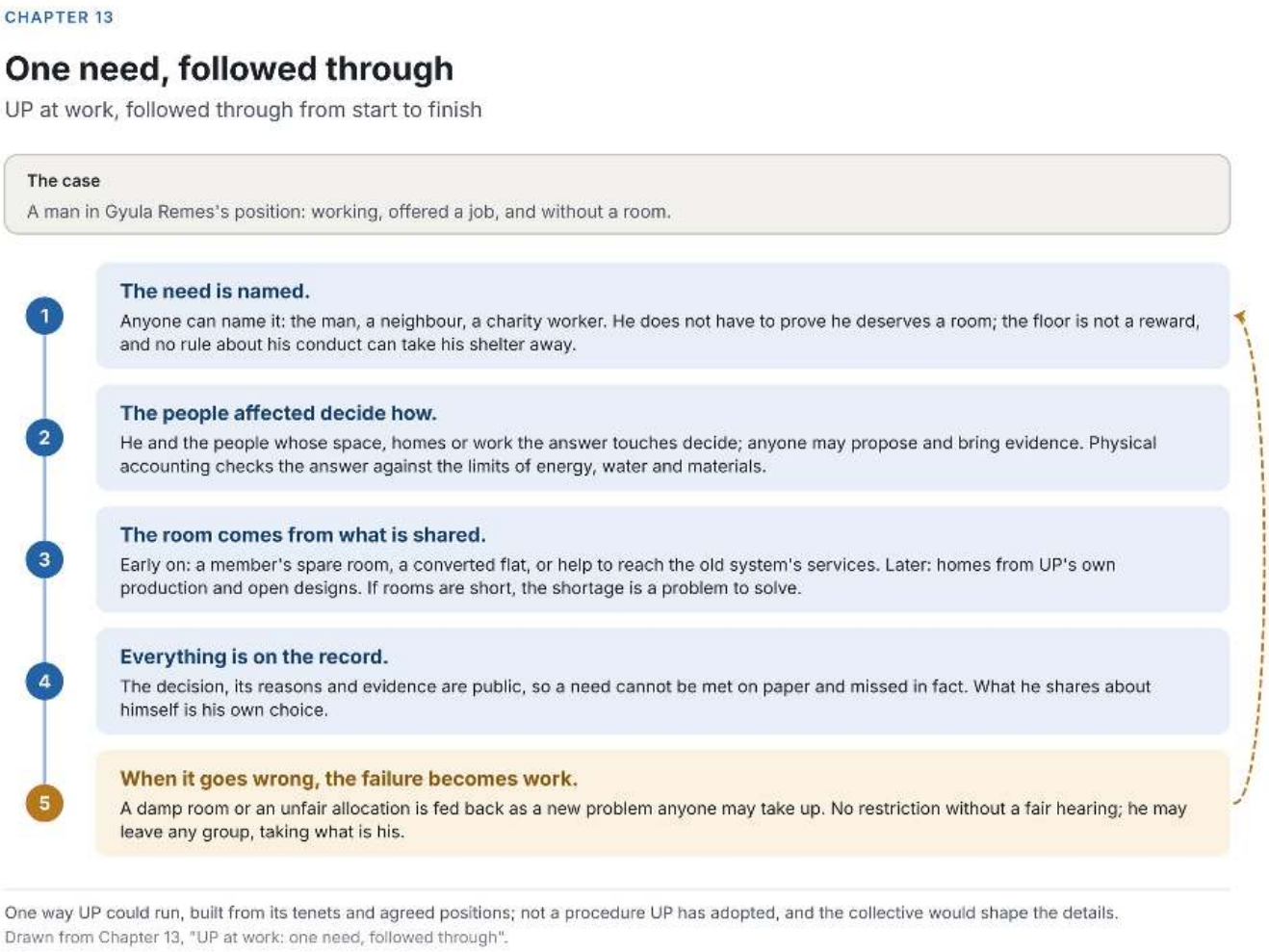
Everything is on the record. The decision, its reasons and the evidence behind it are public, so anyone can check them, and the community publishes the needs it met and what it used to meet them.[49,43] One of UP's floors is a truthful shared record, so a need cannot be met on paper and missed in fact.[48]

When it goes wrong, the failure becomes work. If the room is damp, the allocation looks unfair or the man is passed over, the failure is fed back into UP as a new problem to solve, and anyone may take it up.[52] No one's freedom can be restricted without a fair hearing, with the evidence open to them and a way to appeal, and the man may leave any group or community at any time, taking what is his.[48]

Set beside what happened to Remes, the difference is not that people in UP would care more than the charity workers who knew his name; they were trying to find him a bed. The difference is what the room would rest on. In UP it would not depend on paying for it, on keeping a hostel's rules or on a budget that the next policy can cut. It would rest on a floor that no decision may lower, and on a record that shows whether the floor was met.[48,43] Whether UP can meet that floor, for how many people and how soon, is what the stages later in this chapter set out, and it has to be shown.

[51] Core tenet: *Freely joined, ethically grown*, in full: "UP is never imposed. No one is forced to join, to work or to give up what is theirs. It grows by being useful, building on what people already do, and it acts only by ethical means. A means is ethical when it serves the health, happiness and wellbeing of all and crosses none of the floors; UP never starts harm against anyone. What counts as ethical is defined and refined by the collective through UP's method." Also in "The core of UP".

[52] Core tenet: *Self-correction: nothing is final, including this*, in full: "Every failure of UP is fed back into it as a new problem to solve, so it keeps improving without revolution. Every part of UP, these tenets included, can be improved through its own method. UP is judged against both today's system and the ideal it aims at: the ideal shows the direction and the gap still to close, and today's record shows whether UP is already doing better. Downsides, risks and fringe problems are named openly and treated as work, never as reasons to keep a status quo that fails so many." Also in "The core of UP".



One need, followed through: UP at work, step by step.

What could take the stand-ins' jobs over

Chapter 8 set out seven developments, each already under way somewhere in the current system, that could take over the jobs that money and the other fictions do now: abundance that technology creates; automation, robotics and AI doing the work; doing more with less; a new way of using things; open designs and shared knowledge; coordination that counts real things; and a narrow and intense focus on what is truly scarce.[12] Applied to meeting needs, they share one effect. Each shrinks the amount that has to be rationed, and so shrinks the work that a price is needed for, before any question of calculation arises.

Abundance comes first because the first job of a price is to ration what is scarce, and much of what people need is not scarce taken as a whole. In 2023 the world's food supply passed, on average, 3,000 kilocalories a day for each person on Earth, which is supply, not what people eat.[53] UP's agreed claim is that the capacity to feed, house and supply everyone already exists, and that what has been missing is organisation and distribution.[50] Energy, which every other need depends on, is becoming cheaper to make: in 2024, 91 per cent of new renewable power projects were more cost-effective than any new fossil fuel alternative.[54] UP's agreed position on abundance draws

[53] FAO Statistics Division, "Food balance sheets 2010–2023" (27–28 Oct 2025): in 2023 global food supply "crossed the historic milestone of 3 000 kilocalories per capita per day." This is the supply available per person, not what people eat. https://www.fao.org/statistics/highlights-archive/highlights-detail/food-balance-sheets-2010-2023

[54] IRENA, press release "91% of New Renewable Projects Now Cheaper Than Fossil Fuels Alternatives" (22 July 2025): "Notably, 91% of new renewable power projects commissioned last year were more cost-effective than any new fossil fuel alternatives." https://www.irena.org/News/pressreleases/2025/Jul/91-Percent-of-New-Renewable-Projects-Now-Cheaper-Than-Fossil-Fuels-Alternatives (read in the Internet Archive's copy, https://web.archive.org/web/2025/https://www.irena.org/News/pressreleases/2025/Jul/91-Percent-of-New-Renewable-Projects-Now-Cheaper-Than-Fossil-Fuels-Alternatives , because irena.org blocks automated reading). "Last year" is 2024. Checked at source, 31 Oct 2026.

the conclusion that the automation to end most drudgery and the renewable capacity to give every person on Earth a decent life already exist, and it makes abundance a measured target shown in practice, not a promise.[43] Automation and AI do the work that abundance requires, and Chapter 14 takes up what that means for the people who do the work now. In UP they coordinate, propose and do work, and they never govern: people can always correct, pause or switch them off.[55]

Doing more with less and a new way of using things cut what has to be made in the first place. Almost a fifth of the food available to consumers was wasted in 2022, counting inedible parts, so cutting waste adds food without growing any more.[20] And a thing that is used, not used up, can serve many people in turn. The tool and thing libraries described below show that one drill, ladder or carpet cleaner can meet the needs of a whole street, and one of them reports from its surveys that about half of all its rentals directly prevent a purchase.[56] Every purchase that is not needed is energy and material that does not have to be found.

Open designs and shared knowledge make the things that are still needed easier to build, by more people, in more places. WikiHouse, maintained by Open Systems Lab, is an open building system for homes and other buildings. In its own words, "WikiHouse is completely open source. That means anyone can take the files and freely use them, or improve them", and its blocks "can be digitally-fabricated using relatively low-cost CNC machines", so that small local firms can make them. Its first system has been used to make hundreds of small buildings, including homes, workspaces and schools.[57] An open design spreads the knowledge of how to build a home in the way Wikipedia spreads knowledge of everything else: once made, it can be copied at almost no cost. In UP, the designs UP produces stay in UP, so that everyone taking part may use, study and improve them, and no one may enclose them.[58]

Coordination that counts real things handles what is still limited, and the next section shows the precedents, from the United Nations' accounts of what ecosystems supply to India's village dairy societies. The last development, the narrow and intense focus on what is truly scarce, deals with what is left. Some things cannot be multiplied however much is built: the house by the sea, the view from the hill, the time of a skilled surgeon. UP's agreed position calls these positional goods and shares them by rotation or by a decision of the people affected, never by price, while it works to make more of what can be made and to design places that many people can enjoy at once.[26,35] UP reasons that, as the other six developments do their work, the list of truly scarce things gets shorter and the attention of everyone working on problems can go to it. That is a projection, and it has to be shown.

As Chapter 8 put it, the less that is scarce, the less calculation is needed. That is the first answer UP gives to the oldest objection to replacing prices, and the section after next takes the objection in full.

How the jobs of price get done

A price does several jobs at once, and an honest account of meeting needs without prices has to take them one at a time. It rations what is scarce, so that a thing goes to someone instead of to everyone. It tells producers what people want. It tells everyone what a thing costs to make. And it carries what the economist Friedrich Hayek, quoted earlier in this chapter, called the knowledge of particular circumstances, which no central office can hold in full.[59] UP's agreed position on prices, given as one way UP could run, never as a directive, offers a tool for each job instead of wishing the jobs away. On this one way UP could run, rationing would be done by rotation and reservation; what people want would be learned from direct use data, gathered under UP's rule on personal data;

[55] Core tenet: *Technology serves; people decide*: "AI and automation coordinate, propose and do work. They never govern: people can always correct, pause or switch them off. No single AI system or operator controls coordination: the AI systems UP uses are open, more than one, checked against each other, and watched for concentrated power like everything else." Full wording in "The core of UP".

[56] Rebecca Trevalyan, co-founder of Library of Things, "What Library of Things has taught us about behaviour change", *Circular Online* (1 August 2024): "Nearly 30,000 Londoners like Eleanor, Nick, and Ade have used Library of Things"; "Our surveys suggest that about 50% of all item rentals directly prevent a purchase." https://www.circularonline.co.uk/case-studies/what-library-of-things-has-taught-us-about-behaviour-change/ . The organisation's own figures and surveys. Checked 1 Nov 2026.

[57] WikiHouse, "Media" page (Open Systems Lab): "WikiHouse is completely open source. That means anyone can take the files and freely use them, or improve them."; "WikiHouse blocks can be digitally-fabricated using relatively low-cost CNC machines. This means it can be manufactured by a distributed network of small, local businesses, anywhere."; "The first system, WikiHouse Wren, has been used by teams around the world to make hundreds of small buildings, including homes, workspaces, schools, garden studios, extensions and leisure structures." https://www.wikihouse.cc/media . Checked at source, 13 Nov 2026. The project's own account.

[58] Core tenet: *Open systems, shared knowledge, private persons*: "UP's technology (the knowledge, code, data and designs UP produces) stays only in UP: everyone taking part in UP may use, study and improve it, and no one may enclose it." Full wording in "The core of UP" (amended round 13b, 28 Oct 2026).

[59] Chapter 3, section on markets, with its notes: Hayek, "The Use of Knowledge in Society" (1945), on knowledge that exists only as dispersed bits held by separate individuals; and the planned economies of the twentieth century and their shortages (Kornai).

costs would be counted by physical accounting; and local knowledge would be used by deciding at the smallest scale that can decide.[60]

Each of these tools has a precedent somewhere inside the current system, though none yet replaces a price outright. Sharing by turns is what public libraries do with books: a book that many people want is lent in turn, never sold to the highest bidder. The idea has spread from books to tools. The Berkeley Tool Lending Library in California started in 1979 with 500 tools and one employee, and now circulates more than 4,500.[61] In London, the social enterprise Library of Things rents out household things that people need only now and then; by its co-founder's account nearly 30,000 Londoners had used it by 2024, and its surveys suggest that about half of all rentals directly prevent a purchase.[56] A thing that is shared in turn meets the needs of many people, and fewer of it have to be made.

The second and third tools replace what a price says about wants and costs. Use data, in UP, is gathered under its rule on personal data, given as one way UP could run: data is used only with permission, the question travels to the data, and only the answer leaves; nothing individual is passed on or kept.[62] Chapter 11 described systems that already work this way in medical research.[63] Physical accounting is already official practice. In March 2021 the United Nations Statistical Commission adopted a framework for ecosystem accounting, which keeps physical accounts of what ecosystems supply, so that nature's contributions are counted beside the economy's and not only through GDP.[64] Statistical offices already measure the tonnes of material that a country's consumption draws from the earth; the European Union's statisticians call it the material footprint.[65] Both count real quantities, not prices, and both are published by public bodies.

The fourth tool, deciding at the smallest scale that can decide, has the longest record of all. Chapter 5 described Elinor Ostrom's finding that people who use a shared resource can make and keep the rules for it themselves.[66] Production can be organised the same way, and India's milk shows how far it can go. In the 1940s the milk producers of Kaira (now Kheda) district, in Gujarat, depended on the traders of a private dairy, Polson. Tribhuvandas Patel, who became the union's founding chairman, led the farmers against what the co-operative's own history calls the unfair trade practices of those traders, and on 14 December 1946 they registered a union of their own. Patel built it from the village up. The village co-operatives were the base of the whole venture; each was to be "open to all milk producers in the village", whatever their caste, creed or community; and each member had one vote, whatever their social and economic standing.[67] The union became Amul, and the federation it grew into now lists 3.6 million milk producer members and 18,554 village milk co-operative societies.[68] No office planned that growth from the centre. Farmers with a problem in front of them solved it together, and others copied them. In UP's terms, Amul shows two of its ideas at work at the scale of millions: deciding at the smallest scale that can decide,

[60] UP's agreed position on prices (round 12S, position 7, an illustration of one way UP could run, never a directive): "Price's jobs are replaced: rationing by rotation and reservation"; what people want "by direct use data", under UP's rule on personal data; "costs by physical accounting"; "local knowledge by decisions at the smallest scale"; "Whether this coordinates the most complex production as well as markets do is testable workload, run rung by rung." The position adds a new norm of owning: libraries, personal fabrication, recyclable goods, and the big wants as community spaces with reservations. Full wording in UP's agreed positions (the Position Ledger).

[61] Berkeley Public Library, "Tool Lending Library": "Started in 1979 with 500 tools and one employee"; "the Tool Lending Library now circulates over 4,500 tools". https://www.berkeleypubliclibrary.org/node/27563 . Checked 1 Nov 2026.

[62] UP's agreed position on the data rule (round 12S, position 11, an illustration of one way UP could run): "data is used only with permission, the question travels to the data, and only the answer leaves; nothing individual is passed on or kept." Full wording in UP's agreed positions (the Position Ledger).

[63] Chapter 11, on open systems and private persons, with its note on OpenSAFELY, where researchers send their analysis to the data and only the results leave.

[64] United Nations, System of Environmental-Economic Accounting, "SEEA Ecosystem Accounting": "The United Nations Statistical Commission adopted the SEEA Ecosystem Accounting at its 52nd session in March 2021." The framework includes physical accounts of ecosystem services. https://seea.un.org/ecosystem-accounting . UN DESA, "UN adopts landmark framework to integrate natural capital in economic reporting": the framework "was adopted by the UN Statistical Commission and marks a major step forward that goes beyond the commonly used statistic of gross domestic product (GDP)". https://www.un.org/en/desa/un-adopts-landmark-framework-integrate-natural-capital-economic-reporting . Checked 1 Nov 2026.

[65] Eurostat, *Statistics Explained*, "Material flow accounts statistics – material footprints": "Material footprints quantify the worldwide demand for material extractions"; "triggered by consumption and investment by households, governments and businesses". https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Material_flow_accounts_statistics_-_material_footprints . Checked 1 Nov 2026.

[66] Chapter 5, "UP's method, one line at a time", with its note on Elinor Ostrom's design principle that most of those affected by the rules can take part in changing them.

[67] Amul Dairy (Kaira District Co-operative Milk Producers' Union), "Tribhuvandas K Patel 1903-1994": he "successfully led farmers against the unfair trade practices of traders of Polson and Polson Dairy and established Kaira District Co-operative Milk Producers' Union Limited on 14th December 1946"; the village co-operatives "were literally the "base" of the entire venture"; "He insisted that each village co-operative should be open to all milk producers in the village regardless of caste, creed or community"; he "placed equal emphasis on the principle of 'one man one vote' regardless of each member's social and economic status." https://amuldairy.com/t_k_patel.php . Checked at source, 14 Nov 2026.

[68] Gujarat Cooperative Milk Marketing Federation (Amul), "About us": "18 member unions covering 33 districts, and 3.6 million milk producer members."; "Its daily milk procurement is approx 28 million lit per day from 18,554 village milk cooperative societies". https://shop.amul.com/en/page/about-us . Undated figures. Checked 1 Nov 2026.

and taking part open to anyone, whatever their standing.[69] It still sells its milk for money; UP takes the lesson, not the model.

Thailand's Baan Mankong programme gave the same kind of authority over housing to the people who would live in it, and one canal in Bangkok shows what that meant. Along the Bang Bua canal, in the north of the city, some 2,881 households lived on public land, most of them working in the informal economy, and earlier attempts to evict them had led to a long conflict.[70] Many families lived in stilt houses built over a polluted canal that flooded in heavy rain. In the words of the Smithsonian's design museum, which holds the project in its collection, they had been "living with insecurity for close to a century".[71] From 2004, under Baan Mankong, they planned the rebuilding themselves. Groups of five households chose one another and met to plan, working with architects from nearby Sripatum University. They rebuilt their houses, redrew the plots so that families had shares of a similar size, and moved the houses back from the water to open a public walkway three metres wide along the canal.[71] Across Thailand, by 2016 the programme had reached more than 90,000 households, at a cost to the programme of about $570 a family; the process was entirely community driven, and communities had full authority to negotiate land deals.[72] In UP's terms, Bang Bua is UP's method at work: the people a problem affected named it, planned the answer with skilled help they chose, and decided its outcome.[47] In each of these cases, the people closest to the problem made decisions that a central office would otherwise have made.

The agreed position is careful about what it does not claim. Whether these tools together coordinate the most complex production, a semiconductor plant or a new medicine with thousands of parts and suppliers, as well as markets do is, in its words, "testable workload, run rung by rung".[60] UP does not ask anyone to give up prices on a promise. In the early stage its members live with money, pay real costs and use markets like everyone else, and a shared fiction such as money is kept while it serves health, happiness and wellbeing, and replaced gradually, job by job, where technology can do its work without obvious downsides.[73,74] The question of how far the tools can reach is settled the way UP settles every question of fact, by trying them in the open, measuring the results and comparing them with what happens now.[75]

The calculation problem, rung by rung

The oldest objection to any system that meets needs without prices is also the strongest. In 1920 the economist Ludwig von Mises argued that a society without market prices for the means of production could not calculate at all. "Where there is no free market, there is no pricing mechanism; without a pricing mechanism, there is no economic calculation," he wrote.[76] Without prices, he held, no one could tell whether to build a new railway, or which of two methods of production was the cheaper, because there would be no common measure to compare

[69] Core tenet: *Open participation: anyone may take part; those affected decide*, in full: "Anyone may take part in any problem, and the people it affects decide its outcome. There are no offices to hold: work is shared out, not owned, so no one gathers power by holding a position. Where work needs skill, skill is shown by open, testable standards that anyone can work toward and anyone can propose to change, and education is open to everyone, at every age, so anyone can gain the skills any work requires." Also in "The core of UP".

[70] Prayong Posriprasert and Nattawut Usavagovitwong, "Communities' Environment Improvement Network: Strategy and Process toward Sustainable Urban Poor Housing Development", *Journal of Architectural/Planning Research and Studies* 4 (2006), Thammasat University: "Bang Boa canal, located in the north area of Bangkok"; "The communities consisting of 2,881 households"; "Most people in the neighborhoods are working in the informal" sector; the abstract: "The previous attempts by the local authority to evict the waterfront urban poor communities" "had led to a long conflict in urban development." https://so02.tci-thaijo.org/index.php/jars/article/view/169180 . Checked at source, 14 Nov 2026.

[71] Cooper Hewitt, Smithsonian Design Museum, "Bang-Bua Canal Community Upgrading" (project dated 2004–11; designed by Prayong Posriprasert, Nattawut Usavagovitwong and Sakkarin Sapu, with the Community Organizations Development Institute and the Asian Coalition for Housing Rights): families lived in stilt houses "built directly above the polluted canal", which floods in heavy rains; "After living with insecurity for close to a century, self-selected groups of five households met to plan redevelopment." Working with architects from Sripatum University, they built houses, "re-blocked for similar-sized houses to create a more democratic neighborhood layout", and moved houses to the interior to make way for a public walkway along the canal, "now three meters (9 ft.) wide". https://collection.cooperhewitt.org/objects/420778895 . Checked at source, 14 Nov 2026.

[72] Emily Norford and Terra Virsilas, World Resources Institute, "What Can We Learn from Thailand's Inclusive Approach to Upgrading Informal Settlements?" (12 May 2016): "more than 90,000 households in 1,546 communities"; "spending the equivalent of just $570 per family"; "facilitates a process that is entirely community driven"; "communities have full authority to negotiate land deals". Figures as of 2016. https://www.wri.org/insights/what-can-we-learn-thailands-inclusive-approach-upgrading-informal-settlements . Checked 1 Nov 2026.

[73] Core tenet: *Reality over fiction*: "Decisions rest on real resources, real needs and measured outcomes. Shared fictions (money, corporations, governments, borders) made large-scale cooperation possible and served a great purpose. UP keeps a fiction while it serves health, happiness and wellbeing, and replaces it gradually where technology can do its job without obvious downsides." Full wording in "The core of UP".

[74] Chapter 8, "How money's jobs move to reality" and "It has already begun: how a job moves out of a fiction", with Table 8.1 and their notes, including voluntary blood donation.

[75] Core tenet: *Self-correction: nothing is final, including this*: "UP is judged against both today's system and the ideal it aims at"; "Downsides, risks and fringe problems are named openly and treated as work, never as reasons to keep a status quo that fails so many." Full wording in "The core of UP".

[76] Ludwig von Mises, "Economic Calculation in the Socialist Commonwealth" (1920), Mises Institute online edition, section 3: "Where there is no free market, there is no pricing mechanism; without a pricing mechanism, there is no economic calculation." https://mises.org/online-book/economic-calculation-socialist-commonwealth/3-economic-calculation-socialist-commonwealth . Section 2: "Without economic calculation there can be no economy." https://mises.org/online-book/economic-calculation-socialist-commonwealth/2-nature-economic-calculation . Checked 1 Nov 2026.

them by. Hayek added the point quoted earlier in this chapter: the knowledge needed is scattered, and only a price can gather it without anyone having to collect it.[17,18] Chapter 8 quoted Mises's later statement of the same argument and gave UP's short answer; this section gives the long one.[12] The twentieth century tested the objection on a vast scale. The planned economies that tried to replace prices with a central plan produced chronic shortages. The Hungarian economist János Kornai, whom Chapter 3 quoted, concluded that "Certain properties of the economic mechanism permanently reproduce shortage", and UP takes that failure as a warning, not a footnote.[77]

The history of the argument holds two lessons that are easy to miss. The first is that a great deal of coordination already happens without prices, inside every large organisation. In 1937 the economist Ronald Coase asked why firms exist at all, if prices coordinate so well. Inside a firm, he observed, market transactions are eliminated, and "in place of the complicated market structure with exchange transactions is substituted the entrepreneur-co-ordinator, who directs production." He quoted his colleague D. H. Robertson's image of firms as "islands of conscious power in this ocean of unconscious co-operation like lumps of butter coagulating in a pail of buttermilk".[78] A worker who moves from one department to another, Coase noted, does so not because prices changed but "because he is ordered to do so". Coase was careful to add that the firm stays tied to the prices outside it, and UP should be equally careful: a firm plans inside a market and leans on its prices.[78] Even so, the islands are large and growing, and the question has never been prices or no prices. It is which tool does which job best, at what scale.

The second lesson is that the Soviet failure had more than one cause, and only some of them were about arithmetic. The economists Paul Cockshott and Allin Cottrell argued in 1993 that the computation the planners lacked "is well within the capacity of present-day computational technology", and others have argued since that data could take over much of the work that prices do.[79,80] UP does not rest its case on either claim. Kornai's shortage came from how the system was built: a central plan, power held at the top, and producers who answered to the plan instead of to the people they served. UP's design removes those causes. It has no central planner and no office to hold, power is watched and spread out in every form, AI systems are open, plural and checked against each other, and the people a problem affects decide its outcome.[81,55] Whether that is enough is a question of fact, and UP's agreed position says how it is to be answered: whether coordination without prices works for the most complex production, a semiconductor plant or a new medicine with thousands of parts and suppliers, is "testable workload, run rung by rung".[60]

Table 13.1 shows what running it rung by rung could mean. It is an illustration of how the test could be organised, not a settled sequence: the collective would choose the rungs, the measures and the order. Each rung is tried in the open, beside the market that already does the job, and the results are compared and published. A rung that works lets the next be tried. A rung that fails leaves the price doing that job, because a fiction is kept while it serves, and the failure becomes a problem to solve.[82,83]

Table 13.1. The calculation problem, taken rung by rung. An illustration of one way the test could be organised, not a settled sequence; at every rung the comparison is with what the market does now.

[77] János Kornai, "Resource-Constrained versus Demand-Constrained Systems", *Econometrica* 47(4) (July 1979), pp. 801-820, abstract: "Certain properties of the economic mechanism permanently reproduce shortage."; "A socialist economy in its"classical" form belongs to the former type." (that is, the resource-constrained type). https://www.econometricsociety.org/publications/econometrica/1979/07/01/resource-constrained-versus-demand-constrained-systems . This is Kornai's own statement of the thesis he developed in *Economics of Shortage* (Amsterdam: North-Holland, 1980). Checked at source, 31 Oct 2026.

[78] R. H. Coase, "The Nature of the Firm", *Economica* New Series 4(16) (November 1937), pp. 386–405: "As D. H. Robertson points out, we find"islands of conscious power in this ocean of unconscious co-operation like lumps of butter coagulating in a pail of buttermilk.""";"Within a firm, these market transactions are eliminated and in place of the complicated market structure with exchange transactions is substituted the entrepreneur-co-ordinator, who directs production."; on a worker who moves between departments: "because he is ordered to do so"; and, on the firm, that it is, "as Professor Robbins points out," related to an outside network of relative prices and costs,"". Read in the journal text (JSTOR scan). Checked 13 Nov 2026.

[79] W. Paul Cockshott and Allin F. Cottrell, "Calculation, Complexity and Planning: The Socialist Calculation Debate Once Again", *Review of Political Economy* 5 (1993), the basis of the calculation chapter of their *Towards a New Socialism* (1993): the objection that "the socialists could not solve all the necessary equations, while the market mechanism could"; and, on the computation the planners lacked, that it "is well within the capacity of present-day computational technology." https://users.wfu.edu/cottrell/socialism_book/calculation_debate.pdf . Checked at source, 13 Nov 2026.

[80] Evgeny Morozov, "Digital Socialism? The Calculation Debate in the Age of Big Data", *New Left Review* II/116–117 (2019), reporting the argument of Viktor Mayer-Schönberger and Thomas Ramge that data will "supplant the price system as the economy's chief organizing principle". Morozov's essay also sets out the objections. https://newleftreview.org/issues/ii116/articles/evgeny-morozov-digital-socialism . Checked at source, 13 Nov 2026.

[81] Core tenet: *Open participation: anyone may take part; those affected decide*: "Anyone may take part in any problem, and the people it affects decide its outcome. There are no offices to hold: work is shared out, not owned, so no one gathers power by holding a position." Full wording in "The core of UP". Core tenet: *Power kept spread out*: "Concentration of power, in any form (wealth, position, information, access, expertise or machines), is treated as a standing danger."; "Everyone in UP watches for concentrations of power and spreads them out again." Full wording in "The core of UP".

[82] Core tenet: *Reality over fiction*: "Decisions rest on real resources, real needs and measured outcomes."; "UP keeps a fiction while it serves health, happiness and wellbeing, and replaces it gradually where technology can do its job without obvious downsides." Full wording in "The core of UP".

[83] Core tenet: *Self-correction: nothing is final, including this*: "Every failure of UP is fed back into it as a new problem to solve"; "UP is judged against both today's system and the ideal it aims at". Full wording in "The core of UP".

Rung	What it covers	Precedent today	What would show it works	What would show it does not
1	Things used, not used up, shared in turn: books, tools, rooms	Public libraries; tool and thing libraries	Needs met with fewer things made; waiting times that stay short	Queues that do not shorten; things lost or broken faster than replaced
2	Staple needs with steady demand: basic food, water, shelter	Amul's village societies; Baan Mankong; Housing First; Vienna's social housing	The floor met for every member, published person by person	Shortfalls that persist or are hidden
3	Goods with known designs and few parts: furniture, building kits, simple tools	Open designs such as WikiHouse, made by small local firms	Physical cost in energy and materials at or below the market's	Higher physical cost, poorer quality or long delays
4	Complex goods with long supply chains: vehicles, household machines	Planning inside large firms and co-operatives, such as Mondragon	Coordination across many producers without shortages, run beside the market	Chronic shortages or surpluses, as in the planned economies
5	The frontier: semiconductors, new medicines	None at scale outside markets and states	The same or better results in the open	The market stays better; the price keeps the job while the problem is worked on

Sources: the precedents are described in this chapter and its notes; the test is UP's agreed position on prices, given as one way UP could run.

UP's answer to Mises starts by agreeing with much of what he and Hayek saw. On one way UP could run, no single person, office or machine would set a plan for everyone: AI systems would propose and coordinate in the open, and the people affected would decide, at the smallest scale that can decide.[60,84] The rules, records, decisions and reasons on which those decisions rest are public, while each person's own information stays under their control.[44] UP does not abolish prices by decree. A fiction such as money is kept while it serves, and each of its jobs moves out of it only when something else has shown in practice that it can do that job without obvious downsides.[73,74] And it does not claim to have solved the hardest rung. What the objection does not show is that every need must be met through a price. Public libraries, blood services, Wikipedia and the household itself meet needs every day without one, and the question is how far that territory can be extended, not whether it exists.[74] In UP's terms, the calculation problem is not a reason to stop. It is the largest single piece of workload UP has, and it is worked on the way UP works on everything: in the open, a rung at a time, judged against what happens now.[75]

[84] UP's agreed position on what the AI is, the coordinator that proposes: "The AI is the coordinating system UP needs, and it coordinates by proposing, not by governing. It publishes evidence-based proposals with their data and confidence, marks what is still unknown as shared work for people and AI, and never rules on matters of taste. Every proposal goes through the decision steps: an open call for better ideas, input from everyone affected (including people downstream and future residents), and only as a last resort a guarded vote. People choose their work; the AI may not assign work or compel anyone, and any plan can be overridden through the decision steps." Full wording in UP's agreed positions (the Position Ledger).

CHAPTER 13

The calculation problem, rung by rung

An illustration of how the test could be organised, not a settled sequence. At every rung the comparison is with what the market does now.



	WHAT THE RUNG COVERS · PRECEDENT TODAY	WORKS IF	DOES NOT IF
5	**The frontier: semiconductors, new medicines** *None at scale outside markets and states*	The same or better results in the open	The market stays better; the price keeps the job while the problem is worked on
4	**Complex goods with long supply chains: vehicles, household machines** *Planning inside large firms and co-operatives, such as Mondragon*	Coordination across many producers without shortages, run beside the market	Chronic shortages or surpluses, as in the planned economies
3	**Goods with known designs and few parts: furniture, building kits, simple tools** *Open designs such as WikiHouse, made by small local firms*	Physical cost in energy and materials at or below the market's	Higher physical cost, poorer quality or long delays
2	**Staple needs with steady demand: basic food, water, shelter** *Amul's village societies; Baan Mankong; Housing First; Vienna's social housing*	The floor met for every member, published person by person	Shortfalls that persist or are hidden
1	**Things used, not used up, shared in turn: books, tools, rooms** *Public libraries; tool and thing libraries*	Needs met with fewer things made; waiting times that stay short	Queues that do not shorten; things lost or broken faster than replaced

Source: Table 13.2. The collective would choose the rungs, the measures and the order. Rung 5 is where the old system still does far better today; the price keeps that job while the problem is worked on.

The calculation problem, rung by rung: from shared tools to the frontier, with what would show each rung works or fails.

How it could run, stage by stage

UP grows beside the current system, and its agreed position names three stages: early, when UP is a minority network inside the current system; middle, when it has its own productive base and most members' needs are met from what UP produces; and completed, when most people live mainly in UP.[85] UP's agreed claim on unmet needs is staged the same way, and so is the evidence for it.[50] The early stage rests on today's evidence. The middle and completed stages are projections, and each comes with what would have to be shown.

Early: a minority network inside the current system. Early on, UP meets part of its members' needs directly and depends on the current system for the rest. Members' own assets convert to UP by their choice, and their money is best used early to buy and convert more.[50] What members can already do together is share: tools lent in turn, food grown and cooked together, repairs and building done by crews, and designs open to every member. The expected benefits are modest and real. Members spend less on things they use rarely; one London library of things reports that about half of its rentals directly prevent a purchase.[56] Part of their food and some of their shelter is met in common, and each community publishes what it used and what needs it met, so its claims can be checked.[43] People outside UP lose nothing: no one is forced to join or to give up what is theirs, and members still use the

[85] UP's agreed position on judging UP by stage, beside the current system: UP grows side by side with the current system, "early (a minority network inside it), middle (its own productive base; most members' needs met from what UP produces), completed (most people live mainly in UP)"; "Use today's evidence for the early stage; present the middle and completed stages as a reasoned projection from cited mechanisms, labelled as such." Full wording in UP's study lessons (lesson 13); the Position Ledger (round 12c, position 1) records the same division between today's evidence and projection.

current system's markets and services like everyone else.[51] The evidence that this stage can work is in co-operatives and libraries running today, from Amul's village societies to the Bang Bua canal.

Middle: UP's own productive base (a projection). In the middle stage, needs would be met from UP's own production. UP's agreed claim is that the capacity to feed, house and supply everyone already exists, and that what has been missing is organisation and distribution.[50] The expected benefit is the one this chapter is about. For members, the floor would be met in real goods, so food and shelter would no longer depend on a wage, a price or a hostel's rules, and a member who lost work would not lose a home. Empty buildings given by their owners would be repaired and allocated by the people affected, and wanted places would be shared by rotation while more were made.[35] Wealth would matter less in members' lives, because what matters most to them would be met in common, and money would buy no say inside UP.[40] For the living world, things used in turn and made to last would mean less taken from it, with physical accounting keeping production inside the planet's limits.[45] What would have to be shown is that UP's production meets the floor for its members year after year, in published figures that anyone can check.

Completed: most people living mainly in UP (a projection). UP's card on needs names no completed stage, so what follows is drawn from UP's evidence record and its tenets, not from the card. If most people lived mainly in UP, the floor would be met wherever UP is, and the question would no longer be raising money but allocating real resources and work.[86] Success would be measured person by person, so no one's wellbeing could be traded away to raise an average.[39] What counts as enough would be set together and would rise as capacity grows.[43] The scarcity left would be mostly physical and positional, shared by rotation or by a decision of the people affected and never by price, while artificial scarcity would be answered by open design and physical accounting, which UP's agreed position calls a direction rather than a guarantee.[26] The arguments people have would be about wants: whose turn it is in the workshop, or by the sea. Two things would persist: the coordination of the most complex production, which Table 13.1 makes testable work, and the physical limits of a finite planet. And at every stage UP would be judged against today's record and against the ideal, with every failure fed back into it as work.[52]

Table 13.2 sets out what changes at each stage, the precedent for it, why it is likely and what persists. Table 13.3 sets out the benefits expected at each stage, for members, for everyone else and for the living world, and how each would be shown.

Table 13.2. Meeting needs in UP, by stage. The early stage rests on today's evidence; the middle and completed stages are projections.

Stage	What changes	Real precedent	Why it is likely	What persists
Early	Members share tools, food, repair and building; part of their needs met directly, the rest from the current system; members' assets convert by their own choice	Tool libraries; Amul's village societies; Baan Mankong's community-led upgrading	Production owned by its members already works at scale	Dependence on wages and on the current system for the rest of each member's needs
Middle (projection)	Floors met in real goods from UP's own production	Large co-operative producers such as Amul (3.6 million members) and Mondragon (more than 71,400 employees, not all of them worker-members)[87]	The capacity exists: food supply above 3,000 kcal a person a day; ending extreme poverty modelled at 0.28% of world GDP	Paying for floors, a gap that shrinks with each stage; hunger caused by war outside UP
Completed (projection)	Floors met wherever UP is; the question is allocating real	Modelled only	Each stage adds production, open designs and	Coordinating the most complex production, which is testable work

[86] Sources for Table 13.2. Early: notes 61, 56, 68 and 72. Middle: notes 68 and 87; capacity, notes 89 and 90; the bottleneck of founding, Chapter 12 (the first gap). Every entry in the middle and completed rows is a projection; the staged claim is note 50.
[87] MONDRAGON, *Annual Report 2025*: "The Corporation exceeded 11.3 billion euros in sales, employed more than 71,400 people,". https://www.mondragon-corporation.com/people/site/assets/files/110675/mondragon-descargable-2025-eng.pdf . The count is of people employed, not all of whom are worker-members. Checked 1 Nov 2026.

Stage	What changes	Real precedent	Why it is likely	What persists
	resources and work, not raising money (from UP's step-3 evidence record; card F2 names no completed stage)		automation	

Sources: notes to this section.[86]

Table 13.3. Expected benefits of meeting needs in UP, by stage. The early stage rests on today's evidence; the middle and completed stages are projections, drawn from UP's staged claim on needs and, for the completed stage, from its evidence record and tenets.

Stage	For members	For people outside UP	For the living world	How it would be shown
Early	Lower costs from sharing; part of food and shelter met in common; skills and designs shared among members	Nothing taken from anyone: joining is free and no one gives up what is theirs	Fewer things bought and thrown away	Each community's published record of needs met and resources used
Middle (projection)	The floor met in real goods: food and shelter no longer depend on a wage, a price or a hostel's rules; wealth matters less	An open record of what works, which anyone can check; anyone may join	Things shared and made to last; production kept inside physical limits	Floors met year after year, in published figures
Completed (projection)	The floor met wherever UP is; what counts as enough rises as capacity grows; arguments are about wants, not needs	Most people live mainly in UP, and no one is forced to	Artificial scarcity answered by design and physical accounting, as a direction rather than a guarantee	Wellbeing measured person by person, against today's record and the ideal

Sources: notes to this section.[88]

Stages are easier to see in a single life, so this chapter returns to the household that Chapter 1 introduced: a care worker, her teenage son and his grandfather, in a mid-sized town. As before, this is an illustration of one way UP could run, and never evidence.

> *Illustration: one way it could run. The early stage.* The care worker still earns a wage, and most of what the household needs still comes from shops and bills. But the town's food co-operative now grows part of its vegetables on land a member gave to it, and the tool library she uses lends a ladder, a drill and a pressure cooker by reservation. When the grandfather's kitchen needs new cupboards, a weekend crew of members builds them from an open design, and he cooks for them in return because he wants to. The co-operative publishes what it grew, what it used and what needs it met, and her son, checking the figures for a school project, finds that a third of the vegetables went to families who asked for them, whatever they could pay.
>
> *Illustration: one way it could run. The middle stage, a projection.* The town now meets the food and shelter floor for its members from its own production. A row of empty flats above the high street, given to the community by their owner, has been repaired and holds six families, and more flats are being repaired. No rent is charged. The flats were allocated by the people affected, through the decision steps, to the households in greatest need while the others are made ready, and the decision and its reasons are on the town's open record. The community kitchen is the most wanted place in town on Friday nights, so it runs on reservations, and the waiting list has been posted as a problem open to anyone: a second kitchen is being built.

[88] Table 13.3. Early row: notes 56, 43 and 51. Middle row: notes 50, 35, 40 and 45. Completed row: notes 86, 39, 43, 26 and 52. Every entry in the middle and completed rows is a projection; the completed row is drawn from UP's evidence record and tenets, because card F2 names no completed stage (note 50).

Illustration: one way it could run. The completed stage, a projection. The household's needs are met from shared production, and a person sleeping outside for want of a room is now rare; when it happens, the town treats it as an urgent problem. What the household argues about now are wants: whether the grandfather's workshop space is fair, whether the son's time in the shared studio should come before a neighbour's. Those are matters for the decision steps, settled in the open, and they are the kind of problem UP expects to have.

The strongest objections

The calculation problem, the oldest objection of all, has its own section above, and the objection that the rich will never join was answered in the section on inequality. Three other objections remain.

The first is that people will take more than they need when nothing has a price. Part of the answer is in the floor's own limits: UP guarantees needs, not every want, and what counts as enough is set together.[31,43] Part is in how wanted things are shared. A thing many people want is treated as a signal and a problem to solve, shared meanwhile by rotation or by a decision of the people affected, while more of it is made.[35] And part is that the figures are public. Each community publishes what it used and whom it served, so a shortfall shows up as a problem to work on instead of an empty shelf.[43] Libraries have lent books on these terms for generations, and the tool libraries described above lend in the same way.

A further objection is that a basic income would be simpler: give everyone money and let markets do the rest. The evidence on cash transfers is encouraging, and UP credits it: as this chapter has shown, they have not been found to discourage work, and in Kenya the money spread to neighbours and local firms.[14,15] UP's agreed position on basic income does not rest on the claim that people need to be made to work. It is that basic income keeps the old machine running: money, prices and advertising-driven consumption stay; the machines and the land stay in the hands of a few; nothing gives people a purpose or a way to contribute; and nothing changes how much the planet is asked to give.[35] Cash can lift a family over the floor this year. On UP's reading, it leaves untouched who owns the means of meeting that floor.

The last objection is that abundance is a fantasy. UP's agreed position makes abundance a measured target, shown in practice by communities that publish their energy, materials and needs met, and never a promise.[43] UP's agreed claim is that the capacity to feed, house and supply everyone already exists.[50] In 2023 the food supply available in the world crossed 3,000 kilocalories per person per day, on average, and one recent model put the cost of approximately ending extreme poverty with well-targeted cash at 0.28 per cent of the world's GDP.[89,90] Neither figure shows that UP will deliver abundance. Both are consistent with UP's claim that what has been missing is organisation and distribution, which is the problem UP is built to work on.[50]

Back to the underpass

Gyula Remes died in a country that had the buildings, the food and the money to house him, and a charity that knew his name was trying to find him a bed. No one can say what would have saved him. What the story shows is a gap between what a country holds and what reaches the person in front of it. UP's answer is a floor that no gain for others can buy, which UP would meet more and more from what is shared and counted in the open as it grows, with the scarce things shared by turns or by a decision of the people affected instead of by price.[31,26,43] None of that is proven at the scale of a country. The practices UP's early stage builds on already exist, in tool libraries, village dairies and community-led homes; UP's middle and completed stages are projections that UP's members will have to test, publish and correct as they go.[85,75]

Meeting needs without making them conditional raises the next question at once. If a person's food and shelter no longer depend on a job, who does the work, and especially the work that nobody wants? Chapter 14 takes that question up.

[89] FAO Statistics Division, "Food balance sheets 2010–2023" (27–28 Oct 2025): in 2023 global food supply "crossed the historic milestone of 3 000 kilocalories per capita per day." This is the supply available per person, not what people eat. https://www.fao.org/statistics/highlights-archive/highlights-detail/food-balance-sheets-2010-2023

[90] Roshni Sahoo, Joshua Blumenstock, Paul Niehaus, Leo Selker and Stefan Wager, "What Would it Cost to End Extreme Poverty?", NBER Working Paper 34583 (December 2025), abstract: "Extrapolated globally, the results imply a cost of 0.28% of global GDP"; "to (approximately) end extreme poverty." https://www.nber.org/papers/w34583 . A model, extrapolated from 34 countries, with targeting limited to the information real programmes have. Checked 1 Nov 2026.

Chapter card: Chapter 13

- **Claim:** The current system meets more needs than any before it, yet hunger, homelessness and poverty persist beside surplus food and empty homes, because things move mainly toward whoever can pay. A home that is also an asset shows the gap most plainly; Finland, Vienna, Amul and the Bang Bua canal show parts of the answer already at work. UP guarantees needs, not every want, as a floor that no gain for others can buy, measured person by person and never conditional on work or conduct: a need is named in the open, the people affected decide how it is met, the record is public, and a failure becomes new work. Chapter 8's seven developments shrink what has to be rationed, each job that prices do is given a tool of its own as one way UP could run, and the calculation problem is taken rung by rung, in the open, against what happens now. Equality of income is not UP's aim: it makes the floor secure and cuts the link between wealth and power.
- **Core lines:** the tenets *Floors that are never crossed* (needs, not every want); *The aim* (person by person); *Reality over fiction* (a fiction kept while it serves, replaced gradually where technology can do its job without obvious downsides); *Power kept spread out*; *Open systems, shared knowledge, private persons*; *Technology serves; people decide*; *Freely joined, ethically grown*; *Self-correction*. Agreed positions: abundance shown in the open; the three kinds of scarcity; scarcity as a signal, and the case against basic income; physical accounting sets the limits, people weigh the choices; beautiful commons, modest private space; merit never decides whose needs are met; the staged claims on needs and inequality (round 12c). Given as illustrations of one way UP could run: how the jobs of price are replaced, and the test run rung by rung; the data rule; condensing settlement; what UP makes and shares.
- **Rule of thumb:** "Is this a need or a want, is the scarcity physical, positional or made, and which job of a price is being replaced?"
- **What this is not:** a promise of something for nothing, a central plan, an aim of equal incomes, or a basic income. UP keeps money while it serves, replaces each of its jobs only when something else has shown it can do the job without obvious downsides, never takes anyone's wealth by force, and does not claim to have solved the coordination of the most complex production.
- **Check yourself:**
    1. What does UP's floor guarantee, and what does it not guarantee?
    2. Why does a home that is also an asset show the gap between what exists and who can reach it? What do Finland and Vienna show, and what do they not show?
    3. Name the four jobs a price does, and the tool UP's agreed position gives for each, with one precedent for each tool.
    4. Pick three of Chapter 8's seven developments and say how each shrinks what has to be rationed.
    5. What did Coase and Kornai each add to the calculation debate, and how does UP propose to test it rung by rung?
    6. Is equality of income one of UP's aims? What does UP say about inequality instead?
    7. What is UP's case against basic income?
    8. Follow one need through UP: who can name it, who decides how it is met, where the room comes from, what goes on the record, and what happens if it goes wrong?
    9. What does each stage, early, middle and completed, change, and what benefits does Table 13.3 expect at each, for members, for everyone else and for the living world?
- **Open questions (for the wiki):** How should a community decide what counts as enough, and how should the floor rise as capacity grows? Which goods should move first from prices to reservation and rotation, and how will the results be compared? How can use data be gathered without anyone's data being kept or passed on? Which rungs belong in Table 13.1, in what order, and what would count as a pass or a fail at each? (Improve this page.)

Chapter 14. Work and Contribution: Asked For, Shared and Never Forced

In July 2013, Miwa Sado, a 31-year-old political reporter for NHK, Japan's public broadcaster, was found dead in her bed in Tokyo, reportedly still holding her mobile phone. She had joined NHK in 2006 and was covering the Tokyo Metropolitan Government. She died of congestive heart failure three days after the election for the upper house of Japan's parliament.[1,2,3] According to the labour standards inspection office in Shibuya, she had worked 159 hours and 37 minutes of overtime in June and 146 hours and 57 minutes in May, far beyond the 100 hours of overtime a month that Japan's national guidelines use to judge death from overwork. In May 2014, labour officials ruled that overwork had caused her death.[3]

NHK did not make the case public until October 2017, more than three years after the ruling and four years after her death, and her parents told the newspaper Asahi Shimbun that the broadcaster had done so only after they strongly asked it to. NHK apologised, and it admitted organisational problems.[2] "We are sorry that we lost an excellent reporter," said its president, Ryoichi Ueda.[3,1] Japan has a word for what happened to her, *karoshi*, death from overwork, and since 2014 a law, the Act Promoting Measures to Prevent Death and Injury from Overwork, which defines death and injury from overwork as death from heart disease or stroke brought on by an overload of work, suicide due to a mental disorder brought on by intense psychological burden at work, and those illnesses themselves when work brings them on.[4] In the year to March 2025, Japan recognised, for workers' compensation, 241 cases of heart disease or stroke caused by work, 67 of them deaths, and 1,055 cases of mental disorder caused by work, including 88 suicides. These are cases compensated, not a count of all deaths from overwork.[5]

No law required Sado to work those hours. She was a young journalist in a job she had chosen, in a country where, as one report put it, working long hours is prized.[3] UP's agreed claim on work starts from the way survival depends on a job: as UP produces for its members' needs, it holds, survival stops depending on a job.[6]

That dependence is the subject of this chapter. It is the home of failure F5 on the scoreboard in Chapter 12, the failure of work, which includes the care that families do without pay.[7] Chapter 12 traced it to a root that runs under

[1] Natsuko Fukue, AFP, "Japanese reporter died after 159 hours of overtime", *Arab News* (6 October 2017): "NHK reporter Miwa Sado, 31, who had been covering political news in Tokyo, was found dead in her bed"; "in July 2013, reportedly clutching her mobile phone."; "She died three days after the upper-house election."; "NHK eventually made the case public four years afterwards"; "We are sorry that we lost an excellent reporter". https://www.arabnews.com/node/1173161 . The same AFP report is carried by *The Jakarta Post*: https://www.thejakartapost.com/life/2017/10/06/japanese-reporter-died-after-159-hours-of-overtime . The president is named as Ryoichi Ueda in the same report. Checked 1 Nov 2026.

[2] Adelle Chua, *HRD Asia* (9 October 2017), report headlined as NHK admitting "organisational problems" after the overtime that led to her death: "Labour standards inspectors determined that the journalist, 31-year-old Miwa Sado, died from overworking."; "Sado, who had been with NHK since 2006, was covering the Tokyo Metropolitan Government"; "at the time of her death." https://www.hcamag.com/asia/news/general/journalist-died-of-overwork-bosses-reveal/150766 . Checked 1 Nov 2026.

[3] NBC News, report on Miwa Sado's death (October 2017): "Miwa Sado died of congestive heart failure at the age of 31 in her home in July 2013, the network disclosed on Wednesday."; "a Japanese term for overwork, renewing calls for labor reform in a nation where"; "working long hours is prized."; "Sado logged 159 hours and 37 minutes in overtime in June and 146 hours and 57 minutes in May,"; "according to the Shibuya Labor Standard Inspection Office, far exceeding the 100 hours of overtime a month"; "that national guidelines use for determining karoshi, Asahi Shimbun reported."; "Her parents told Japanese newspaper Asahi Shimbun that NHK only disclosed it after they strongly requested that it do so."; "NHK issued an apology and said it made the incident public in effort to prevent future tragedies,". The same report says that labour officials determined in May 2014 that her death was caused by overwork; Campaign Asia (5 October 2017) also dates the ruling to May 2014. https://www.nbcnews.com/news/world/young-japanese-reporter-died-karoshi-or-overwork-broadcaster-says-n808311 ; https://aws1.campaignasia.com/article/nhk-admits-overwork-caused-the-death-of-a-reporter-in-2013/440135 . Checked 1 Nov 2026.

[4] Japan, Act Promoting Measures to Prevent Death and Injury from Overwork (Act No. 100 of June 27, 2014), official English translation, Japanese Law Translation database, Article 2: "means death due to cerebrovascular disease or heart disease that"; "is brought on by an overload of work; death by suicide due to a mental disorder that is brought on by an intense"; "psychological burden at work; or cerebrovascular disease, heart disease, or a mental disorder brought on by such". https://www.japaneselawtranslation.go.jp/en/laws/view/3258/en . Checked 1 Nov 2026.

[5] Takami Tomohiro, *Karoshi and Overwork-Related Health Problems in Japan: Current Situation and Prevention Measures*, Japan Institute for Labour Policy and Training, *Japan Labor Issues* 10(56) (Winter 2026), drawing on the labour ministry's figures: "the number of compensated cases related to CCVDs has remained around 200 in recent years, with 241 cases reported in fiscal year 2024."; "Among these, 67 cases resulted in death."; "compensated cases related to mental disorders have continued to rise,"; "reaching 1,055 recognized cases in fiscal year 2024, including 88 suicides." https://www.jil.go.jp/english/jli/documents/2026/056-06.pdf . CCVDs are cerebrovascular and cardiovascular diseases. The figures are cases recognised for workers' compensation, not counts of all deaths. The ministry's own 2025 white paper summary (https://www.mhlw.go.jp/content/11200000/001684286.pdf) could not be read on 1 Nov 2026. Checked 1 Nov 2026.

[6] UP's agreed staged claim on work (round 12c, card F5): "early on, UP helps members learn and earn more within the old system. As UP produces for its members' needs, survival stops depending on a job, and AI and automation serve those needs rather than profit. Who does care and unpleasant work, fairly, is open work for the collective." The early stage rests on today's evidence; the middle and completed stages are projections. Full wording in the round 12c record.

[7] Chapter 12, Table 12.1, failure F5 (work), and the paragraph on care.

several of the rows: in the current system, survival is tied to a wage, so the job does two things at once. It gets the work done, and it decides whether the worker eats.[8] Chapter 8 set out the developments that could take over the jobs that money does now, and this chapter applies them to work.[9] It also faces the question many readers ask of a system in which no one is forced to work: who does the work, and especially the work that nobody wants? The chapter looks first at how the current system organises work, where it does well and where it fails, and at what the wage does that drives those failures. It then asks why people work when no one makes them, sets out what UP holds about work, and follows one piece of necessary work through UP, step by step, to show the system at work. It looks at what could take the wage's jobs over and how care could be shared, with the people already doing it, and at how work could change at each stage of UP's growth and what each stage is expected to bring. It ends with the strongest objections, beginning with the oldest: that if no one has to work, no one will.

How the current system organises work, and where it falls short

The current system deserves credit for the ways it is still improving work itself, and some of the best evidence is recent. In 2022, 61 companies in Britain, with about 2,900 employees taking part, cut working hours by a fifth for six months. When the trial ended, 56 of them said they intended to continue it, 18 of them permanently, and 71 per cent of the employees reported lower levels of burnout.[10] A wider study, of 2,896 employees in 141 organisations in six countries, published in 2025, found that after six months on a four-day week people reported less burnout, more satisfaction with their jobs and better mental and physical health, a pattern not seen in a small group of comparison companies.[11] The organisations chose to take part, and the measures were reported by the workers themselves, but both studies point the same way. Good employers also meet the psychological needs that research has named, which the next section sets out, and UP's agreed position says plainly that they do, though there it is the exception.[12]

The improvement has a long history, and much of it was won from inside the current system. In 1919 the International Labour Organization's first convention limited hours of work in industry to eight in the day and forty-eight in the week. Only four countries had passed eight-hour laws before then, and the ILO's own history of the convention notes that the eight-hour day had been dismissed only five years earlier "as impracticable and unachievable due to international competition".[13] UP takes that record as evidence of two things: that the conditions of work can be changed by people working together, and that the change is never finished.

The failures sit beside the successes. The first is overwork, and it kills. The World Health Organization and the International Labour Organization estimated that working at least 55 hours a week led to 745,000 deaths from stroke and heart disease in 2016, a 29 per cent rise since 2000, and that by 2021 about 9 per cent of the world's population worked such hours.[14]

[8] Chapter 12, "Why the failures share roots" and Table 12.3, row F5 (work), with its notes.

[9] Chapter 8, "Money, and the jobs it does", "How money's jobs move to reality" and "How the pieces work together", with their notes: the seven developments.

[10] University of Cambridge, Department of Sociology, "New results from the world's largest trial of a four-day working week" (23 February 2023): "Last year, 61 organisations in the UK committed to a 20% reduction in working hours for all staff"; "for six months."; "Companies from across the UK took part, with around 2,900 employees dropping a day of work."; "continue with the four-day working week, with 18 companies confirming the change as permanent."; "some 92% of companies that took part in the UK pilot programme (56 out of 61) say they intend to"; "Some 71% of employees self-reported lower levels of". https://www.sociology.cam.ac.uk/news/new-results-worlds-largest-trial-four-day-working-week . The companies chose to take part, and the measures of burnout and stress were reported by the employees. Checked 1 Nov 2026.

[11] Wen Fan, Juliet B. Schor, Orla Kelly and Guolin Gu, *Work time reduction via a 4-day workweek finds improvements in workers' well-being*, *Nature Human Behaviour* 9 (2025), pp. 2153-2168, DOI 10.1038/s41562-025-02259-6, abstract: "Analysis of pre- and post-trial data from 2,896 employees across 141 organizations in Australia, Canada, Ireland, New Zealand, the UK and the USA shows improvements"; "in burnout, job satisfaction, mental health and physical health"; "a pattern not observed in 12 control companies."; "followed by a 6-month trial." Abstract read at the National Science Foundation's public-access copy: https://par.nsf.gov/biblio/10636509 (journal page: https://www.nature.com/articles/s41562-025-02259-6). Checked 1 Nov 2026.

[12] UP's agreed position on psychological needs, in full: "Autonomy, competence and relatedness are universal psychological needs (Self-Determination Theory). Good employers and schools already meet them inside today's system, and the book says so. But there it is the exception, and the same wage that supports it can withdraw it. UP is designed to make meeting these needs the default in every role: a big upgrade to what is possible, not a claim that today's system meets none of them." In the position, "the book" refers to the UP book, and the word "role" predates round 11, which settled that UP has no roles or offices in the old sense. Full wording in UP's agreed positions (the Position Ledger).

[13] Jon Messenger, "Convention No. 1: A landmark in workers' rights" (International Labour Organization, 13 November 2019): "Considering that the eight hour working day had been dismissed five years earlier as impracticable and unachievable due to international competition, the adoption of Convention No.1 was a remarkable achievement"; "Only four countries had passed eight hour laws before 1919: Cuba in 1909, Panama in 1914, Uruguay in 1915 and Ecuador in 1916." https://www.ilo.org/resource/article/convention-no-1-landmark-workers%E2%80%99-rights . The convention's text, Article 2: hours of work "shall not exceed eight in the day and forty-eight in the week, with the exceptions hereinafter provided for". https://hrlibrary.umn.edu/links/ilo1.html . Checked at source, 13 Nov 2026.

[14] World Health Organization and International Labour Organization, "Long working hours increasing deaths from heart disease and stroke: WHO, ILO", joint news release (17 May 2021): "Long working hours led to 745 000 deaths from stroke and ischemic heart disease in 2016, a 29 per cent increase since 2000,"; "as a result of having worked at least 55 hours a week."; "the number of people working long hours is increasing, and currently stands at 9% of the total population globally." https://www.who.int/news/item/17-05-2021-long-working-hours-increasing-deaths-from-heart-disease-and-stroke-who-ilo .

The second failure is care, the work on which all other work depends. The ILO estimated in 2018 that, in 64 countries holding two thirds of the world's working-age population, 16.4 billion hours a day are spent in unpaid care work, and that women do 76.2 per cent of it.[15] In 2023, by its later estimates, 708 million women were outside the labour force because of unpaid care responsibilities, against 40 million men.[16] Care is the work a society can least do without, and much of it the current system does not pay for at all.

The third failure is meaning, and here the evidence is more contested than it looks. In 2013 the anthropologist David Graeber argued that huge numbers of people spend their working lives on tasks they secretly believe do not really need to be performed, and two years later a YouGov poll seemed to bear him out: 37 per cent of British workers thought their job was not making a meaningful contribution to the world.[17,18] Later research, discussed below, asked a different question and found a far smaller share, about one worker in twenty in the European Union, who felt their work was not useful.[19] Even on that cautious figure, one worker in twenty does not feel their work is useful, and the feeling is strongly linked to poor wellbeing.[19]

The fourth is an open question more than a failure: who gains from new machines. When the economists Anders Humlum and Emilie Vestergaard linked surveys of AI chatbot use at work to Denmark's official labour records, they found no measurable effect on workers' earnings or recorded hours two years after the launch of ChatGPT, and could rule out effects larger than 2 per cent.[20] That may change, in either direction. UP's agreed claim is not a forecast of it but a claim about whom the machines would serve: as UP produces for its members' needs, AI and automation serve those needs rather than profit.[6]

What the wage does, and what it costs

A wage does several jobs at once, and the failures above follow from the way they are bundled together. It gets the work done that someone is willing to pay for. It tells people which work is wanted. It rewards the people who do it. And, in the current system, it decides whether they can eat and keep a roof over their heads. The last job is the one that does the damage. A person whose survival depends on a job cannot easily leave one that harms them, whether the harm is overtime that stops a heart or a workplace they believe is pointless.[6,19] Work that no one pays for, however necessary, earns its worker nothing to live on, which is why the care that holds every other kind of work up falls so heavily on those who cannot refuse it. And a machine that can do a job threatens the person who did it, because the wage was the person's livelihood as well as their pay. UP's agreed position on machines and work puts the point in one line: inside today's framework, AI and robotics threaten to destroy the labour market and concentrate power in a few hands, and the problem is "not progress but the framework we run it in".[21]

Checked 1 Nov 2026.

[15] International Labour Organization, "ILO calls for urgent action to prevent looming global care crisis", news release (28 June 2018), on the report *Care work and care jobs for the future of decent work*: "16.4 billion hours per day are spent in unpaid care work"; "According to the report, women perform 76.2 per cent of total hours of unpaid care work,"; "more than three times as much as men." The same release says the data cover 64 countries representing two thirds of the world's working-age population. https://www.ilo.org/resource/news/ilo-calls-urgent-action-prevent-looming-global-care-crisis . No newer global estimate of hours was found. Checked 1 Nov 2026.

[16] International Labour Organization, "Unpaid care work prevents 708 million women from participating in the labour market", news release (29 October 2024): "An estimated 708 million women worldwide are outside the labour force"; "because of unpaid care responsibilities, according to new ILO global estimates,"; "In 2023, 748 million people (aged 15 or older) were not participating"; "Of these, 708 million were women and 40 million were men." https://www.ilo.org/resource/news/unpaid-care-work-prevents-708-million-women-participating-labour-market . Checked 1 Nov 2026.

[17] David Graeber, "On the Phenomenon of Bullshit Jobs: A Work Rant", *STRIKE!* magazine, issue 3 (August 2013): "Huge swathes of people, in Europe and North America in particular,"; "spend their entire working lives performing tasks they secretly believe do not really need to be performed." https://strikemag.org/bullshit-jobs/ . Checked 1 Nov 2026.

[18] Matthew Smith, YouGov, *What are the most meaningless jobs?* (3 April 2024): "In 2015, a YouGov study found that 37% felt that their job"; "Nine years later, a repeat of that study shows that this figure has since fallen fractionally,"; "to one in three (33%)." https://yougov.com/en-gb/articles/49058-what-are-the-most-meaningless-jobs . The 2015 question asked whether a job was making a meaningful contribution to the world. The 2015 report: https://yougov.co.uk/news/2015/08/12/british-jobs-meaningless . Checked 1 Nov 2026.

[19] Magdalena Soffia, Alex J. Wood and Brendan Burchell, *Alienation Is Not 'Bullshit': An Empirical Critique of Graeber's Theory of BS Jobs*, *Work, Employment and Society* 36(5) (2022), DOI 10.1177/09500170211015067, abstract: "Although we find that the perception of doing useless work is strongly associated with poor wellbeing,"; "The proportion of employees describing their jobs as useless is low and declining"; "that highlights poor management and toxic workplace environments in explaining why workers perceive"; "paid work as useless." https://journals.sagepub.com/doi/10.1177/09500170211015067 . The share is given in the University of Cambridge news release (3 June 2021): "Yet the EWCS found that just 4.8% of EU workers said they did not feel they were doing useful work."; "the percentage of people in BS jobs fell from 7.8% in 2005 to just 4.8% in 2015". https://www.cam.ac.uk/research/news/one-in-twenty-workers-are-in-useless-jobs-far-fewer-than-previously-thought . The survey question differs from YouGov's, so the figures are not directly comparable. Checked 1 Nov 2026.

[20] Anders Humlum and Emilie Vestergaard, "Still Waters, Rapid Currents: Early Labor Market Transformation under Generative AI", NBER Working Paper 33777 (2025), abstract: "We study the early labor market impacts of AI chatbots by linking large-scale adoption surveys"; "to administrative labor market records in Denmark."; "null effects on earnings and recorded hours at both the worker and workplace levels, ruling"; "out effects larger than 2% two years after the launch of ChatGPT."; "Technological change reshapes work well before it surfaces in earnings or hours." https://www.nber.org/papers/w33777 . An earlier version of the same paper was titled "Large Language Models, Small Labor Market Effects". Checked 1 Nov 2026.

[21] UP's agreed position F1, "UP names a system people already use" (CANON, 22 Oct 2026): "These elements have existed in isolation, and others saw that they could be coordinated: Jacque Fresco, Ward Cunningham with the wiki, Paolo Soleri, Maria Montessori. What was missing was the technology. Inside

None of this means that employers are cruel or that wages are useless. A wage is a fiction that does real work, as Chapter 8 showed of money in general and Chapter 10 of the corporation that pays most wages, and many people find in their paid work much of what UP hopes all work could give them.[9,12] It means that one of the wage's jobs, deciding whether a person survives, turns the other jobs into pressure. Chapter 12 found that link under the rows on work, needs and inequality, and UP's agreed claim on work starts by cutting it: as UP produces for its members' needs, survival stops depending on a job.[8,6]

Why people work when no one makes them

If survival does not depend on a job, why would anyone work? The question assumes that people work only because they must, and the evidence says that is only part of the truth. People want to solve problems because they are there, often without reward or punishment and sometimes in spite of them, and the drive shows itself early. In 2006 the psychologists Felix Warneken and Michael Tomasello set 24 infants, 18 months old, ten situations in which an adult had trouble reaching a goal, and the adult never asked for help. "In no case did the infant receive any benefit (reward or praise) for helping," they reported, and 22 of the 24 helped in at least one of the tasks.[22] Two years later the same researchers gave a group of 20-month-olds a material reward for helping. Afterwards those children were less likely to help again than children who had been praised or given nothing.[23]

Chapter 1 told how Maria Montessori found the same drive in the children of a Rome tenement and built a way of teaching around it. She saw a child of four repeat an exercise sixteen times while the other children sang around her, and she concluded that "The prize and the punishment are incentives toward unnatural or forced effort".[24,25] The 1999 review by Deci, Koestner and Ryan, described below among the objections, found the adult version of the pattern across 128 studies: rewards that people expect, and that feel like control, weaken the interest they bring to a task themselves, while feedback that informs strengthens it.[26] And the largest works of shared knowledge of the last generation were built by people who were not paid to build them: the English Wikipedia alone holds more than seven million articles written and kept up by volunteers.[27]

Adults show the same drive when work is offered on these terms, and one of the clearest cases began in a small town in South Australia. In February 1993 the Goolwa Heritage Club opened a community shed for men, a workshop where, in the movement's own words, older men could "tinker and have a cuppa".[28] Maxine Chaseling,

today's framework, AI and robotics threaten to destroy the labour market and concentrate power in a few hands; inside a new framework they can coordinate the whole system for everyone's benefit. The Venus Project imagined a central brain; AI can now be the pattern-finding and coordinating system it envisioned. The problem is not progress but the framework we run it in". Full wording in UP's agreed positions (the Position Ledger).

[22] Felix Warneken and Michael Tomasello, "Altruistic Helping in Human Infants and Young Chimpanzees", *Science* 311(5765):1301-1303 (3 March 2006): "we presented 24 18-month-old infants with 10 different situations"; "In no case did the infant receive any benefit (reward or praise) for helping"; "22 of the 24 infants helped in at least one of the tasks"; the experimenter never asked for help. https://doi.org/10.1126/science.1121448 ; bibliographic record and abstract (children "as young as 18 months of age (prelinguistic or just-linguistic) quite readily help others"): https://scholars.duke.edu/publication/1457987 ; full text read in an archived author copy: https://web.archive.org/web/20240704025705/http://www.wisebrain.org/papers/AltruismInfantsChimps.pdf . Checked at source, 31 Oct 2026.

[23] Felix Warneken and Michael Tomasello, "Extrinsic Rewards Undermine Altruistic Tendencies in 20-Month-Olds", *Developmental Psychology* 44(6):1785-1788 (2008): "After 20-month-old infants received a material reward during a treatment phase, they subsequently were less likely to engage in further helping during a test phase as compared with infants who had previously received social praise or no reward at all"; this "suggests that even the earliest helping behaviors of young children are intrinsically motivated". The final sample was 36 German children, about 20 months old, 12 in each of three conditions (material reward, praise, no response); the reward was a toy cube handed over when the child helped. https://scholars.duke.edu/publication/1458228 (record); full text read at https://ppkdocs.elte.hu/th/felveteli/letoltheto_dokumentumok_2022/pszicho_MA_mintacikkek/Angol_nyelvu_szakcikkminta_1 . Small sample. Checked at source, 31 Oct 2026.

[24] Maria Montessori, *The Montessori Method*, trans. Anne E. George (New York: Frederick A. Stokes Company, 1912), ch. XII, "Education of the Senses": she watched "a little one of four years repeat this exercise sixteen times" and, when "I had the other children sing in order to distract her", the child "continued unmoved". https://digital.library.upenn.edu/women/montessori/method/method-XII.html . A later book, *The Advanced Montessori Method*, vol. 1 (1918), is the source of a different telling, with 44 repetitions and the children marching (A. E. Jones, S. P. Henzi and L. Barrett, "A Natural History of Repetition", *Journal of Montessori Research* 5(2), 2019, https://journals.ku.edu/jmr/article/download/7407/12511); the text uses the 1912 version. Checked at source, 31 Oct 2026.

[25] Maria Montessori, *The Montessori Method* (1912), chapter I: children in ordinary schools "like butterflies mounted on pins, are fastened each to his place"; "The prize and the punishment are incentives toward unnatural or forced effort"; chapter V, "Discipline": "Discipline must come through liberty"; "liberty is activity." https://digital.library.upenn.edu/women/montessori/method/method-I.html ; https://digital.library.upenn.edu/women/montessori/method/method-V.html . Checked 30 Oct 2026.

[26] Edward L. Deci, Richard Koestner and Richard M. Ryan, "A meta-analytic review of experiments examining the effects of extrinsic rewards on intrinsic motivation", *Psychological Bulletin* 125(6) (1999), pp. 627-668, DOI 10.1037/0033-2909.125.6.627, abstract: "A meta-analysis of 128 studies examined the effects of extrinsic rewards on intrinsic motivation."; "as did all rewards, all tangible rewards, and all expected rewards."; "Positive feedback enhanced both free-choice behavior (d = 0.33) and self-reported interest (d = 0.31)." Abstract read at an institutional repository: https://pure.ewha.ac.kr/en/publications/a-meta-analytic-review-of-experiments-examining-the-effects-of-ex/ . The studies were mostly laboratory tasks. Checked 1 Nov 2026.

[27] Wikipedia, "Wikipedia": "is a free online encyclopedia written and maintained by a community of volunteer editors"; "The English Wikipedia has". On 1 Nov 2026 the page gave the English Wikipedia's count as 7,257,758 articles. https://en.wikipedia.org/wiki/Wikipedia . Checked 1 Nov 2026.

[28] Australian Men's Shed Association, "An Australian made icon: celebrating 30 years of connection, community and camaraderie" (27 February 2023): "The first community shed for men, 'The Shed at Goolwa Heritage Club', opened in Goolwa (South Australia) in February 1993."; "Since the first community shed for men opened its doors in 1993, the Men's Shed community has grown to encompass more than 2,500 Sheds in 12 countries."; "Today 1,297 Men's, Women's and Community Sheds benefit from membership of the Australian Men's Shed Association. A figure that surpasses even the number of

the coordinator of the activities centre that started it, is widely credited with lighting the spark, and her talks at health conferences carried the idea to other towns.[29] The sheds that followed were built and run by communities of people, mostly volunteers, where men learn new skills, practise old ones and contribute to their towns, and they are recognised in Australia as one answer to the health problems that come from social isolation.[28] Thirty years later the movement counted more than 2,500 sheds in 12 countries, and 1,297 men's, women's and community sheds belonged to the Australian association alone, more than the number of McDonald's restaurants in the country.[28] The sheds are one case of a wider pattern this chapter has already met in children, in Wikipedia and in Deci's studies: given a problem in front of them, tools and company, people work without being paid or made to. In UP's terms, a men's shed is a small picture of work in UP, chosen, shared and visible, with nobody's living riding on it.[30,31]

In UP's terms, this is the motive UP is built to free. Its agreed position calls inventing solutions together UP's primary activity, and says that in UP anyone can try anything that might solve a problem, with the result, not a funder, deciding what rises.[32] The current system often wears the drive away: by tying it to pay, by setting it to tasks people believe are pointless, and by working people to exhaustion. UP's claim is that, once survival no longer depends on a job, much of the work a community needs can be done the way Wikipedia, open source and mutual aid already do it, and that what remains can be asked for in the open. It does not claim that the drive alone is enough, and the rest of this chapter shows what it adds.

What UP holds about work

UP's answer begins with a line its core draws without exceptions. UP is never imposed, and no one is forced to join, to work or to give up what is theirs.[30] UP's agreed position on merit spells out what that means for work. Labour is never forced: support and health care are offered, never imposed, and choosing not to work is not an illness. Merit decides who does skilled work, but it never decides whose needs are met.[33] There are no roles or offices in UP in the old sense, so within UP no one holds a post or office the way people hold them today. Work is shared out, not held, and where work needs skill, skill is shown by open, testable standards that anyone can work toward, with the education to meet them open to everyone at every age.[34,35]

If no one can be made to work, how does the work get done? UP's agreed position starts from what already happens. When survival does not depend on a wage, much of the work a community needs is done the way Wikipedia, open source and mutual aid already do it: people contribute because they are asked, because their peers see the work, and because the problem is theirs. The position does not assume that this is enough. A community publishes a labour budget, setting out what is needed, by when, and what happens if it is not done, and

McDonald's restaurants around the country." "Known by many as a place where older blokes can go to tinker and have a cuppa"; the movement is built by "a community of people (mostly volunteers)"; sheds help men "learn new skills (and practice old ones) and contribute to local community development"; "Recognised as one answer to national health issues emanating from social isolation". https://mensshed.org/an-australian-made-icon-celebrating-30-years-of-connection-community-and-camaraderie/ . Checked at source, 14 Nov 2026.

[29] Men's Sheds Canada, "History of Men's Sheds": "The first Men's Shed was started in 1993 in Goolwa, South Australia as part of an activities centre for the elderly. The centre's coordinator, Maxine Chaseling, is widely given credit for initiating the first Shed and kickstarting the movement."; "Maxine's presentations at health conferences resulted in Men's Sheds being established in a number of communities during the 1990s". https://mensshedscanada.ca/history-of-mens-sheds/ . Checked at source, 14 Nov 2026.

[30] Core tenet: *Freely joined, ethically grown*: "UP is never imposed. No one is forced to join, to work or to give up what is theirs. It grows by being useful, building on what people already do, and it acts only by ethical means." Full wording in "The core of UP".

[31] UP's agreed position on rewards, motivation and the transition, in full: "Money that controls people crowds out the motivation they bring themselves; feedback that informs, and the freedom to choose, keep it alive (Ryan & Deci). UP's contribution records are feedback: they inform, and they never decide whether anyone's needs are met. Open source, libraries and Montessori schools already show people contributing out of interest, respect and shared purpose without pay. Moving from a money-driven system will bring friction: many people will find it hard to imagine others working without rewards, coercion, status or wealth. Purpose, passion and the reward of a job well done are expected to raise health, happiness and wellbeing. Some people, hurt by the old system, will not fully make the change; UP expects this and meets it with compassion and kindness." Full wording in UP's agreed positions (the Position Ledger).

[32] UP's agreed position (round 12S, position 1): "Inventing solutions together is UP's primary activity" (T2); "In UP anyone can try anything that might solve a problem; tools are commons; the result carries the power; unpopular ideas that work rise because of their results, not because a funder chose them." Full wording in UP's agreed positions (the Position Ledger) and UP's study lessons (lesson 15).

[33] UP's agreed position on merit, in full: "Every role is open to anyone who meets its standards; the standards are published, testable and open to change, and the education to meet them is free. Merit decides who does skilled work; it never decides whose needs are met. The AI puts work in front of people that fits their skills and interests, using only what each person chooses to share, which anyone can see, correct or withdraw. Labour is never forced: support and health care are offered, never imposed, and choosing not to work is not an illness. Work that is important but unwanted is a target for automation." The word "role" here predates round 11, which settled that UP has no roles or offices in the old sense. Full wording in UP's agreed positions (the Position Ledger).

[34] UP's study lessons, lesson 12 (a lesson drawn from the settled core, not a Position Ledger entry): "Labour is never forced; skill is shown by open standards, never by holding a position."; "There are no roles or offices in the old sense: work is shared out, not held (round 11)."; "Unwanted work is posted, asked for, and targeted for automation." Full wording in UP's study lessons.

[35] Core tenet: *Open participation: anyone may take part; those affected decide*: "There are no offices to hold: work is shared out, not owned, so no one gathers power by holding a position. Where work needs skill, skill is shown by open, testable standards that anyone can work toward and anyone can propose to change, and education is open to everyone, at every age, so anyone can gain the skills any work requires." Full wording in "The core of UP".

it asks people directly. Any shortfall, and any task nobody wants, becomes a shared problem, met with visibility, recognition, fair rotas and automation. “Free-riding exists,” the position says plainly; “it is met with openness and support, not pay or force.”[36]

A second agreed position, given as one possible way, describes how necessary work could be shared. In it, necessary work is shared through a published, fair rota that people sign up for, with recognition and example doing the rest. Every able member is expected to take a small share, but the expectation is not a law, and it never affects whether anyone’s needs are met. Better ideas, for better outcomes with less friction, are always welcome.[37] Work that is important but unwanted is a target for automation.[33] UP’s coordinating AI puts work in front of people that fits their skills and interests, using only what each person chooses to share, which anyone can see, correct or withdraw; but people choose their work, the AI may not assign work or compel anyone, and any plan can be overridden through the decision steps.[33,38]

What replaces the wage as the reason to work is set out in UP’s agreed position on rewards. Money that controls people crowds out the motivation they bring themselves, while feedback that informs, and the freedom to choose, keep that motivation alive. UP’s contribution records are feedback: they inform, and they never decide whether anyone’s needs are met.[31] Time and money earn recognition in UP, never power.[39] The position on rewards is candid about the cost of the change. Many people will find it hard to imagine others working without rewards, coercion, status or wealth, and some, hurt by the current system, will not fully make the change; UP expects this and meets it with compassion and kindness.[31]

Behind that position sits a body of research that UP adopts by name. Self-Determination Theory, developed by the psychologists Edward Deci and Richard Ryan, holds that people have three basic psychological needs: to act by their own choice, to be good at something, and to be connected to others. UP’s agreed position calls them autonomy, competence and relatedness, and treats them as universal.[12,40] The same position is careful about the credit owed to the current system. Good employers and schools already meet these needs, and UP says so; but there they are the exception, and the wage that supports them can also withdraw them. UP is designed to make meeting them the default in all work, which its position calls a big upgrade to what is possible, not a claim that the current system meets none of them.[12]

UP’s agreed position on cooperation faces the hardest part. It holds that people are cooperative by nature and, drawing on Elinor Ostrom’s studies of commons, that cooperation lasts where contributions are visible and limits are agreed together. Selfishness, it holds, is largely an adaptation to scarcity and low trust, and by meeting needs UP removes those drivers at the source, so that contributing becomes the natural path. UP’s own position, to be tested in the open, is that visible contributions work as feedback, not punishment, and that free-riding is treated as a sign of distress or mismatch and met with support, not punishment. The commons Ostrom studied also used graduated sanctions, so whether feedback and support can do that work “is measured, not assumed.”[41]

[36] UP’s agreed position on the work nobody wants, in full: “When survival does not depend on a wage, much of the work a node needs is done the way Wikipedia, open source and mutual aid already do it: people contribute because they are asked, because their peers see the work, and because the problem is theirs. A node does not assume this is enough. It publishes a labour budget (what is needed, by when, and what happens if it is not done) and asks people directly. Any shortfall, and any task nobody wants, becomes a shared problem, met with visibility, recognition, fair rotas and automation. Free-riding exists; it is met with openness and support, not pay or force.” A node is a community running UP. Full wording in UP’s agreed positions (the Position Ledger).

[37] UP’s agreed position on sharing necessary work, in full: “Necessary work is shared through a published, fair rota that people sign up for, with recognition and example doing the rest. Every able member is expected to take a small share, but it is an expectation, not a law, and it never affects whether anyone’s needs are met. This is one possible way; better ideas for better outcomes with less friction are always welcome.” Full wording in UP’s agreed positions (the Position Ledger).

[38] UP’s agreed position on what the AI is, the coordinator that proposes: “People choose their work; the AI may not assign work or compel anyone, and any plan can be overridden through the decision steps.” Full wording in UP’s agreed positions (the Position Ledger).

[39] Settled alongside the core, dangers adopted in round 10: “time and money earn recognition, never power”. Full wording in “The core of UP”.

[40] Richard M. Ryan and Edward L. Deci, “Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being”, *American Psychologist* 55(1) (2000), pp. 68-78, abstract: “The findings have led to the postulate of three innate psychological needs”; “which when satisfied yield enhanced self-motivation and mental health and when thwarted”; “lead to diminished motivation and well-being.”; “such as health care, education, work, sport, religion, and psychotherapy.” The three needs are named as competence, autonomy and relatedness. https://pubmed.ncbi.nlm.nih.gov/11392867/ . Checked 1 Nov 2026.

[41] UP’s agreed position that people are cooperative by nature, as amended on 31 Oct 2026: “Behaviour is powerfully shaped by the environment. People are cooperative by nature, and cooperation lasts where contributions are visible and limits are agreed together (Ostrom). Selfishness is largely an adaptation to scarcity and low trust. UP meets needs and removes those drivers at the source, so contributing becomes the natural path. UP’s own position, to be tested in the open, is that visible contributions work as feedback, not punishment, and that free-riding is treated as a sign of distress or mismatch and met with support, not punishment. The commons Ostrom studied also used graduated sanctions, so whether feedback and support can do that work is measured, not assumed.” Full wording in UP’s agreed positions (the Position Ledger).

UP at work: one task, followed through

A list of positions does not show a system at work, so it helps to follow one piece of necessary work through UP from start to finish. Take the task that the household illustration later in this chapter meets: an older member who has had a fall needs someone with him through the night for a few weeks. The walk-through below is one way UP could run, built from its tenets and agreed positions. Like the walk-through in Chapter 13, it is not a procedure UP has adopted.

The work is named and asked for. The task goes on the community's published labour budget: what is needed, by when, and what happens if it is not done.[36] Anyone may take part in any problem, and there are no offices, so nobody's job title decides who answers; the work is shared out, not owned.[35] Where the work needs skill, as safe lifting does, the skill is shown by an open, testable standard that anyone can work toward, and the training to meet it is open to everyone, at every age.[33,35]

People choose. UP's coordinating AI may put the night shifts in front of members whose skills and interests fit, but only from what each person has chosen to share, which they can see, correct or withdraw. It proposes; it may not assign the work or compel anyone, and any plan can be overridden through the decision steps.[38,42] No one is forced to work.[30] Necessary work is shared, as one possible way, through a published, fair rota that people sign up for, with recognition and example doing the rest.[37]

If no one comes forward, the gap becomes work. An empty night on the rota is not met with a penalty. It becomes a shared problem, met with visibility, recognition, fairer rotas and, where the task allows, machines; the parts of care that are lifting and monitoring are targets for automation.[36,33] Every able member is expected to take a small share, but the expectation is not a law, and it never affects whether anyone's needs are met.[37]

Nobody's living rides on it. The member who sits with him through the night is not doing it to keep a roof over their head, because needs are met as a floor, and merit, or a share of necessary work, never decides whose needs are met.[43,33] UP's contribution records show who did what, as feedback that informs; they never decide whether anyone's needs are met, and they earn recognition, never power.[31,39]

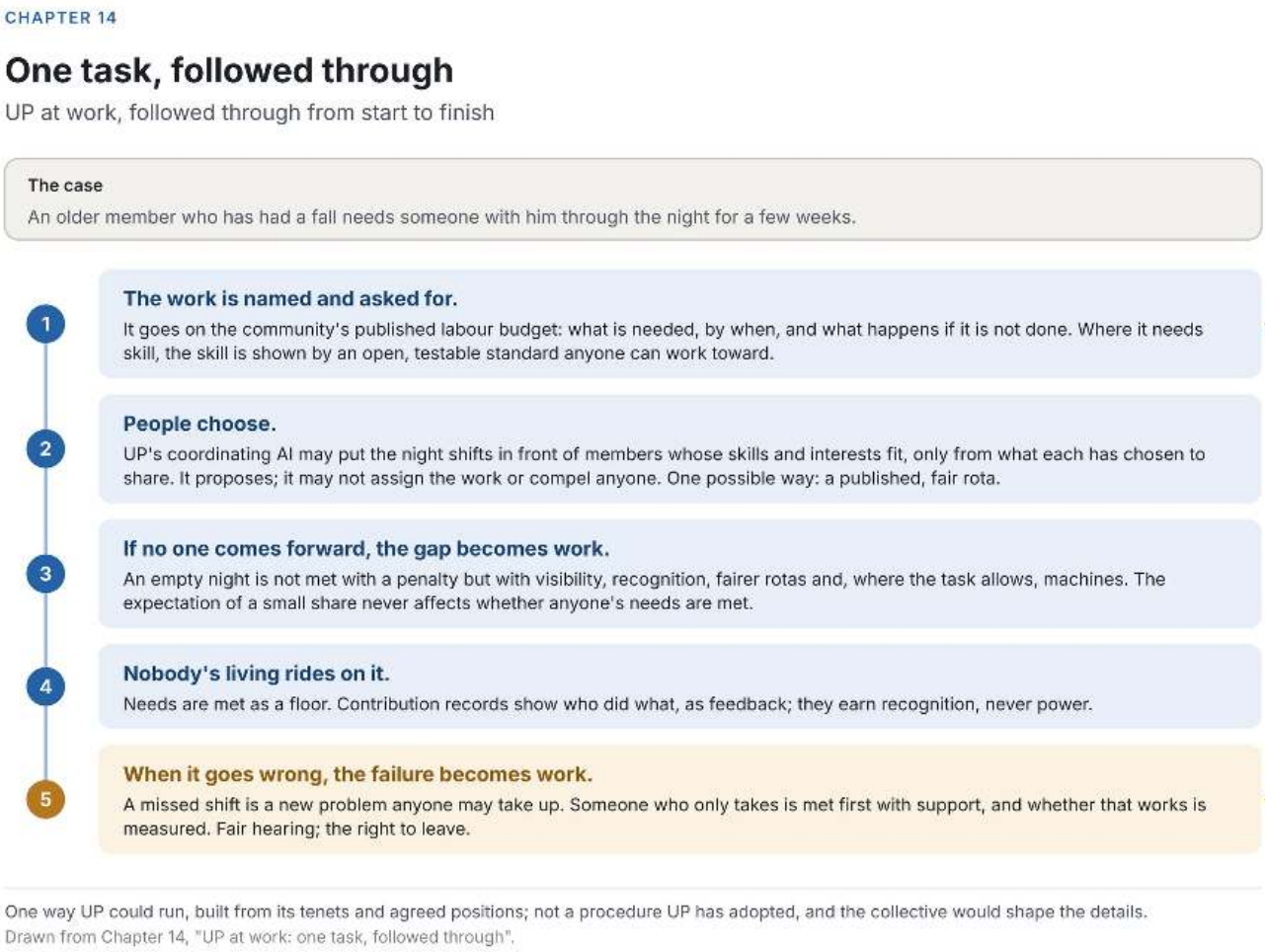
When it goes wrong, the failure becomes work. If a shift is missed or the care falls short, the failure is fed back into UP as a new problem to solve, and anyone may take it up.[44] If one person keeps taking from the shared work and never gives, UP's agreed position treats it first as a sign of distress or mismatch and meets it with support, and whether that works is measured, not assumed.[41] No one's freedom is restricted without a fair hearing, with the evidence open to them and a way to appeal, and anyone may leave any group or community at any time, taking what is theirs.[43]

Set beside Miwa Sado's last month, the difference is plain. She worked more than 159 hours of overtime in her last full month because the job decided whether she could live as she did and because no one could see the whole load. In UP the work would be visible on a published budget, the load would be shared on a rota anyone can read, and walking away from a shift would cost no one their home. Whether people will come forward in enough numbers is what the stages below set out, and it has to be shown.

[42] Core tenet: *Open systems, shared knowledge, private persons*, in full (as amended on 28 Oct 2026): "The rules, code, records, decisions and reasons of UP are public, so anyone can check them. UP's technology (the knowledge, code, data and designs UP produces) stays only in UP: everyone taking part in UP may use, study and improve it, and no one may enclose it. Each person controls their own information and chooses what to share. Openness helps people find problems, but it will not find all of them, so UP also names the risks that openness alone cannot catch and keeps working on them." Also in "The core of UP".

[43] Core tenet: *Floors that are never crossed*, in full (as amended on 28 October 2026): "UP keeps a set of floors that no decision may cross: everyone's basic needs and protected freedoms, which no gain for others can buy; the living world's capacity to recover, so damage that cannot be undone is never traded for a short-term need; the right to leave any group or community at any time, taking what is theirs; a truthful shared record, so facts, measures and decisions are never falsified; freedom of the mind, so no one's thinking is manipulated without their knowledge or consent; and a fair hearing, so no one's freedom is restricted without a fair, evidence-based hearing, with the evidence open to them and a way to appeal. UP guarantees needs, not every want. The collective defines and refines the floors through UP's method; it may clarify or raise them, but no decision may lower them or push anyone below them. As a starting example for the collective to refine: needs such as food, water, shelter, health care, education and connection; freedoms such as thought, belief, speech, movement and privacy." And: "A protected freedom such as movement may be restricted only to protect others or the person, only through an evidence-based court process, for the shortest time needed, and never below the needs floor. The hearing comes first, except briefly, to stop harm in progress, with a hearing promptly after. Leaving a group or community does not end a restriction set by a fair hearing. These limits are an open problem: they are the best that can be imagined now, and UP is built to find better and better solutions. Above the floors, everything is open to the method." Also in "The core of UP".

[44] Core tenet: *Self-correction: nothing is final, including this*, in full: "Every failure of UP is fed back into it as a new problem to solve, so it keeps improving without revolution. Every part of UP, these tenets included, can be improved through its own method. UP is judged against both today's system and the ideal it aims at: the ideal shows the direction and the gap still to close, and today's record shows whether UP is already doing better. Downsides, risks and fringe problems are named openly and treated as work, never as reasons to keep a status quo that fails so many." Also in "The core of UP".



One task, followed through: UP at work, step by step.

What could take the wage's jobs over

Each job the wage does now can be given to something else, and Chapter 8's seven developments show how.[9] Survival is the first, and it moves to the floor of needs that Chapter 13 described, which no gain for others can buy and which never depends on work.[30,45] Telling people which work is wanted moves to the labour budget, which a community publishes: what is needed, by when, and what happens if it is not done. That is coordination that counts real things, in hours and tasks instead of in pay.[36] Rewarding the people who do the work moves to recognition and feedback, which inform and never decide whether anyone's needs are met, and which earn recognition, never power.[31,39] And getting done the work that nobody would choose moves, as far as it can, to machines.

The machines are the largest of the developments for work. Five million industrial robots were at work in the world's factories in 2025, a record.[46] UP's agreed position on abundance holds that the automation to end most drudgery already exists, and its position on merit makes work that is important but unwanted a target for automation.[47,33] In UP the machines serve people's needs, not profit, and they never govern: AI and automation

[45] Chapter 13, "What UP holds about needs" and "How the jobs of price get done", with their notes: the floor of needs, which never depends on work, and the tool and thing libraries.

[46] International Federation of Robotics, "Five Million Robots now Operate in Factories Globally", press release (24 September 2026): "The global operational stock of industrial robots surged 9% to a record 5 million units in 2025." https://ifr.org/ifr-press-releases/five-million-robots-now-operate-in-factories-globally . Checked 1 Nov 2026.

[47] UP's agreed position on abundance (card 22), its first sentence: "We have the automation to end most drudgery and the renewable capacity to give every person on Earth a decent life." It goes on: "UP guarantees needs (food, shelter, health care, education, connection), not every want. What counts as enough is set together and rises as capacity grows. Today's luxury is not the target: the wealthy few drive most of today's damage." Full wording in UP's agreed positions (the Position Ledger).

coordinate, propose and do work, and people can always correct, pause or switch them off.[6,48] The coordinating AI may put work in front of people that fits their skills and interests, but people choose their work, and the AI may not assign work or compel anyone.[38]

The other developments shrink the work before anyone has to do it. Doing more with less means less work for the same result, and the four-day-week trials described above show that hours can fall by a fifth with most of the firms choosing to keep the change.[10] A new way of using things means fewer things made, because a tool shared by a street replaces a tool in every house.[45] Open designs and shared knowledge mean that work done once can be used everywhere, as an article on Wikipedia or a line of open-source code is written once and read by millions.[27] And the last development, the narrow and intense focus on what is truly scarce, says where people's time is most needed when the rest is shared or done by machines: care that no machine can give, and the invention of solutions to problems no one has solved yet.[32]

Care: the work that holds the rest up

Care is where these questions are hardest, and where the stakes are highest. The ILO estimated in 2018 that 16.4 billion hours a day were spent on unpaid care work in the countries it studied, and that women did 76.2 per cent of it. Were that work paid at an hourly minimum wage, it would be worth, by the ILO's estimate, 9 per cent of global GDP, or US$11 trillion.[15,49] By 2023, 708 million women were outside the labour force because of unpaid care responsibilities, against 40 million men.[16] On UP's reading, part of the reason care falls where it does is that a wage decides survival: the person who stays home to care earns nothing to live on, and the person who earns cannot stay home. UP's floor of needs breaks that bind, because a person's needs are met whether or not they are paid.[30,33]

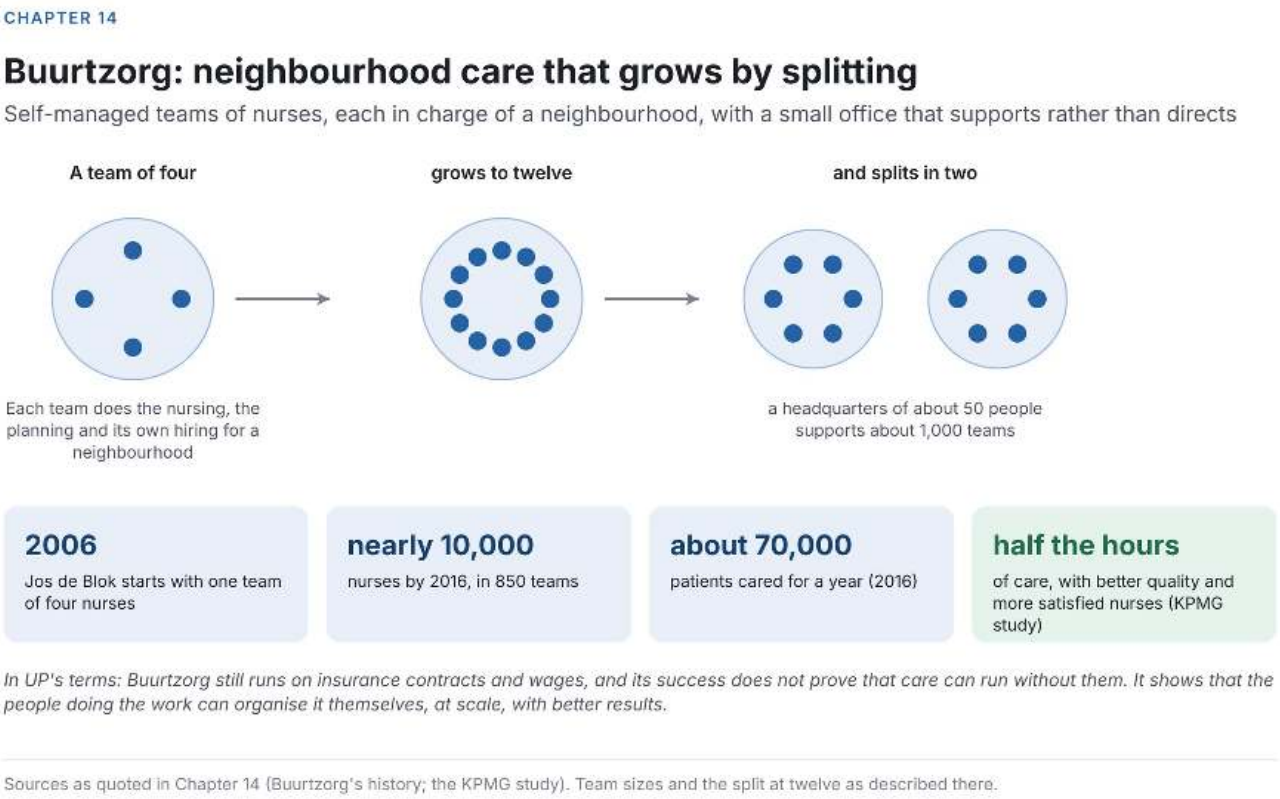
The care itself can be organised in ways that give the people doing it more say, and one Dutch nurse showed how far that can go. In 2006 Jos de Blok, frustrated by the paperwork and control he met in a traditional home-care organisation, started Buurtzorg, Dutch for neighbourhood care, with a team of four nurses.[50] Each team is self-managed and takes charge of a neighbourhood, doing the nursing, the planning and its own hiring; when a team reaches twelve nurses it splits in two, and a headquarters of about 50 people supports about 1,000 teams.[51] By 2016 Buurtzorg had grown to nearly 10,000 nurses in 850 teams caring for about 70,000 patients a year, and a KPMG study found that it had cut the hours of care by half while improving its quality and raising its nurses' satisfaction with their work.[50] Buurtzorg still runs on insurance contracts and wages, and its success does not prove that care can be shared without them. What it shows is the wider finding of this chapter at work in the hardest kind of work: give the people who do the care autonomy, competence and one another, the three needs of Self-Determination Theory, and they do it better.[12,40] In UP's terms, Buurtzorg is open participation at work in care: the people closest to the problem decide how it is done.[35]

[48] Core tenet: *Technology serves; people decide*: "AI and automation coordinate, propose and do work. They never govern: people can always correct, pause or switch them off." Full wording in "The core of UP".

[49] International Labour Organization, "ILO calls for urgent action to prevent looming global care crisis", news release (28 June 2018): "Were such services to be valued on the basis of an hourly minimum wage, they would amount to 9 per cent of global GDP or US$11 trillion (purchasing power parity in 2011)." https://www.ilo.org/resource/news/ilo-calls-urgent-action-prevent-looming-global-care-crisis . Checked at source, 13 Nov 2026.

[50] LSE Business Review, article on Buurtzorg in the Surviving Work series: "Buurtzorg was founded in the Netherlands in 2006 by Jos de Blok and a small team of professional nurses who were dissatisfied with the delivery of health care by traditional home care organisations."; "What started as a team of 4 nurses in 2006, has grown to nearly 10,000 nurses in 2016, operating within 850 independent teams in the Netherlands looking after 70,000 patients per year."; citing a KPMG case study: "Buurtzorg has accomplished a 50 per cent reduction in hours of care, improved quality of care, and raised work satisfaction for their employees". https://blogs.lse.ac.uk/businessreview/?p=10667 . Checked at source, 14 Nov 2026.

[51] Pim de Morree, "Radical autonomy at scale", *Think:Act* (Roland Berger, 2019): "Each team is self-managed and fully responsible for a specific neighborhood."; "Every time a team gets to 12 nurses, they split."; "The headquarters that supports this network of about 1,000 teams has only 50 people." https://www.rolandberger.com/en/Point-of-View/Radical-autonomy-at-scale.html . Checked at source, 14 Nov 2026.



Buurtzorg: neighbourhood care that grows by splitting, and what it achieved.

The floor does not by itself decide who does the care, and UP's agreed claim does not pretend that it does. Who does care and unpleasant work, fairly, is open work for the collective.[6] What UP offers are tools, not answers. Care that must be done can be put on the labour budget, asked for directly and shared, with a published rota that people sign up for as one possible way, so that it no longer falls by default on the person nearest.[36,37] The parts of care that are lifting, cleaning and keeping records are targets for automation. The part that is company, listening and presence is the part people want to give and that no machine can give for them, and on UP's reasoning it is the part that remains when the rest is shared: a projection, to be tested in the open.[33,52] The household illustration below shows how that could look from inside a family.

How it could run, stage by stage

UP grows beside the current system, and its agreed position names three stages: early, when UP is a minority network inside the current system; middle, when it has its own productive base and most members' needs are met from what UP produces; and completed, when most people live mainly in UP.[52] UP's agreed claim on work is staged the same way.[6] In the reading UP's author has set out, now going through UP's method, what changes gradually is people, not UP: each member relies on a wage less as UP meets more of their needs, and more people make that move, while UP's own work is never paid in money.[53] The early stage rests on today's evidence. The middle and completed stages are projections, each with its test.

[52] UP's agreed position on judging UP by stage, beside the current system: UP grows side by side with the current system, "early (a minority network inside it), middle (its own productive base; most members' needs met from what UP produces), completed (most people live mainly in UP)"; "Use today's evidence for the early stage; present the middle and completed stages as a reasoned projection from cited mechanisms, labelled as such." Full wording in UP's study lessons (lesson 13); the Position Ledger (round 12c, position 1) records the same division.

[53] Clarification of the tenet *Reality over fiction* and of UP's agreed position on useful fictions, set out by UP's author on 14 November 2026 and going through UP's method; until the UP Moderator enters it in the Position Ledger, it is the author's stated reading, not yet an agreed position. In substance: the gradual change is in people, not in UP; UP's own system does not run on money, prices, a UP government or UP companies; each person relies on money, governments and corporations less as they use UP more, and the number of people doing so grows; where UP meets the current system (taxes, land title, the legal form needed to hold property, partnership with local governments), it uses only what the law requires, openly recorded and kept to a minimum, and that contact shrinks toward none as the people of an area move fully to UP. Record: LXW Shared Brain, decisions, "2026-11-14 1015 … Gradual change is people's" and "2026-11-14 1005 …".

Early: a minority network inside the current system. Early on, UP helps its members learn and earn more within the current system.[6] Members keep their jobs, and their wages are their own. What UP adds is the work its own communities do for themselves, posted on a labour budget, asked for and shared on published rotas: the co-operative's till, the repair table, the van. The expected benefits are modest and real. Members gain skills, company and recognition from work they choose, as men in a shed do, and some of what they would otherwise buy is made or mended among them. Care that falls on one person can begin to be shared among several. People outside UP lose nothing: nobody is forced to join, and anyone may.[30] What would have to be shown is that a community's own work gets done this way, month after month, in published labour budgets.

Middle: UP's own productive base (a projection). As UP produces for its members' needs, survival stops depending on a job.[6] That is the benefit this chapter is about. A member could leave work that harms them without losing a home; a parent could stay with a sick child without losing pay, because there is no pay to lose inside UP; and care could be shared on an open rota rather than falling by default on the nearest woman. The work nobody wants would be posted as a problem, shared meanwhile and targeted for machines.[36,33] Free-riding would exist, and would be met with openness and support, its effect measured.[36,41] What would have to be shown is that necessary work gets done without the wage's threat, in published figures that anyone can check.

Completed: most people living mainly in UP (a projection). At this stage, UP's agreed claim holds, AI and automation serve people's needs rather than profit.[6] The expected benefit is time. Machines that serve needs would take on more of the lifting, cleaning and keeping of records, and the work left to people would be more and more the work people want to do: making, teaching, inventing, and the part of care that is company and presence. On UP's reasoning, people would solve problems because they are there, which UP's agreed position calls its primary activity.[32] What would persist is the fair sharing of care, which no machine fully replaces, and the argument over it, held in the open. At every stage UP is judged against today's record and against the ideal, and every failure is fed back into it as work.[44]

Table 14.1 sums up each stage: what changes, the precedent, why it is likely and what persists. Table 14.2 sums up the benefits by stage and how each would be shown.

Table 14.1. Work in UP, by stage. The early stage rests on today's evidence; the middle and completed stages are projections.

Stage	What changes	Real precedent	Why it is likely	What persists
Early	Members learn and earn more within the current system; a community's own work is posted, asked for and shared on published rotas	Volunteer fire services; Wikipedia; rotation of routine duties on the kibbutz	People already give unpaid work at great scale	Survival still depends on a wage for most members; most unpaid care still falls on women
Middle (projection)	Survival stops depending on a job, as UP's production meets members' needs; necessary work shared through labour budgets and, as one possible way, a published fair rota	Twin Oaks, which shares income and logs all its work, domestic chores included, in labour credits	The needs floor of Chapter 13 removes the threat behind much unwanted work	Care and unpleasant work still to be shared fairly; free-riding, met with openness and support
Completed (projection)	AI and automation serve people's needs rather than profit, taking on more of the work nobody wants	Automation at scale today: five million industrial robots at work in factories (2025)	Once UP's production serves members' needs, the machines it builds are aimed at those needs, not profit	The fair sharing of care, which no machine fully replaces

Sources: notes to this section.[54]

[54] Table 14.1: the staged claim is card U12 F5 (round 12c; note 6). Precedents: volunteer firefighters (note 58); Wikipedia (note 27); kibbutz rotation (note 60); Twin Oaks (notes 61 and 62); unpaid work at scale (note 59); unpaid care (notes 15 and 16); industrial robots (note 46). The middle and completed rows are projections (note 52).

Table 14.2. Expected benefits of work in UP, by stage. The early stage rests on today's evidence; the middle and completed stages are projections, drawn from UP's staged claim on work.

Stage	For members	For people outside UP	For the living world	How it would be shown
Early	Skills, company and recognition from chosen work; some things made or mended instead of bought; care begun to be shared	Nothing taken: joining is free and wages stay members' own	Less bought new where things are mended and shared	Published labour budgets, met month after month
Middle (projection)	Survival no longer tied to a job: harmful work can be left, care shared on open rotas, the unwanted work posted and shared	An open record of how work is shared, which anyone can check; anyone may join	Work aimed at needs rather than sales	Necessary work done without the wage's threat, in published figures
Completed (projection)	Machines serving needs take more of the lifting and cleaning; time for the work people want to do	Most people live mainly in UP, and no one is forced to	Production aimed at needs, inside physical limits	Measured person by person, against today's record and the ideal

Sources: notes to this section.[55]

The household that Chapter 1 introduced shows how this could feel from inside. Again, the household is an illustration, not evidence.

> *Illustration: one way it could run. The early stage.* The care worker still works paid shifts at the care home, and her wage still pays the rent. The town's UP community publishes a short labour budget each month for what it runs itself, the food co-operative and the tool library: what is needed, by when, and what happens if it is not done. She signs up for two evenings a month at the co-operative's till, because she likes the people there. Her son takes a Saturday at the repair table, where a retired electrician teaches him to rewire a lamp, and his grandfather, who drove buses for thirty years, teaches a short course for new drivers of the community's van. Nobody is paid, and the budget shows who did what, so that the gaps can be seen and asked for.
>
> *Illustration: one way it could run. The middle stage, a projection.* The household's food and shelter now come from what the town's UP community produces, so the care worker's survival no longer depends on her shifts. She still does care work, because she is good at it and wants to, but the night shifts that wore her down are now on a published rota, shared among everyone who has signed up for care, and she takes two a month instead of three a week. Caring for the grandfather after his fall is shared in the same way: neighbours, his grandson and a retired nurse sign up for mornings on an open rota, so that no one, and least of all his daughter, the care worker, carries it alone. Cleaning the drains under the market is the task nobody wants. It is posted as a problem, done meanwhile by a rota of volunteers who are thanked by name, and the town's engineers are building a machine to do most of it.
>
> *Illustration: one way it could run. The completed stage, a projection.* Machines do most of the lifting in the care home and all of the drain-cleaning. What remains is the part of care that people want to do and that no machine can do for them: sitting with the grandfather, listening, keeping him company. How that is shared fairly is still argued over in the open, and it is the kind of problem UP expects to keep.

The strongest objections

The first objection is the one almost everyone raises: if no one has to work, no one will. It deserves a serious answer, because economics has good reasons for it. People respond to incentives, and a system that pays the same whether or not a person works invites some of them to stop. Research on the kibbutz, which Chapter 3 examined, found that more educated and more skilled members were more likely to leave, and that the reported

[55] Table 14.2. Early row: notes 36, 37, 28 and 30. Middle row: notes 6, 36, 33 and 41. Completed row: notes 6, 32 and 44. Every entry in the middle and completed rows is a projection, drawn from UP's staged claim on work (note 6).

work ethic was lower in the kibbutzim that shared most equally, even though case studies found kibbutz members more motivated at work than outsiders.[56,57]

UP's answer starts from what people already do without pay. Wikipedia, the online encyclopedia, is written and maintained by a community of volunteer editors, and its English edition alone holds more than seven million articles.[27] In the United States in 2020, 65 per cent of firefighters were volunteers.[58] The United Nations and the International Labour Organization now estimate that about 2.1 billion people do volunteer work every month, a third of the world's people of working age; that is a much higher figure than earlier estimates, largely because the method changed, so it is not a measure of growth.[59] None of that shows that unpaid work would be enough to run a whole society, and UP's agreed position does not claim it: a community does not assume that what people offer freely will be enough, so it publishes a labour budget and asks.[36] What the evidence does show is that money is not the only reason people work, and that money used to control people can weaken the others. A 1999 review of 128 studies, mostly of laboratory tasks, by Deci, Richard Koestner and Ryan found that tangible rewards, and rewards people expected, undermined the interest people bring to a task themselves, while positive feedback strengthened it.[26] UP's agreed position on rewards draws on Ryan and Deci's work, which it names: contribution records are feedback; they inform, and they never decide whether anyone's needs are met.[31]

The second objection is about the work nobody wants. Someone has to clean the drains, empty the bins and sit up through the night with the dying, and a society that relies on goodwill will find those jobs left undone. UP's agreed position meets this directly. Unwanted work is posted and asked for, and any shortfall is met with visibility, recognition, fair rotas and automation.[36] One possible way, offered as such, is a published rota that people sign up for, with recognition and example doing the rest.[37] Work that is important but unwanted is a target for automation.[33] Sharing of this kind has a long record. On the kibbutz, which Chapter 3 described, routine work such as kitchen and dining-hall duty was done by rotation.[60] Twin Oaks, the Virginia community also described in Chapter 3, has long shared all its work, domestic chores included, by logging it in labour credits, where one hour of work equals one credit; in its early years, when too few people signed up for a job such as dishwashing, the credit it earned was raised until enough people wanted to do it.[61,62] The difference matters: at Twin Oaks each member works a set number of hours a week, while under UP's agreed position the rota is an expectation, not a law, and it never affects whether anyone's needs are met.[61,37] Whether feedback and support, without penalties, can do the work that sanctions did in the commons Ostrom studied is, in UP's agreed position, measured, not assumed.[41]

The third objection is that free-riders will exploit the system. As set out above, UP's agreed position accepts that free-riding exists and meets it with openness and support, not pay or force, treating it as a sign of distress or mismatch; and it records, against itself, that the commons Ostrom studied also used graduated sanctions. Whether UP's way works is a position to test, in the open, and not a finding.[36,41]

A fourth objection is that the "bullshit jobs" story is exaggerated, so today's world of work is not as broken as UP makes out. That objection is partly right, and the evidence for it is strong. Polls such as YouGov's seemed to bear

[56] Ran Abramitzky, "Lessons from the Kibbutz on the Equality-Incentives Trade-off", *Journal of Economic Perspectives* 25(1) (Winter 2011), pp. 185-208, DOI 10.1257/jep.25.1.185, p. 191: "Figure 2 shows that more-educated and -skilled individuals were indeed more likely to exit kibbutzim."; p. 197: "case studies have found kibbutz members to have higher work motivation than nonmembers"; p. 199: "the reported work ethic is lower in kibbutzim with more-equal compensation schemes." https://pubs.aeaweb.org/doi/pdfplus/10.1257/jep.25.1.185 . Checked at source, 31 Oct 2026 (Chapter 3).

[57] Chapter 3, "Starting over somewhere else", on the kibbutz and Twin Oaks.

[58] Rita Fahy, Ben Evarts and Gary P. Stein, National Fire Protection Association, *US Fire Department Profile 2020* (September 2022): "There were an estimated 1,041,200 career and volunteer firefighters in the United States in 2020."; "Of the total number of firefighters in 2020, 364,300 (35 percent) were career, while 676,900 (65 percent)"; "were volunteers." https://www.nfpa.org/-/media/Files/News-and-Research/Fire-statistics-and-reports/Emergency-responders/osfdprofile.pdf . No newer edition was found. Checked 1 Nov 2026.

[59] UN Volunteers, *2026 State of the World's Volunteerism Report*, summary overview: "The report presents updated global estimates showing that approximately 2.1 billion people engage in volunteer work every month,"; "representing 34.5 per cent of the global working-age population." https://knowledge.unv.org/evidence-library/summary-overview2026-state-of-the-worlds-volunteerism-report . The ILO's statisticians give the same estimate: https://ilostat.ilo.org/blog/new-global-estimates-reveal-that-2-1-billion-people-volunteer-monthly/ . The 2022 report had estimated 862.4 million; the difference comes largely from a change of method, so it is not a measure of growth. Checked 1 Nov 2026.

[60] Jewish Virtual Library, "The Kibbutz & Moshav: History & Overview": "Members are assigned to positions for varying lengths of time, while routine functions such as kitchen"; "and dining hall duty are performed on a rotation basis." https://www.jewishvirtuallibrary.org/history-and-overview-of-the-kibbutz-movement . The page gives no date, and does not say how widely or for how long rotation was kept up. Checked 1 Nov 2026.

[61] Twin Oaks Community, home page: "Since the community's beginning in 1967, our way of life has reflected our values of cooperation, sharing,"; "We are income-sharing." https://www.twinoaks.org/ ; Twin Oaks, "Labor Policy": "One hour of work equals one credit." https://www.twinoaks.org/policies/labor-policy?showall=1 ; the home page also says: "Each member works 38.5 hours a week in the community's business and domestic areas." Checked at source, 31 Oct 2026 (Chapter 3); the site could not be reached on 1 Nov 2026.

[62] Krystine Newman and Henry Wilhelm, "Communal Living at Twin Oaks", *Mother Earth News* (1970), describing a visit in 1969: "If not enough people sign up to do a certain job, say dishwashing, the labor credit value of it is increased"; "until enough people want to do the job."; "Then people sign up for the jobs they want to do." https://www.motherearthnews.com/sustainable-living/nature-and-environment/communal-living-at-twin-oaks-zmaz70jfzkin/ . Later accounts say Twin Oaks moved to credits valued equally for every job. Checked 1 Nov 2026.

out Graeber's claim that huge numbers of people do work they themselves think pointless.[17,18] When the sociologists Magdalena Soffia, Alex Wood and Brendan Burchell tested the claim against the European Working Conditions Survey, they found that just 4.8 per cent of workers in the European Union said they did not feel they were doing useful work in 2015, down from 7.8 per cent in 2005. The two surveys asked different questions, so their figures cannot be set side by side, but the researchers concluded that the share of people who see their jobs as useless is low and falling. They also found that the feeling is strongly linked to poor wellbeing, and they pointed to poor management and toxic workplaces to explain why workers come to see their work as useless.[19] UP's case does not rest on the number of useless jobs. It rests on the needs that Self-Determination Theory names, and on the fact that a person whose survival depends on a job cannot easily leave one that harms them.[12,6]

The last objection is that AI will take the jobs anyway, so the question will answer itself. The early evidence, from Denmark, says not yet: as this chapter showed, the Danish study found no measurable effect on earnings or hours two years after the launch of ChatGPT, though its authors add that technological change reshapes work well before it shows in earnings or hours.[20] The machines are spreading: five million industrial robots were at work in the world's factories in 2025, a record, up 9 per cent in a year.[46] What happens next is unknown, and UP does not predict it. UP's agreed claim is about whom automation serves: as UP produces for its members' needs, survival stops depending on a job, and AI and automation serve those needs rather than profit.[6] What persists at every stage is the question of how care is shared fairly. Today women do most unpaid care, and UP's agreed claim names who does care and unpleasant work, fairly, as open work for the collective.[15,6]

Back to the overtime

Miwa Sado's employer called her an excellent reporter.[1] Her story shows how far work can drive a person even where no law requires it; NHK itself admitted organisational problems.[2] UP's answer does not depend on finding better employers. In UP no one is forced to work, and neither merit nor a share of the rota ever decides whose needs are met; the work a community needs is posted and asked for, shared with a fair rota as one possible way, and where nobody wants it, made a target for automation.[30,33,36,37] Contribution is recorded so that it can be seen and thanked, and it earns recognition, never power.[31,39] Nothing like it has yet run across a whole country. The precedents are real, in volunteer fire services, Wikipedia, the kibbutz rota and Twin Oaks, but UP's middle and completed stages are projections, and whether feedback and support, without penalties, can do the work that sanctions did elsewhere is, in UP's own words, measured, not assumed.[52,41]

If work is shared and skill is shown by open standards anyone can work toward, then everyone must be able to learn whatever any work requires, at any age.[35] Chapter 15 takes up learning.

Chapter card: Chapter 14

- **Claim:** The current system ties survival to a wage, and that one job of the wage turns its other jobs into pressure: people stay in work that harms them, care that no one pays for falls on those who cannot refuse it, and a machine that can do a job threatens the person who did it. People want to solve problems because they are there, and rewards that control can wear that drive away. In UP no one is forced to work, and neither merit nor a share of necessary work ever decides whose needs are met. Each job of the wage is given to something else: survival to the floor of needs, the signal of what is needed to a published labour budget, reward to recognition that never buys power, and the work nobody wants, as far as possible, to machines that serve people's needs and never govern. Whether that is enough is measured in the open, not assumed. Men's sheds and Buurtzorg's neighbourhood nurses show parts of the answer already at work, and a single task followed through UP shows how the pieces fit.
- **Core lines:** the tenets *Freely joined, ethically grown* (no one is forced to work); *Open participation* (no offices; skill shown by open standards; education open to all, at every age); *Technology serves; people decide*; *Floors that are never crossed* (needs, not every want). Agreed positions: inventing solutions together is UP's primary activity; the work nobody wants and the labour budget; the fair rota, one possible way; merit, which never decides whose needs are met; rewards and motivation; psychological needs; cooperation, measured not assumed; the AI proposes and may not assign work; time and money earn recognition, never power; abundance and automation; the framework, not progress, is the problem; the staged claim on work (round 12c).
- **Rule of thumb:** "Is the work asked for, shared and visible, never forced, and is survival kept out of it?"
- **What this is not:** a promise that everyone will want to work, a ban on paid work in the current system, or a duty enforced by penalties. UP does not claim that goodwill alone will do the work; it publishes what is needed and measures whether it gets done.

- **Check yourself:**
    1. Name the four jobs a wage does, and say which one UP holds does the damage.
    2. What did Warneken and Tomasello find about helping, with and without rewards, and what does it suggest for UP?
    3. What does UP's labour budget publish, and what happens to a task nobody takes?
    4. Which of Chapter 8's developments shrink the work before anyone does it, and how?
    5. Why does UP keep contribution records as feedback, and what do they never decide?
    6. What is the difference between UP's rota and the labour quota at Twin Oaks?
    7. What did the critique of "bullshit jobs" find, and why does UP's case not depend on it?
    8. Follow one necessary task through UP: how is it named and asked for, who chooses who does it, what happens if no one comes forward, and why does nobody's living ride on it?
    9. What does each stage, early, middle and completed, change for work, and what benefits does Table 14.2 expect at each?
- **Open questions (for the wiki):** whether an expectation without penalties shares necessary work fairly at scale; how care is shared fairly when it cannot be automated; what UP does when a task nobody wants is also urgent; which kinds of work should be automated first, and who decides. (Improve this page.)

Chapter 15. Learning, Open to Everyone

On 12 January 2004, Kimani Ng'ang'a Maruge enrolled in Standard One, the first year of primary school, at Kapkenduiyo Primary School in Eldoret, Kenya. He was 84. He was a veteran of the Mau Mau revolt of the 1950s against British colonial rule, and he had never had the chance to go to school. A year earlier, President Mwai Kibaki's government had made primary schooling free across the country, and Maruge took the chance it gave him. He wanted to learn to count money, he said, and to read the Bible for himself.[1,2,3] Each morning he walked at least four kilometres to school.[2] Guinness World Records lists him as the oldest person to begin primary school, and in 2005 he travelled to the United Nations in New York, to a summit of world leaders.[1,3,4] He died in August 2009, aged 90.[5]

Maruge's story is often told as a curiosity, but it carries two lessons that pull in different directions. The first is a credit to the current system. A public policy, free primary schooling paid for by a government, opened a door that had been shut to him for eight decades, and it brought more than a million additional children into Kenya's classrooms; by UNICEF's figures, reported in February 2004, enrolment rose from 5.9 million to 7.2 million.[6,7] The second is a warning. The door had been shut for most of his life, and it opened in the shape the current system offered him: a school built for young children, which an old man had to fit into.

That is the subject of this chapter. It is the home of failure F7 on the scoreboard in Chapter 12, the failure of education.[8] Chapter 12 marked it as a failure that a stand-in for the real world drives only in part: fees keep some children out, but many more are kept out by things no change of accounts would fix, among them a shortage of teachers, and UP should say so.[9,10] Even so, a stand-in shapes how learning is organised more than most people notice, as this chapter shows. The chapter also answers the question a reader of the last chapter is likely to ask. If skill in UP is shown by open standards that anyone can work toward, then everyone must be able to learn whatever any work requires, at any age. What would that be like? The chapter looks first at how the current system teaches, where it does well and where it fails, and at the drive to learn that every child brings to school. It then sets out what UP holds about learning and follows one learner through UP, step by step, to show the system at work. It looks at what could take over the jobs that credentials and fees do now, and at the institutions already doing without them, why the capacity to teach and mentor may be the hardest limit UP faces, how learning could change at each stage of UP's growth and what each stage is expected to bring, and the strongest objections, beginning with the newest: that AI will make learners lazy.

[1] Guinness World Records, *Oldest person to begin primary school*: "enrolled into Standard One at Kapkenduiyo Primary School, Eldoret, Kenya, on 12 January 2004"; "to learn to count money; and for literacy so he could read the Bible."; "Sadly, Mr Maruge passed away on 15 August 2009, aged 90." The same page records that he was a Mau Mau veteran and that he was aged 84. https://www.guinnessworldrecords.com/world-records/oldest-person-to-begin-primary-school . News reports give the date of his death as 14 August 2009 (note 5). Checked 1 Nov 2026.

[2] Al Jazeera, "World's oldest pupil dies at 90" (14 August 2009): "Maruge, who joined primary school at the age of 84, outlived 10 of his 15 children"; "took a belated opportunity to educate himself when Mwai Kibaki, the Kenyan president, introduced free primary schooling"; "walked at least four kilometres each morning to the Kapkenduiywo primary school." https://www.aljazeera.com/news/2009/8/14/worlds-oldest-pupil-dies-at-90 . Kenyan reports spell the school Kapkenduiywo. Checked 1 Nov 2026.

[3] Daniel Wallis, Reuters, "World's oldest schoolboy dies aged 90 in Kenya" (August 2009), as republished by *elEconomista*: "he wanted to go to school so he could read the Bible for himself."; "The veteran of the 1950s Mau Mau revolt against British colonial forces"; "he travelled to the United Nations in New York to urge world leaders". https://www.eleconomista.es/empresas-finanzas/noticias/1475305/08/09/Worlds-oldest-schoolboy-dies-aged-90-in-Kenya.html . Checked 1 Nov 2026.

[4] NPR, *Goats and Soda* (12 January 2015): "In 2004, Kimani Maruge went to school for the first time at age 84."; "he traveled around New York in a big yellow school bus". https://www.npr.org/sections/goatsandsoda/2015/01/12/376765868/the-worlds-oldest-first-grader-is-honored-by-a-google-doodle . The report places the visit at the UN summit of 2005. Checked 1 Nov 2026.

[5] Bernard Momanyi, Capital FM, "World oldest pupil Maruge dies" (14 August 2009): "The nonagenarian joined class one at Kapkenduiywo Primary School in Eldoret at the age of 84."; "died in Nairobi on Friday at the age of 90." https://capitalfm.africa/world-oldest-pupil-maruge-dies/ . Checked 1 Nov 2026.

[6] IRIN, UN Office for the Coordination of Humanitarian Affairs, "Kenya: Free primary education brings over 1 million into school" (22 July 2005): "Nationwide, the abolition of school fees drew over 1 million additional Kenyan children like Esther to classrooms". https://reliefweb.int/report/kenya/kenya-free-primary-education-brings-over-1-million-school . Checked 1 Nov 2026.

[7] UN News, "Harry Belafonte urges all countries to end school fees, UNICEF reports" (16 February 2004): "Since the first week of tuition-free school in Kenya in January 2003"; "from 5.9 million to 7.2 million". https://news.un.org/en/story/2004/02/94202 . Checked 1 Nov 2026.

[8] Chapter 12, Table 12.1, failure F7 (education).

[9] Chapter 12, "Why the failures share roots" and Table 12.3, row F7 (education), marked "Part", with its notes.

[10] UNESCO, *Teachers*: "44 million additional teachers are needed globally to ensure universal primary and secondary education by 2030." https://www.unesco.org/en/teachers . A report in October 2026 (AP, via Africanews) gave a revised figure of 50 million, which could not be found on UNESCO's own pages. Checked 1 Nov 2026.

How the current system teaches, and where it falls short

Mass public schooling is one of the great achievements of the current system, and UP credits it first. Two centuries ago, the best estimate is that about 12 per cent of the world's people could read; today more than four out of five can.[11] In 2024, 1.4 billion students were enrolled in school.[12] Open learning has grown alongside the schools. Khan Academy, which sets out to provide a free, world-class education to anyone, anywhere, is available in more than 190 countries and 55 languages, and MIT's OpenCourseWare puts material from thousands of courses online for anyone to use.[13,14]

The failures sit beside these gains. UNESCO reported in 2026 that the number of children and young people out of school had risen for the seventh year in a row, to 273 million, so that one in six children of school age is excluded from education.[12,15] Progress in keeping children in school has slowed across almost every region since 2015.[12] And literacy is still far from universal: 739 million adults lack basic literacy skills, two thirds of them women, and 251 million children are failing to acquire them.[16] UNESCO estimates that 44 million additional teachers are needed to give every child a primary and secondary education by 2030.[10] And 2.2 billion people remain offline, most of them in low- and middle-income countries, cut off from the open learning that the connected take for granted.[17]

There is also a quieter failure, in how learning is organised. Most schooling moves students forward by age and time, not by what they have mastered, and most of it is delivered to a class, not to a person. The educational psychologist Benjamin Bloom reported in 1984 that, in the studies he described, the average student tutored one to one performed about two standard deviations above the average of a conventional class, above 98 per cent of those students.[18] Later research has cut that figure down to size. A meta-analysis of 96 studies of tutoring programmes found none with an effect of that size, and an average effect of 0.37 standard deviations, still substantial.[19,20] The lesson that survives is that personal teaching works, and that it is costly to offer to everyone.

Much of what is missing is the chance to learn at every age. UP's tenet answers it directly: education is open to everyone, at every age.[21] What UP makes, an illustration rather than a tenet, adds that it is offered without condition.[22]

The drive to learn, and what schooling does to it

Every child brings to school a drive that no school has to create. Chapter 1 told how Maria Montessori built a way of teaching around it after watching a child of four repeat an exercise sixteen times while the others sang around her,

[11] Max Roser and Esteban Ortiz-Ospina, Our World in Data, *Literacy* (text revised March 2024): "the best estimate is that 12% of the world population was literate"; "More than 4 out of 5 people are now able to read." https://ourworldindata.org/literacy . The 12 per cent estimate is for 1820. Checked 1 Nov 2026.

[12] UNESCO, Global Education Monitoring Report, "More children out of school for the 7th year in a row, up to 273 million" (25 March 2026): "The number of children and young people out of school has risen for the seventh consecutive year, up to 273 million,"; "One in six children of school age worldwide are excluded from education,"; "With 1.4 billion students enrolled in school in 2024, global enrolment had increased by 327 million, or 30%,"; "progress in keeping children in school has slowed across almost every region since 2015,". https://www.unesco.org/en/articles/more-children-out-school-7th-year-row-273-million . The count includes young people of upper-secondary age. Checked 1 Nov 2026.

[13] Khan Academy, *About*: "Khan Academy is available in 190+ countries and in 55+ languages." https://www.khanacademy.org/about . The page gives its mission as a free, world-class education for anyone, anywhere. Checked 1 Nov 2026.

[14] MIT OpenCourseWare, *About*: "MIT OpenCourseWare is a free and open collection of material from thousands of MIT courses". https://ocw.mit.edu/about/ . Checked 1 Nov 2026.

[15] United Nations, *The Sustainable Development Goals Report 2026*, Goal 4, "Quality education": "yet 273 million children and young people remain out of school". https://unstats.un.org/sdgs/report/2026/goal-04/ . Checked 1 Nov 2026 (Chapter 12).

[16] UNESCO, *Literacy*: "739 million adults aged 15 and above still lack basic literacy skills, two-thirds of them are women"; "251 million children are failing to acquire basic literacy skills". https://www.unesco.org/en/literacy . Checked 1 Nov 2026.

[17] International Telecommunication Union, *Measuring digital development: Facts and Figures 2025*: "Yet progress is slowing, and 2.2 billion people remain offline". https://www.itu.int/itu-d/reports/statistics/facts-figures-2025/ . The same page says that most of them live in low- and middle-income countries. Checked 1 Nov 2026.

[18] Benjamin S. Bloom, *The 2 Sigma Problem: The Search for Methods of Group Instruction as Effective as One-to-One Tutoring*, *Educational Researcher* 13(6) (1984), pp. 4-16, DOI 10.3102/0013189X013006004: "it was typically found that the average student under tutoring was"; "about two standard deviations above the average of the control class"; "(the average tutored student was above 98% of the students in the control class)." Read at a scanned copy: https://www.gwern.net/doc/psychology/1984-bloom.pdf . Checked 1 Nov 2026.

[19] Paul T. von Hippel, *Two-Sigma Tutoring: Separating Science Fiction from Science Fact*, *Education Next* 24(2) (7 March 2024): "Among 96 tutoring studies the authors reviewed, none produced a two-sigma effect."; "Tutoring can be much more effective than that but rarely approaches two standard deviations." https://www.educationnext.org/two-sigma-tutoring-separating-science-fiction-from-science-fact/ . Checked 1 Nov 2026.

[20] Andre Nickow, Philip Oreopoulos and Vincent Quan, *The Impressive Effects of Tutoring on PreK-12 Learning*, NBER Working Paper 27476 (July 2020): "We find that tutoring programs yield consistent and substantial positive impacts on learning outcomes,"; "with an overall pooled effect size estimate of 0.37 SD." https://www.nber.org/papers/w27476 . Checked 1 Nov 2026.

[21] Core tenet: *Open participation: anyone may take part; those affected decide*, in full: "Anyone may take part in any problem, and the people it affects decide its outcome. There are no offices to hold: work is shared out, not owned, so no one gathers power by holding a position. Where work needs skill, skill is shown by open, testable standards that anyone can work toward and anyone can propose to change, and education is open to everyone, at every age, so anyone can gain the skills any work requires." Full wording in "The core of UP".

[22] Settled alongside the core, "What UP makes" (round 11; amended round 13b): "Education is open to everyone without condition; the more it is used, the more it succeeds, and it may be UP's main way of reaching people (these are illustrations, not tenets)." Full wording in "The core of UP".

and how the psychologist Susan Engel, watching American kindergarten classes, counted only two to five questions or explorations in a typical two-hour stretch.[23,24] Engel did not blame the children. Her experiments showed that children explore more when the adult with them shows curiosity and encourages it, and less when the adult does not.[24] The drive is there, and the setting decides whether it grows or fades.

The evidence on schools built around that drive is encouraging, though not conclusive. In a study of a public Montessori school in the United States whose places were filled by lottery, so that the children who did and did not get in could be compared fairly, the Montessori children did better at five on early reading and mathematics and on tests of self-control and understanding others, and at twelve wrote essays rated more creative.[25] A later lottery study of 141 children found that Montessori preschool "elevates and equalizes" outcomes, narrowing the gaps between groups of children that usually have unequal outcomes, and a 2023 systematic review of 32 studies found "a meaningful and positive impact on child outcomes", while rating some of the evidence as low in quality.[26,27] Montessori herself put the contrast with ordinary schooling bluntly: "The prize and the punishment are incentives toward unnatural or forced effort".[28]

In UP's terms, this is why learning sits so close to the centre of UP. UP is built on the drive people have to solve problems because they are there, and Chapter 14 showed how that drive can do much of the work a community needs.[29] A school that wears the drive away does more than teach less well. It prepares people for a world in which effort has to be bought or forced, which is the world UP sets out to replace. A school that keeps the drive alive prepares people for UP.

Where a stand-in shapes learning

Most of the failures above have causes that no change of accounts would remove: a child cannot learn where there is no school, no teacher and no peace. But a stand-in shapes learning in two quieter ways. The first is that, for many families, schooling costs money they do not have. Kenya's free primary schooling showed what happens when the fee is removed: more than a million additional children came to school within a year, and Kimani Maruge with them.[6,7] The second is that learning is measured by a stand-in of its own. A credential, a degree or a certificate stands in for what a person can actually do, much as money stands in for what a thing is worth, and it can drift from the real thing in the same way. When researchers at Harvard Business School, Accenture and Grads of Life studied 26 million American job postings and surveyed 600 business leaders, they reported in 2017 that more than six million middle-skills jobs were at risk of "degree inflation", the practice of preferring or requiring a college

[23] Maria Montessori, *The Montessori Method*, trans. Anne E. George (New York: Frederick A. Stokes Company, 1912), ch. XII, "Education of the Senses": she watched "a little one of four years repeat this exercise sixteen times" and, when "I had the other children sing in order to distract her", the child "continued unmoved". https://digital.library.upenn.edu/women/montessori/method/method-XII.html . A later book, *The Advanced Montessori Method*, vol. 1 (1918), is the source of a different telling, with 44 repetitions and the children marching (A. E. Jones, S. P. Henzi and L. Barrett, "A Natural History of Repetition", *Journal of Montessori Research* 5(2), 2019, https://journals.ku.edu/jmr/article/download/7407/12511); the text uses the 1912 version. Checked at source, 31 Oct 2026.

[24] Susan Engel, "The Case for Curiosity", *Educational Leadership* 70(5) (February 2013): "In any given two-hour stretch, we'd see anywhere from two to five questions or explorations"; "When the experimenter makes encouraging faces or comments, children are more likely to explore the interesting object"; "Experiments I've done show that children show much more interest in materials when an adult visibly shows how curious he or she is about the materials." https://ascd.org/el/articles/the-case-for-curiosity . Her fuller account is "Children's Need to Know: Curiosity in Schools", *Harvard Educational Review* 81(4):625–645 (2011), https://www.harvardeducationalreview.org/content/81/4/625 . Small, observational studies. Checked at source, 31 Oct 2026.

[25] Angeline Lillard and Nicole Else-Quest, "Evaluating Montessori Education", *Science* 313:1893–1894 (29 Sept 2006): "Overall, 53 control and 59 Montessori students were studied"; "Both the experimental and the control group had entered the Montessori school lottery"; at 5, Montessori children scored higher on letter-word identification, word attack and applied problems, did better on a card-sorting test of executive function and more often passed a false-belief test of theory of mind; at 12, "The Montessori students' essays were rated as significantly more creative", they were more likely to choose the positive assertive response to social dilemmas, and "Montessori children indicated having a greater sense of community". https://www.springmont.com/editoruploads/files/Evaluating%20Montessori%20Education.pdf (copy of the article); DOI https://doi.org/10.1126/science.1132362 . A natural experiment at one public school; small samples. Checked at source, 31 Oct 2026.

[26] Lillard A S, Heise M J, Richey E M, Tong X, Hart A, Bray P M, "Montessori Preschool Elevates and Equalizes Child Outcomes: A Longitudinal Study", *Frontiers in Psychology* 8:1783 (2017): "The final sample included 141 children"; admission was by "randomized lottery"; "over time the Montessori children fared better on measures of academic achievement, social understanding, and mastery orientation"; "Montessori preschool also equalized outcomes among subgroups that typically have unequal outcomes"; "a larger study of public Montessori preschools is warranted." https://www.frontiersin.org/articles/10.3389/fpsyg.2017.01783/full

[27] Randolph J J et al., "Montessori education's impact on academic and nonacademic outcomes: A systematic review", *Campbell Systematic Reviews* 19(3):e1330 (2023): "32 studies that met minimum standards for inclusion"; "a meaningful and positive impact on child outcomes"; some outcomes rated low quality of evidence. Angeline Lillard is an author of both this review and the lottery study, so the two are not fully independent. https://ideas.repec.org/a/wly/camsys/v19y2023i3ne1330.html

[28] Maria Montessori, *The Montessori Method* (1912), chapter I: children in ordinary schools "like butterflies mounted on pins, are fastened each to his place"; "The prize and the punishment are incentives toward unnatural or forced effort"; chapter V, "Discipline": "Discipline must come through liberty"; "liberty is activity." https://digital.library.upenn.edu/women/montessori/method/method-I.html ; https://digital.library.upenn.edu/women/montessori/method/method-V.html . Checked 30 Oct 2026.

[29] Chapter 14, "Why people work when no one makes them", with its notes (Warneken and Tomasello; Deci, Koestner and Ryan; UP's agreed position that inventing solutions together is its primary activity).

degree for jobs that were traditionally held by workers without one. Their lead author warned of the consequences of "employers relying on degrees as a proxy for the competencies to succeed in today's workplace".[30] A credential that stands in for skill can shut out a person who has the skill, and admit a person who has only the credential.

UP's tenet replaces the stand-in with the thing itself. Skill in UP is shown by open, testable standards that anyone can work toward and anyone can propose to change, so what counts is what a person can do, shown in a test that anyone may take as often as they need.[21] In UP's terms, an open standard is to a credential what physical accounting is to a price: it counts the real thing directly instead of through a symbol that can drift.

Open, testable standards are not only an idea. One has run in the United States for decades, in a corner of life most people never see. Anyone who wants to transmit as a radio amateur must pass an examination for a licence from the Federal Communications Commission, and the examination is given not by officials but "by a team of volunteer examiners", themselves licensed amateurs who give their time.[31] The questions are drawn from a common pool kept by the volunteer examiner coordinators, and each pool "must be published and made available to the public prior to its use", so anyone can study every question that could be asked.[31,32] The pools are reviewed every four years, and the committee that keeps them asks the amateur radio community for new and changed questions.[33] It is a small precedent, and it certifies one narrow skill. But it shows the three things UP's tenet asks of a standard working together: it is open to anyone, it is testable, and the people who use it can propose to change it.

Two institutions show what happens when the stand-in is set aside at the door. The first is a university. When the British government announced in 1969 a university open to adults who had never been to one, a leading opposition politician, Iain Macleod, called it "blithering nonsense".[34] The Open University received its Royal Charter on 23 April 1969 and began teaching in 1971.[35] It opened to its first 25,000 students that January with a radical open admissions policy: it did not ask for any prior qualifications.[34] It taught at a distance, and adults who had never been asked to a university before came in their tens of thousands: within the 1970s, its own history records, student numbers had reached 70,000. The second is a school for programmers. In 2013 the French entrepreneur Xavier Niel and a group of educators opened 42 in Paris, a coding school with no classes and no teachers, where students learn by working through projects and checking one another's work. It is free and open to everyone, in its own words, "regardless of qualifications, origin, gender or age", from the age of eighteen. Ten years on, it counted 18,000 active students on 50 campuses in 29 countries; a third of its students had no diploma, and nearly half had never written code before they came. In 2015 it began working with the French employment service to help long-term unemployed older people back into work.[36] Both still depend on money, the first on public funds and fees and the second on a founder's fortune and its partners. What they show is the pattern this chapter traces: when entry asks what a person can learn rather than what they already hold, people the current system had written off reach

[30] Harvard Business School, news release "Dismissed by Degrees" (25 October 2017), on the report by Joseph B. Fuller and Manjari Raman with Accenture and Grads of Life: "According to new research released today, more than six million middle-skills jobs in the U.S. are now at risk of"degree inflation"—the practice of preferring or requiring a college degree for jobs that were traditionally held by middle-skills workers"; Fuller: "the consequences of employers relying on degrees as a proxy for the competencies to succeed in today's workplace." The release reports 26 million job postings analysed and 600 business and HR leaders surveyed. https://www.hbs.edu/news/releases/Pages/degree-inflation-us-competetiveness.aspx . Checked at source, 13 Nov 2026.

[31] Federal Communications Commission, "The Exam" (Amateur Radio Service licensing): "Before receiving a license grant, you must pass an examination administered by a team of volunteer examiners (VEs)."; "The Volunteer Examiner Coordinators maintain a common question pool for each written examination element."; "Volunteer Examiners (VEs) are Amateur Extra Class radio operators who volunteer their time and talent to prepare and administer amateur radio operator license examinations." https://www.fcc.gov/node/190783 . Checked at source, 13 Nov 2026.

[32] ARRL, "NCVEC Releases New Technician License Question Pool into the Public Domain" (9 January 2018): "Each question pool must be published and made available to the public prior to its use as a question set, from which individual examinations are developed." https://www.arrl.org/news/ncvec-releases-new-technician-license-question-pool-into-the-public-domain . Checked at source, 13 Nov 2026.

[33] ARRL, "Download or Print Amateur Radio Question Pools": "Each question pool is reviewed and updated on a four year rotation." https://www.arrl.org/question-pools ; ARRL, "NCVEC Question Pool Committee Seeks Input for Updated Technician Question Pool" (25 March 2021): the committee "is requesting input from the amateur radio community on new or modified questions". https://www.arrl.org/news/ncvec-question-pool-committee-seeks-input-for-updated-technician-question-pool . Checked at source, 13 Nov 2026.

[34] The Open University, "History of the OU": when the idea was announced in 1969 Iain Macleod MP called it "blithering nonsense"; "The OU opened to its first students – 25,000 of them" in January 1971; "With its radical open admissions policy – it did not insist on any prior educational qualifications"; in the 1970s, "Total student numbers had reached 70,000". http://www.open.ac.uk/about/main/the-ou-explained/history-the-ou . Checked at source, 14 Nov 2026.

[35] The Open University in Scotland, "Our story": "The OU received its Royal Charter on 23 April 1969. Registration opened in 1970 and the first students began their studies in 1971." https://university.open.ac.uk/scotland/about/our-story . Checked at source, 14 Nov 2026.

[36] 42, *Press Kit 2013–2023* (published by 42 Lausanne, 2024): "42 is completely free and open to everyone, regardless of qualifications, origin, gender or age."; 42 works "without any classes or teachers"; "18,000 ACTIVE STUDENTS THROUGHOUT THE WORLD"; "50 CAMPUSES WORLDWIDE, IN 29 COUNTRIES"; "1/3 OF STUDENTS HAVE NO DIPLOMA"; "46% STUDENTS WITH NO PRIOR CODING EXPERIENCE"; 2015: "42 establishes a partnership with Pôle Emploi to enable long-term unemployed seniors to return to work".
https://42lausanne.ch/wp-content/uploads/2024/07/42_Press_Kit_2013_2023_EN.pdf . Also 42 Network, "Media kit": "42 is the first tuition-free computer training, open to all, regardless of diploma, age 18+." https://www.42network.org/media-kit . Founding in Paris in 2013 by Xavier Niel with Nicolas Sadirac and others: 42 Network, "About us", https://www.42network.org/about-us . Checked at source, 14 Nov 2026. Learning by projects with peer checking is described in both sources.

the standard. In UP's terms, they are the open-learning half of UP's tenet at work, and 42 shows peers teaching and checking one another, the open-standards half, at the scale of thousands.[21]

What UP holds about learning

UP's commitment to learning sits inside one of its tenets, and the reason it sits there matters. In UP there are no offices to hold: work is shared out, not owned, so no one gathers power by holding a position. Where work needs skill, skill is shown by open, testable standards that anyone can work toward and anyone can propose to change, and education is open to everyone, at every age, so that anyone can gain the skills any work requires.[21] The three parts depend on each other. Open standards would mean little if only some people could learn to meet them, and open learning would lead nowhere if skill were still certified by holding a post. UP's agreed position on merit adds the line that keeps learning from becoming a sorting machine: merit decides who does skilled work, but it never decides whose needs are met.[37]

What UP makes, settled alongside its core as an illustration rather than a tenet, includes education: it is open to everyone without condition; the more it is used, the more it succeeds; and it may be UP's main way of reaching people.[22] On that illustration, a school, a course or a tutor in UP need not ask who is paying or whether the learner is a member.

UP's agreed claim on education says that education is where UP can show results first: open, tutor-style learning reaches people the current system leaves out, at low cost, and grows with UP. The same claim names two conditions, getting people online and designing learning that teaches rather than does the work for the learner, and, as the sections below show, it names the capacity to teach and mentor as a limit UP must keep ahead of.[38]

Learning in UP is also part of how the system can be checked. UP's rules, code and records are public so that anyone can check them, and its agreed position on open code says that reading those shared systems is taught in open education, and that checking them counts as contribution.[39,40] A society that lets anyone check its machinery has to teach anyone who wants to learn how.

Three further lines shape how learning feels from inside. The psychological needs that UP's agreed position adopts from Self-Determination Theory, to act by one's own choice, to grow competent and to be connected to others, are the same needs that good schools already meet, and UP credits the schools that do, though in its reading that is the exception inside the current system.[41] Montessori schools are named in UP's agreed position on motivation, alongside open source and libraries, as showing people contributing out of interest, respect and shared purpose without pay.[42] And UP's agreed position is that its coordinating AI proposes and never governs; a tutor-style AI could be held to the same line. Under UP's tenet, each learner controls their own information and chooses what to share.[43,39]

[37] UP's agreed position on merit: "Every role is open to anyone who meets its standards; the standards are published, testable and open to change, and the education to meet them is free. Merit decides who does skilled work; it never decides whose needs are met." The word "role" predates round 11, which settled that UP has no roles or offices in the old sense. Full wording in UP's agreed positions (the Position Ledger).

[38] UP's agreed staged claim on education (round 12c, card F7), in full: "Education is where UP can show results first: open, tutor-style learning reaches people the old system leaves out, at low cost, and grows with UP. An education and mentoring programme, limited by its capacity, sets the pace of the whole transition (12S). Getting people online and designing learning that teaches rather than does the work for them are the conditions." Full wording in the round 12c record. Clarified by UP's author on 13 Nov 2026: the capacity of an education and mentoring programme is likely to be what most limits how fast UP can grow; how fast UP grows is not for anyone to decide; UP must grow with high quality, so that the transition does not itself create large problems, and must also speed up, because it answers many of the current system's most urgent problems; keeping education and mentoring ahead of growth is a known problem to be worked on together. The clarified wording goes to the UP Moderator for confirmation before the card's text changes.

[39] Core tenet: *Open systems, shared knowledge, private persons*: "The rules, code, records, decisions and reasons of UP are public, so anyone can check them."; "Each person controls their own information and chooses what to share." Full wording in "The core of UP".

[40] UP's agreed position on open code: "UP also widens who can check: reading shared systems is taught in open education, checking counts as contribution work, and the AI explains every change in plain language." Full wording in UP's agreed positions (the Position Ledger).

[41] UP's agreed position on psychological needs: "Autonomy, competence and relatedness are universal psychological needs (Self-Determination Theory). Good employers and schools already meet them inside today's system, and the book says so. But there it is the exception, and the same wage that supports it can withdraw it." In the position, "the book" refers to the UP book. Full wording in UP's agreed positions (the Position Ledger).

[42] UP's agreed position on rewards and motivation: "Open source, libraries and Montessori schools already show people contributing out of interest, respect and shared purpose without pay." Full wording in UP's agreed positions (the Position Ledger).

[43] UP's agreed position on what the AI is, the coordinator that proposes: "The AI is the coordinating system UP needs, and it coordinates by proposing, not by governing."; "People choose their work; the AI may not assign work or compel anyone, and any plan can be overridden through the decision steps." Full wording in UP's agreed positions (the Position Ledger).

UP at work: one learner, followed through

A list of positions does not show a system at work, so it helps to follow one learner through UP from start to finish. Take a woman of forty-five who left school at fifteen and now wants to do the electrical work her community needs. Here is one way it could run, built from UP's tenets and agreed positions. It is not a procedure; the collective would shape the details.

She starts where she is. Education in UP is open to everyone, at every age, without condition; no one asks whether she is a member, what she can pay or what she left school with.[21,22] She does not need anyone's permission to begin.

The standard is public. What an electrician must be able to do is set out as an open, testable standard that anyone can read, work toward and propose to change.[21] She can see exactly what she must show, and nothing on the list is a certificate or a title. Every role is open to anyone who meets its standard, and the education to meet it is free.[37]

She learns with help that teaches. Open courses, a tutor-style AI and mentors who have signed up to help carry her through. UP's agreed claim on education asks that such learning teach rather than do the work for the learner, and the coordinating AI proposes, never governs.[38,43] Her learning record is hers: she controls her own information and chooses what to share.[39]

She shows what she can do. When she is ready she takes the test, as often as she needs. Passing it opens skilled electrical work to her. It never decides whether her needs are met, which are met as a floor whether or not she ever passes.[37,44]

If the standard is wrong, it can be changed. If the test asks for something the work does not need, or leaves out something it does, anyone may propose a change with evidence; the people the change affects decide, and the decision and its reasons are public.[21,45,46]

If mentors are short, the shortage is shared work. Teaching and mentoring time is the scarce thing in learning, and UP's agreed claim names it as likely to be what most limits how fast UP can grow. Keeping it ahead of growth is a known problem that UP expects to work on together.[38,47] When something fails her, a course or a mentor or the test itself, the failure is fed back into UP as a new problem to solve.[48]

Set beside Kimani Maruge, who waited eighty years for a school to open to him, the difference is the door. In UP there would be no age at which learning closes and no fee or certificate that decides who may start, and what a person can do would count for more than what they hold.

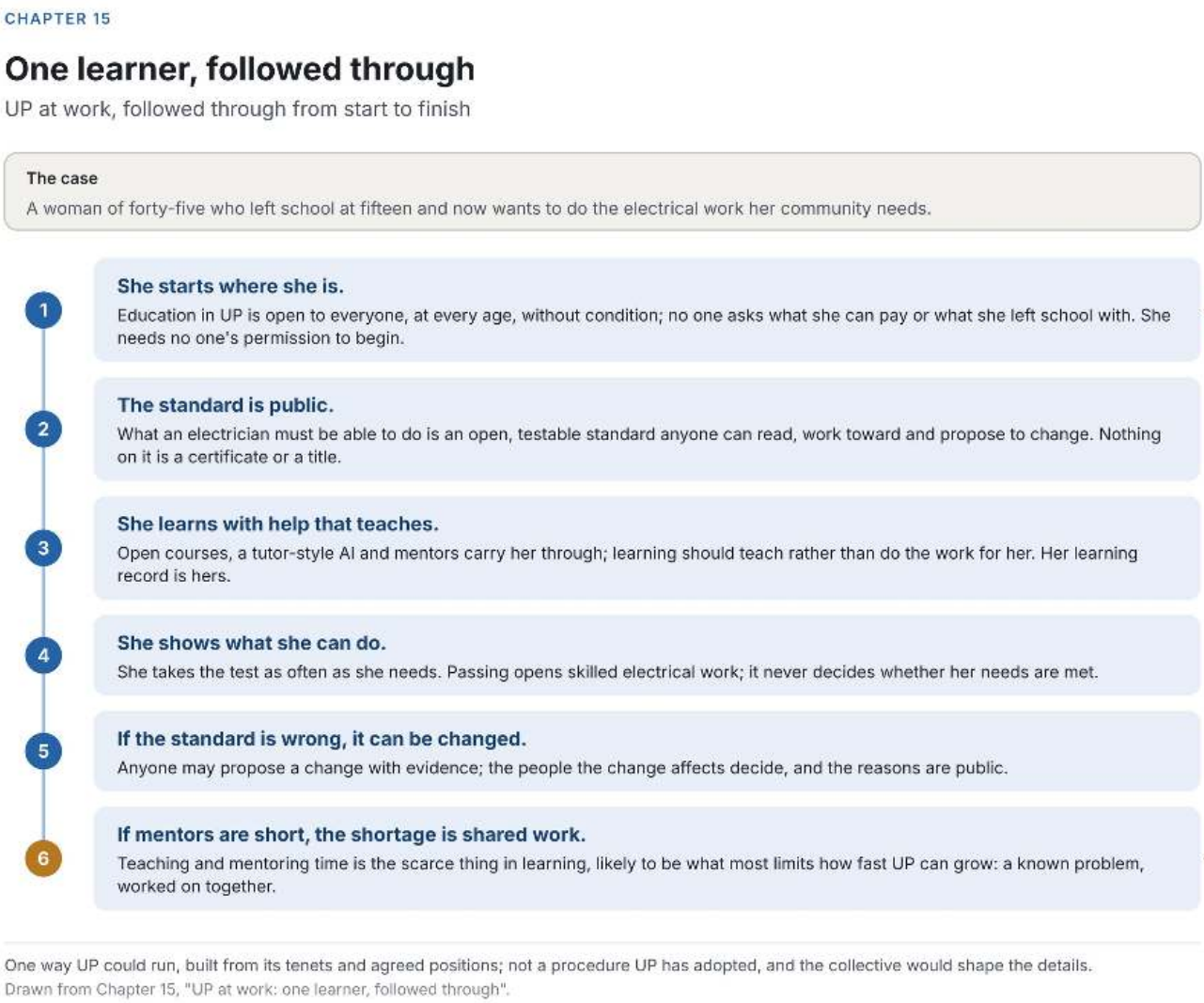
[44] Core tenet: *Floors that are never crossed*, in full (as amended on 28 October 2026): "UP keeps a set of floors that no decision may cross: everyone's basic needs and protected freedoms, which no gain for others can buy; the living world's capacity to recover, so damage that cannot be undone is never traded for a short-term need; the right to leave any group or community at any time, taking what is theirs; a truthful shared record, so facts, measures and decisions are never falsified; freedom of the mind, so no one's thinking is manipulated without their knowledge or consent; and a fair hearing, so no one's freedom is restricted without a fair, evidence-based hearing, with the evidence open to them and a way to appeal. UP guarantees needs, not every want. The collective defines and refines the floors through UP's method; it may clarify or raise them, but no decision may lower them or push anyone below them. As a starting example for the collective to refine: needs such as food, water, shelter, health care, education and connection; freedoms such as thought, belief, speech, movement and privacy." And: "A protected freedom such as movement may be restricted only to protect others or the person, only through an evidence-based court process, for the shortest time needed, and never below the needs floor. The hearing comes first, except briefly, to stop harm in progress, with a hearing promptly after. Leaving a group or community does not end a restriction set by a fair hearing. These limits are an open problem: they are the best that can be imagined now, and UP is built to find better and better solutions. Above the floors, everything is open to the method." Also in "The core of UP".

[45] Core tenet: *The method: shared problem solving with evidence*, in full: "Everything in UP runs through one method. Problems are named, measured and offered as work to anyone willing to take them on, whether or not they are affected; the people a problem affects decide its outcome. No problem, solution or method belongs to the person who raised it: anyone may update, reframe or improve it. Solutions are proposed with their evidence, tested and compared, and a better idea replaces a worse one. Every claim that guides shared action can be tested and is open to being proved wrong. Work on the roots of problems is worth the most, but a problem can be worked from any angle. Facts are checked, unknowns become shared work, and matters of taste are never made rules for others. Evidence proposes; people decide." Also in "The core of UP".

[46] Core tenet: *Open systems, shared knowledge, private persons*, in full (as amended on 28 Oct 2026): "The rules, code, records, decisions and reasons of UP are public, so anyone can check them. UP's technology (the knowledge, code, data and designs UP produces) stays only in UP: everyone taking part in UP may use, study and improve it, and no one may enclose it. Each person controls their own information and chooses what to share. Openness helps people find problems, but it will not find all of them, so UP also names the risks that openness alone cannot catch and keeps working on them." Also in "The core of UP".

[47] UP's agreed position on growth (round 12c, position 3): "It will grow naturally and may grow very fast and big or it might be slow. That is not for us to decide. What is relevant is to list that it is important to grow and maintain quality of the core values and tenets so that the growth remains positive and does not descend into unintended consequences." The same round withdrew the growth figures given earlier in the debate as part of a thought experiment. Full wording in UP's agreed positions (the Position Ledger).

[48] Core tenet: *Self-correction: nothing is final, including this*, in full: "Every failure of UP is fed back into it as a new problem to solve, so it keeps improving without revolution. Every part of UP, these tenets included, can be improved through its own method. UP is judged against both today's system and the ideal it aims at: the ideal shows the direction and the gap still to close, and today's record shows whether UP is already doing better. Downsides, risks and fringe problems are named openly and treated as work, never as reasons to keep a status quo that fails so many." Also in "The core of UP".



One learner, followed through: UP at work, step by step.

What could take the stand-ins' jobs over

Chapter 8's seven developments apply to learning as they apply to everything else, and here several are already far along.[49] Open designs and shared knowledge are the oldest: public libraries, then Wikipedia, Khan Academy and MIT's OpenCourseWare have made much of the world's knowledge free to anyone with a connection.[13,14] Automation and AI are the newest. A tutor-style AI that asks questions instead of giving answers can offer something like personal teaching to anyone, and the trials in Turkey and Nigeria described among the objections below show both what that can do and what it must avoid. In UP such tools propose and never govern, and each learner controls their own information and chooses what to share.[43,39] Coordination that counts real things shows up as open standards, which count what a person can do, and as a published record of who is learning what and where help is needed. Abundance is the reason it can be offered without condition: what UP makes, given as an illustration, includes education open to everyone, which succeeds more the more it is used.[22]

The last development, the narrow and intense focus on what is truly scarce, points to the hardest part. Knowledge can be copied without limit, but a teacher's time cannot, and UNESCO estimates that 44 million more teachers are needed to give every child a primary and secondary education by 2030.[10] Tutoring works because it is personal: the meta-analysis described earlier found an average effect of 0.37 standard deviations, and personal teaching is

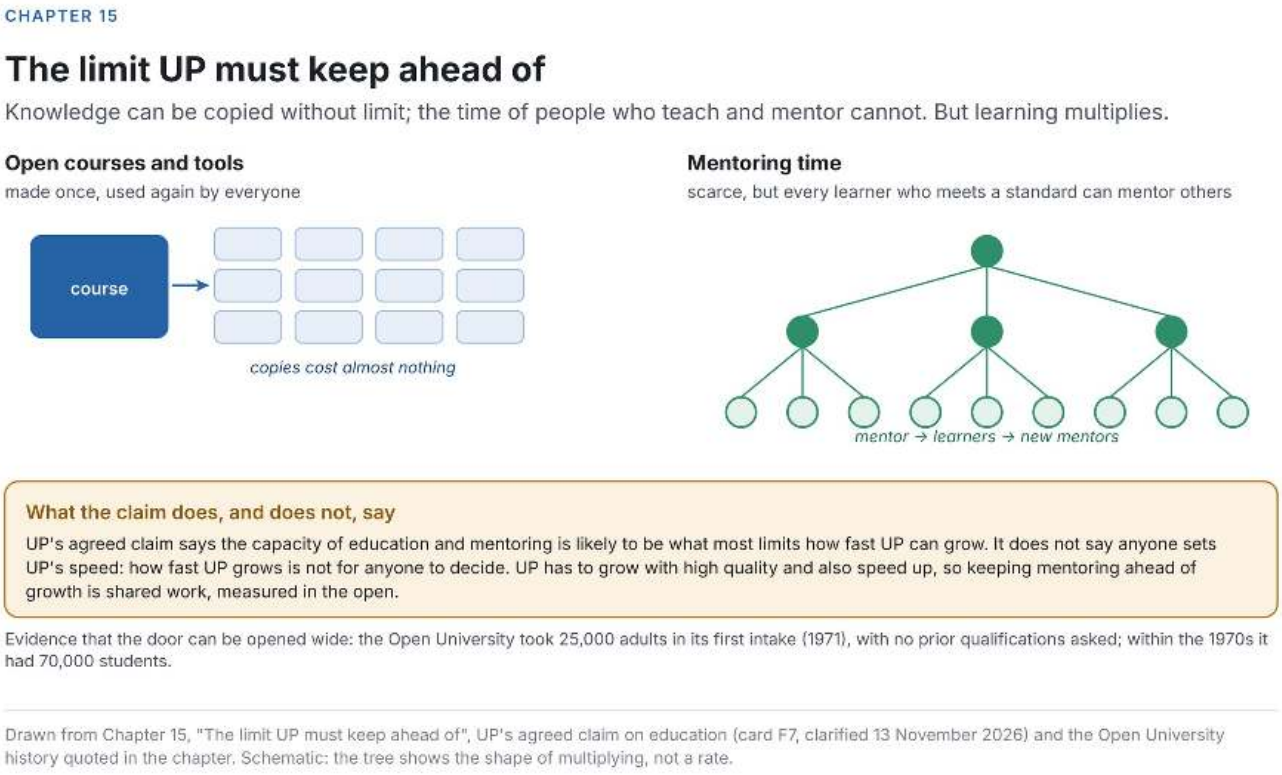
[49] Chapter 8, "Money, and the jobs it does", "How money's jobs move to reality" and "How the pieces work together", with their notes: the seven developments.

costly to offer to everyone.[19] AI tutors may stretch the time of human teachers, but the evidence so far suggests that they work best when designed with care, and mentoring, the kind the son finds at the repair table in the illustration below, is a relationship between people. In UP's terms, the scarce thing in learning is not information. It is the time and attention of people who can teach and mentor.

The limit UP must keep ahead of

UP's agreed claim on education draws a conclusion from that scarcity. The capacity of an education and mentoring programme is likely to be what most limits how fast UP can grow, because everyone who joins needs to learn how UP works and, often, new skills for the work they choose.[38] The claim does not say that anyone sets UP's speed. How fast UP grows is not for anyone to decide, and UP's agreed position on growth says so in as many words.[47] It names a known problem. UP has to grow with high quality, so that the transition does not itself create large problems, and it also has to speed up, because it is the answer to many of the current system's most urgent failures. Keeping education and mentoring ahead of growth is therefore work that UP expects to share, in the open, like any other problem.[38,47]

The problem has a useful property: learning multiplies. Every learner who meets an open standard can mentor others, as the son does in the middle stage of the illustration below, and every open course or tool, once made, can be used again by everyone. UP's whole-system position counts open education, improving quickly, among the parts of UP that strengthen each other, and says plainly that UP's starting point will not be great.[50] Whether learning can multiply fast enough to keep ahead of growth is a question of fact, measured in the open as UP grows.



The limit UP must keep ahead of: knowledge copies freely, mentoring time does not, but learning multiplies.

How it could run, stage by stage

UP grows beside the current system, and its agreed position names three stages: early, when UP is a minority network inside the current system; middle, when it has its own productive base and most members' needs are met

[50] UP's agreed position on judging UP as a whole system: "UP is a system whose parts strengthen each other: education open to everyone and improving quickly;"; "Its starting point will not be great; it is built to improve much faster than today's systems." Full wording in UP's agreed positions (the Position Ledger).

from what UP produces; and completed, when most people live mainly in UP.[51] UP's agreed claim on education is staged the same way, and it expects results here sooner than anywhere.[38] In the reading UP's author has set out, now going through UP's method, what changes gradually is people, not UP: each person relies less on the current system's credentials and fees as UP's open learning meets more of what they need, and more people make that move.[52] The early stage rests on today's evidence. The later stages are projections, and each says what would have to be shown.

Early: a minority network inside the current system. Open, tutor-style learning reaches people the current system leaves out, at low cost, and grows with UP, on two conditions: getting people online, and designing learning that teaches rather than does the work for the learner.[38] Members keep using schools, colleges and courses as they do now. What UP adds is open learning and open standards in the skills its own communities need, and mentors who share what they know. The expected benefits come first here. People who left school early, like the Open University's first students, can learn again; teenagers bored at school can test themselves against real work; and members learn how UP itself works, which every member needs.[38] People outside UP lose nothing, and because UP's education is open without condition, they can learn from it too.[22] What would have to be shown is that learners reach open standards, in published results that anyone can check.

Middle: UP's own productive base (a projection). As more of members' needs are met within UP, learning would no longer be tied to earning a credential for a job that decides survival. Skill would be shown by open standards across the work UP's communities do, and any member could move to new work by learning for it, at any age. The expected benefit is that ability, not paper, would decide who does skilled work, while needs would be met whatever anyone has learned.[37] The limit this chapter names would be at its sharpest here: the time of teachers and mentors would decide how fast UP could take people in, so growing that capacity, learner by learner, would be shared work.[38,47] What would have to be shown is that mentoring keeps ahead of growth, in published figures, and that open standards stay honest.

Completed: most people living mainly in UP (a projection). UP's card on education names no separate completed stage, so what follows is drawn from UP's tenet and agreed positions, not from the card. If most people lived mainly in UP, learning would be open to everyone at every age, and skill would be shown by open, testable standards everywhere.[21] Every learner who reaches a standard can mentor others, so the capacity to teach would grow with the number of people who have learned. People would learn because a problem is in front of them, the drive UP is built on.[42] What would persist is the hard part of teaching, which is time and attention between people, and the work of keeping open standards honest when anyone can propose to change them. At every stage UP is judged against today's record and against the ideal, and every failure is fed back into it as work.[48]

Table 15.1 gives each stage's change, precedent, reason and what persists. Table 15.2 sets out the benefits at each stage and how each would show.

Table 15.1. Learning in UP, by stage. The early stage rests on today's evidence; the middle and completed stages are projections.

Stage	What changes	Real precedent	Why it is likely	What persists
Early	Open courses, mentoring and tutor-style AI offered to anyone, alongside today's schools; skills shown by open standards	Free primary schooling in Kenya (2003); Khan Academy and MIT OpenCourseWare; tutor-style AI tested in Turkey and Nigeria	Open learning is already available in more than 190 countries	Most learning still runs through today's schools and credentials; people offline are left out

[51] UP's agreed position on judging UP by stage, beside the current system: UP grows side by side with the current system, "early (a minority network inside it), middle (its own productive base; most members' needs met from what UP produces), completed (most people live mainly in UP)"; "Use today's evidence for the early stage; present the middle and completed stages as a reasoned projection from cited mechanisms, labelled as such." Full wording in UP's study lessons (lesson 13); the Position Ledger (round 12c, position 1) records the same division.

[52] Clarification of the tenet *Reality over fiction* and of UP's agreed position on useful fictions, set out by UP's author on 14 November 2026 and going through UP's method; until the UP Moderator enters it in the Position Ledger, it is the author's stated reading, not yet an agreed position. In substance: the gradual change is in people, not in UP; UP's own system does not run on money, prices, a UP government or UP companies; each person relies on money, governments and corporations less as they use UP more, and the number of people doing so grows; where UP meets the current system (taxes, land title, the legal form needed to hold property, partnership with local governments), it uses only what the law requires, openly recorded and kept to a minimum, and that contact shrinks toward none as the people of an area move fully to UP. Record: LXW Shared Brain, decisions, "2026-11-14 1015 … Gradual change is people's" and "2026-11-14 1005 …".

Stage	What changes	Real precedent	Why it is likely	What persists
Middle (projection)	Learning open to everyone at every age, without condition, as UP's own production meets needs; mentors and tutors drawn from members	Tutoring programmes (average effect 0.37 SD)	If survival stops depending on a job, time to learn and to teach could be freed	Getting everyone online; tutor-style AI that teaches without doing the work
Completed (projection)	Skill shown everywhere by open, testable standards; education improving quickly and checked in the open	None yet (projection)	Each stage adds teachers, mentors and better-tested tools	The gap between those who reach learning first and those who reach it last

Sources: notes to this section.[53]

Table 15.2. Expected benefits of learning in UP, by stage. The early stage rests on today's evidence; the middle and completed stages are projections, drawn from UP's staged claim on education and, for the completed stage, from its tenet and agreed positions.

Stage	For members	For people outside UP	For the living world	How it would be shown
Early	Learning again at any age; open standards to test against; mentors; learning how UP works	Open learning available to them too, without condition	Little directly	Learners reaching open standards, in published results
Middle (projection)	Ability, not paper, decides who does skilled work; anyone can move to new work by learning for it	An open record of standards and results, which anyone can check; anyone may join	Skills for repair and making spread widely	Mentoring kept ahead of growth, in published figures
Completed (projection)	Learning open to all at every age; teaching capacity grows with every learner	Most people live mainly in UP, and no one is forced to	Knowledge shared rather than enclosed	Judged person by person, against today's record and the ideal

Sources: notes to this section.[54]

The household that Chapter 1 introduced shows how this could feel from inside. It is an illustration, not evidence.

> *Illustration: one way it could run. The early stage.* The care worker's teenage son is bored at school, though not in a workshop. Two evenings a week he goes to the repair table run by the town's UP community, where a retired electrician has become his mentor. At home he works through an open course in electronics with a tutor-style AI that will not hand him the answers. It asks him what he thinks the circuit does, waits, and asks again. His grandfather, who left school at fourteen, takes an open course in reading, at his own pace, because he has always wanted to read the history books his own father kept.
>
> *Illustration: one way it could run. The middle stage, a projection.* The son has passed the open standard for basic electrical work, a published test that anyone can take as often as they need, and now mentors two younger learners at the repair table himself. His mother, whose survival no longer depends on her shifts, is learning to be a nurse, with a mentor from the town's clinic and a study group that meets on her days off. The grandfather has finished the history books and is writing down the town's history as he remembers it, with a younger neighbour who is learning to edit.
>
> *Illustration: one way it could run. The completed stage, a projection.* Nobody in the household thinks of learning as something that ends. What they argue about is which of the town's open standards needs changing, because the electrical standard has fallen behind new equipment, and anyone may propose a change.

[53] Table 15.1: the staged claim is card U12 F7 (round 12c; note 38). Precedents: open learning (notes 13 and 14); tutor-style AI (notes 55 and 56); tutoring (note 20); free primary schooling (notes 6 and 7). People offline: note 17. The middle and completed rows are projections (note 51).
[54] Table 15.2. Early row: notes 38, 34 and 22. Middle row: notes 37, 38 and 47. Completed row: notes 21, 42 and 48. Every entry in the middle and completed rows is a projection; the completed row is drawn from UP's tenet and agreed positions, because card F7 names no separate completed stage (note 38).

The strongest objections

The newest objection is that AI will make learners lazy: a student who can ask a machine for the answer will stop thinking. A large field experiment suggests the worry is real, and also suggests what to do about it. In a high school in Turkey, Hamsa Bastani and her colleagues gave some students an AI tutor to use while practising mathematics. With the plain version, practice grades improved by 48 per cent, but on the later exams grades fell by 17 per cent. A second version, built with safeguards, improved practice grades by 127 per cent, and the negative effects on learning were largely mitigated.[55] UP's agreed claim names exactly this as a condition: learning must be designed to teach rather than to do the work for the learner.[38]

Other evidence suggests what well-designed AI can do. The World Bank tested an after-school programme in Edo State, Nigeria, in which first-year senior secondary students used Microsoft Copilot, powered by GPT-4, as a tutor in English for six weeks. Scores rose by 0.31 standard deviations on a combined assessment, which the World Bank's blog described as equivalent to nearly two years of typical learning; the effect on English alone, the main outcome, was 0.23.[56] One trial is not proof, and the comparison with years of schooling is an estimate, not a measurement. But it is consistent with UP's agreed claim that open, tutor-style learning reaches people the current system leaves out, at low cost.[38]

A second objection is that open learning helps those who are already ahead: open courses are easiest to use for people who already have education, a quiet room and a good connection. And 2.2 billion people remain offline.[17] UP's agreed claim does not deny it; it names getting people online as the other condition.[38] Its answer is in its tenet that education is open to everyone, at every age, so anyone can gain the skills any work requires,[21] and in what UP makes, an illustration, where learning is offered without condition and succeeds more the more it is used.[22] An open course alone is not that. Mentors, study groups, devices and connection are part of what meeting those conditions may require; whoever supplies them, a failure to reach the last learner as well as the first would be named openly and treated as work.[57]

A third objection is that open standards will be watered down, or captured, if anyone may propose to change them. A standard that anyone can change could drift toward whatever is easiest to pass. UP's tenet makes standards testable as well as open: anyone may propose a change, and the people a problem affects decide its outcome.[21] The record of every standard and every change is public, so a weakened standard can be seen and challenged.[39] The amateur radio pools show both the risk and an answer to it. In 1995 a newly formed corporation tried to take control of the committee that keeps the question pools; the dispute was brought into the open, and seven months later it had been resolved.[58] Whether that keeps standards high is not settled; it is the kind of question UP's self-correction treats as work, not as a reason to keep today's arrangements.[57]

The last objection is the oldest: that schools do more than teach. They look after children while parents work, they teach children to live with others, and they have teachers who know their pupils. UP does not dispute it, and none of the positions cited here would close a school. Good schools already meet the needs for autonomy, competence and relatedness that UP's agreed position adopts, and UP says so.[41] What persists at every stage is the gap between the learners who reach learning first and those who reach it last. UP's agreed claim names getting people online as one of its two conditions, so reaching the last learner is part of the measure, not an afterthought.[38]

[55] Hamsa Bastani, Osbert Bastani, Alp Sungu, Haosen Ge, Özge Kabakcı and Rei Mariman, *Generative AI without guardrails can harm learning: Evidence from high school mathematics*, *Proceedings of the National Academy of Sciences* 122(26) (25 June 2025), e2422633122, abstract: "48% improvement in grades for GPT Base and 127% for GPT Tutor."; "17% reduction in grades for GPT Base."; "These negative learning effects are largely mitigated by the safeguards in GPT Tutor." https://pubmed.ncbi.nlm.nih.gov/40560616/ (journal: https://doi.org/10.1073/pnas.2422633122). The experiment was with high-school students in Turkey; the PNAS and PubMed pages could not be opened on 1 Nov 2026 for a second reading. Checked 1 Nov 2026.

[56] Martín De Simone and others, *From Chalkboards to Chatbots: Evaluating the Impact of Generative AI on Learning Outcomes in Nigeria*, World Bank Policy Research Working Paper 11125 (20 May 2025): "first-year senior secondary students in English language learning over six weeks."; "The intervention demonstrated a significant improvement of 0.31 standard deviation on an assessment"; "The effect on English, the main outcome of interest, was of 0.23 standard deviations." https://openknowledge.worldbank.org/entities/publication/15e1ff08-15ae-4f7a-b2a8-d146e6c113ee/full ; World Bank blog (9 January 2025): "this is equivalent to nearly two years of typical learning in just six weeks."; "Students participate in an AI after-school program in Edo, Nigeria." https://blogs.worldbank.org/en/education/From-chalkboards-to-chatbots-Transforming-learning-in-Nigeria . The working paper says the programme used Microsoft Copilot, powered by GPT-4; the comparison with years of schooling is an estimate. Checked 1 Nov 2026.

[57] Core tenet: *Self-correction: nothing is final, including this*: "UP is judged against both today's system and the ideal it aims at"; "Downsides, risks and fringe problems are named openly and treated as work, never as reasons to keep a status quo that fails so many." Full wording in "The core of UP".

[58] ARRL General Bulletin ARLB025 (1996): "A seven-month-old problem that had threatened to disrupt the Amateur Radio volunteer examiner program has been resolved."; "In September 1995, a newly formed corporation called NCVEC Inc attempted to exert control over the Question Pool Committee (QPC)". https://www.arrl.org/w1aw-bulletins-archive/ARLB025/1996 ; and ARLB013 (23 February 1996), in which the ARRL asked the FCC to issue a public notice on the dispute. https://www.arrl.org/w1aw-bulletins-archive/ARLB013/1996 . Checked at source, 13 Nov 2026.

Back to the classroom in Eldoret

Kimani Maruge waited eighty years for a school to open to him, and when it did, it was a school for small children. UP's answer, in its tenet, is education open to everyone, at every age, with skill shown by open standards that anyone can work toward; what UP makes illustrates it as open without condition; and its agreed claim looks to open, tutor-style learning to reach the people the current system leaves out.[21,22,38] The current system has already built much of what that needs: public schools, trained teachers, open courses and, newly, AI tutors that can be designed to teach rather than to answer. UP's early stage would build on them. Its middle and completed stages are projections, and whether open learning reaches the last learner as well as the first is, under UP's tenet of self-correction, a shortfall to be named openly and treated as work.[51,57]

Learning keeps people able to do the work their communities need. Staying well enough to do it, and to live, is the subject of Chapter 16.

Chapter card: Chapter 15

- **Claim:** Public schooling is one of the current system's great achievements, yet hundreds of millions of children and young people are out of school, millions more teachers are needed, and learning is still organised by age and class. Every child brings a drive to learn that schooling can keep alive or wear away, and UP is built on that drive. A credential is a stand-in for skill that can drift from it; in UP, skill is shown by open, testable standards that anyone can work toward, and education is open to everyone, at every age. Knowledge can be copied without limit, but the time of people who teach and mentor cannot, so the capacity of education and mentoring is likely to be what most limits how fast UP can grow: a known problem, worked on together, not a speed anyone sets.
- **Core lines:** the tenets *Open participation* (no offices; open standards; education open to everyone, at every age); *Open systems, shared knowledge, private persons* (the system is public so anyone can check it; each person controls their own information). Settled alongside the core: what UP makes (education open without condition, given as an illustration). Agreed positions: merit never decides whose needs are met; psychological needs; motivation (Montessori named); open code (reading shared systems is taught in open education); the coordinating AI proposes, never governs; the whole system (education improving quickly); growth (not for anyone to decide; quality kept); the staged claim on education (round 12c, card F7, as clarified on 13 Nov 2026).
- **Rule of thumb:** "Does it teach, or does it do the work for the learner, and does it count what a person can do or only what they hold?"
- **What this is not:** a plan to close schools, a promise that AI can replace teachers, a claim that learning in UP costs nothing to provide, or a claim that anyone sets UP's pace. UP would build on the schools, teachers and open courses that already work, and name openly where its own learning falls short.
- **Check yourself:**
    1. Why does UP put open standards and open learning in the same tenet?
    2. What did Engel and the Montessori lottery studies find, and why does it matter for UP?
    3. In what sense is a credential a stand-in, and what does UP put in its place?
    4. What two conditions does UP's agreed claim on education name?
    5. Why is the time of teachers and mentors the scarce thing in learning, and what does UP's claim say about it and about growth?
    6. What did the Turkish high-school trial find about AI with and without guardrails?
    7. Why does a society that lets anyone check its systems have to teach people how?
    8. Follow one learner through UP: where does she start, what is public about the standard, what does the AI do and not do, and what does passing the test decide, and not decide?
    9. What did the Open University and 42 set aside at the door, and what happened? What does each stage of UP add, and what benefits does Table 15.2 expect at each?
- **Open questions (for the wiki):** how open standards are kept honest when anyone can propose to change them; how learning reaches the people who are still offline; how mentoring capacity can be kept ahead of growth, and how that is measured. (Improve this page.)

Chapter 16. Health and Wellbeing

On 18 March 2017, Shane Patrick Boyle died in Mena, Arkansas, of type 1 diabetes. He had recently moved there from Houston, Texas, to be with his ailing mother, who died a week before him, and by crossing state lines he had lost his prescription benefits. Before he died, he had set up an online fundraising page to raise $750, enough for one more month of insulin and supplies, and while he was alive it stayed about $50 short of that goal. After stretching the insulin he had for as long as it would go, he developed diabetic ketoacidosis, the crisis that follows when the body has no insulin at all.[1,2] Most of the money on the page, which in the end passed its goal, came in after his death.[2]

What Boyle lacked was not a new medicine but the money to buy an old one at the price he faced, and he was not alone. At one diabetes clinic at Yale, in a survey published in 2018, a quarter of the patients said they had used less insulin than prescribed because of its cost.[3] The United States has since capped what people on Medicare pay for insulin at $35 a month for each product, a real step that did not reach Boyle and does not reach everyone.[4]

Boyle's death is the subject of this chapter in a narrow sense, because it shows a medicine that exists failing to reach a person who needs it. It is also the subject in a wide sense, because the most powerful health system in history still lets people die of things it knows how to prevent. This chapter is the home of failure F6 on the scoreboard in Chapter 12, the failure of health.[5] Chapter 12 marked it as a failure that a stand-in for the real world drives only in part: bacteria evolve resistance whatever anyone's accounts say. But the price of a medicine, and the business of making one, shape a great deal of what goes wrong, and this chapter shows how.[6] It asks the question every reader brings to a new way of organising life: what happens when I am sick? It looks first at how the current system keeps people well, where it does extraordinarily well and where it fails. It then looks at what the price of a medicine does, and at the loop that ties ill health to the conditions people live in. It sets out what UP holds about health and then follows one illness through UP, step by step, to answer that question directly. It looks at what could take over the jobs that prices do in medicine, with the people already trying, and at how health care could change at each stage of UP's growth and what each stage is expected to bring, and the strongest objections, beginning with the one most often asked: who would invent new medicines?

How the current system keeps people well, and where it falls short

The current system's record on health is one of the great achievements of human history, and UP credits it first. Global immunization efforts have saved an estimated 154 million lives over the past 50 years, the equivalent of six lives every minute of every year, most of them infants.[7] Smallpox was declared eradicated by the World Health Organization in 1980, the only human infectious disease to have been wiped out.[8] Non-profit research has filled

[1] Vice (Motherboard), report on the price of insulin (9 May 2017): "Shane Patrick Boyle died on March 18th, 2017, from Type I Diabetes."; "Boyle had recently relocated from Houston, Texas, to Mena, Arkansas,"; "so he could be with his ailing mother Judith, who died a week before Shane did."; "By crossing state lines, he lost his prescription benefits."; "After presumably stretching the meds he had as long as they could possibly go, he developed diabetic ketoacidosis (DKA),". https://www.vice.com/en/article/gvzyzy/impact-the-high-price-of-insulin-is-literally-killing-people . The same report says he was $50 short of a $750 goal for a month of insulin. Checked 1 Nov 2026.

[2] Snopes, fact check on Shane Patrick Boyle: "Before his death on 18 March 2017, he set up a GoFundMe campaign to raise money for one month of insulin:"; "We found a GoFundMe where he was trying to raise $750 to get just one more month of insulin and supplies."; "it appears that the majority of this money was raised after his passing." https://www.snopes.com/fact-check/shane-patrick-boyle-died-after-starting-a-gofundme-campaign-for-insulin . Snopes records that the campaign later passed its goal. No source read gives his age. Checked 1 Nov 2026.

[3] Darby Herkert and others, *Cost-Related Insulin Underuse Among Patients With Diabetes*, *JAMA Internal Medicine* (published online 3 December 2018): "Of these patients, 51 (25.5%) reported cost-related insulin underuse."; "One in 4 patients at an urban diabetes center reported cost-related insulin underuse". https://pmc.ncbi.nlm.nih.gov/articles/PMC6583414 . A single clinic, 199 respondents. Checked 1 Nov 2026.

[4] Medicare.gov, *Insulin*: "No more than $35 for a one-month supply of each Part B- and Part D-covered insulin product (other costs may apply)"; "Under Part D, the $35 limit applies to everyone who takes insulin, even if you get Extra Help." https://www.medicare.gov/coverage/insulin . The cap covers Medicare only. Checked 1 Nov 2026.

[5] Chapter 12, Table 12.1, failure F6 (health).

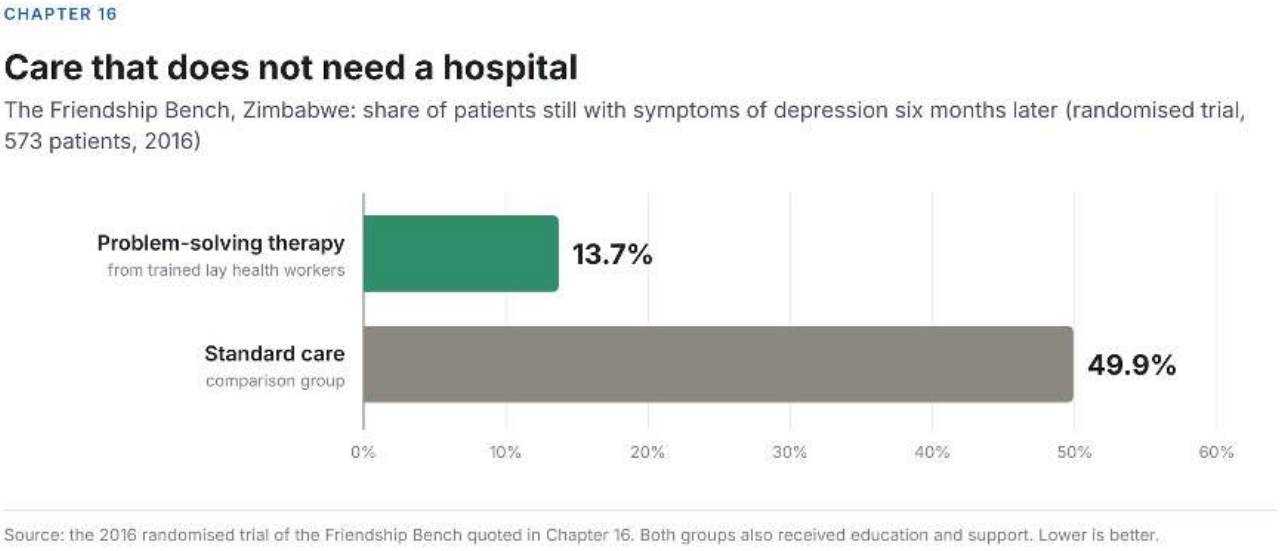
[6] Chapter 12, "Why the failures share roots" and Table 12.3, row F6 (health), marked "Part", with its notes.

[7] World Health Organization, "Global immunization efforts have saved at least 154 million lives over the past 50 years", news release (24 April 2024): "global immunization efforts have saved an estimated 154 million lives"; "the equivalent of 6 lives every minute of every year"; "were those of infants." https://www.who.int/news/item/24-04-2024-global-immunization-efforts-have-saved-at-least-154-million-lives-over-the-past-50-years . The release says 101 million of the lives saved were those of infants; the figure is a model estimate. Checked 1 Nov 2026.

[8] World Health Organization, *Smallpox*: "The last known natural case was in Somalia in 1977." The same page records that WHO declared smallpox eradicated in 1980, the only infectious disease to achieve this. https://www.who.int/health-topics/smallpox . Checked 1 Nov 2026.

some of the gaps that markets leave: the Drugs for Neglected Diseases initiative developed fexinidazole, the first all-oral treatment for sleeping sickness, through what it calls an alternative non-profit model of research and development.[9]

Some of the most striking recent evidence is about care that does not need a hospital. In Zimbabwe, the Friendship Bench trains lay health workers to deliver problem-solving therapy in primary care. In a randomised trial of 573 patients published in 2016, six months later 13.7 per cent of those who had the therapy still had symptoms of depression, against 49.9 per cent of those given standard care; both groups also received education and support.[10] Ethiopia built a health extension programme of 40,000 trained workers, supported by about three million part-time volunteers.[11] And money itself appears to protect health: a study of cash transfer programmes in low- and middle-income countries found them associated with significant reductions in the deaths of women and of children under five, with the risk of death falling by about a fifth among women.[12,13]



Care that does not need a hospital: the Friendship Bench trial.

The strongest case of care organised by neighbours comes from India. In Kerala, from 2000, the Neighbourhood Network in Palliative Care trained volunteers from local communities to find the chronically ill and dying people in their own area and to act for them, backed by a network of trained doctors and nurses. By 2007 the network had more than 60 units serving a population of over 12 million, probably the largest community-owned palliative care network in the world.[14] It aimed to be free of charge, sustainable and led by the community, and the volunteers

[9] Drugs for Neglected Diseases initiative, "European Medicines Agency recommends fexinidazole, the first all-oral treatment for sleeping sickness", press release (16 November 2018): "Fexinidazole is an entirely new chemical entity that has been developed through an alternative non-profit R&D model."; "Sanofi is proud to donate this medicine to the World Health Organization". https://dndi.org/2018/press-releases/ema-recommends-fexinidazole-first-all-oral-treatment-sleeping-sickness . The 2018 decision was a positive scientific opinion of the European Medicines Agency, not an EU marketing approval. Checked 1 Nov 2026.

[10] Dixon Chibanda and others, randomised clinical trial of the Friendship Bench, *JAMA* (2016), abstract: "Among 573 randomized patients (286 in the intervention group and 287 in the control group), 495 (86.4%) were women,"; "Intervention group participants also had lower risk of symptoms of depression"; "(13.7% vs 49.9%; ARR, 0.28; 95% CI, 0.22 to 0.34; P < .001)." https://pubmed.ncbi.nlm.nih.gov/28027368/ . The outcome is symptoms at six months. Checked 1 Nov 2026.

[11] Exemplars in Global Health, *Community Health Workers in Ethiopia*: "40,000 professional Health Extension Workers, supported by another 3 million part-time volunteers,"; "In 2004, Ethiopia launched an unprecedented pair of initiatives to improve its dismal health indicators." https://www.exemplars.health/topics/community-health-workers/ethiopia/what-did-ethiopia-do . Checked 1 Nov 2026.

[12] Aaron Richterman and others, *The effects of cash transfers on adult and child mortality in low- and middle-income countries*, *Nature* 618 (2023), pp. 575-582, abstract: "We found that cash transfer programmes were associated with significant reductions in mortality among children under five years of age and women." https://www.nature.com/articles/s41586-023-06116-2 . An observational (difference-in-differences) study. Checked 1 Nov 2026.

[13] Penn Leonard Davis Institute of Health Economics, summary of the same study: "the risk of all-cause death fell 20% among women aged 18 years or older and 8% among children younger than 5". https://ldi.upenn.edu/our-work/research-updates/how-to-lower-maternal-and-child-deaths-across-the-world-give-low-income-families-cash/ . Checked 1 Nov 2026.

[14] Review of the history of palliative care in India, PubMed Central PMC9859967: "The Neighbourhood Network in Palliative Care (NNPC) program was initiated in 2000 to facilitate and foster a sustainable, community-led service capable of providing palliative care to all those in need."; "volunteers from the local community were trained to identify problems of the chronically ill in their area and intervene effectively, with active support from a network of trained professionals."; "By 2007, it had more than 60 units covering a population of more than 12 million and was probably the largest community-owned palliative care network in the world". https://pmc.ncbi.nlm.nih.gov/articles/PMC9859967 . Checked at source, 14 Nov 2026. Other accounts date the network's formation to 2001.

raised the money to run it locally.[15] Kerala, with about 3 per cent of India's people, came to hold a large share of the country's palliative care, much of it delivered at home, and the network has been described as a model of community-based palliative care for low-resource countries everywhere.[15] The Kerala network is one case of a wider pattern this chapter has already met in Zimbabwe's Friendship Bench and Ethiopia's health workers: trained neighbours, backed by professionals, reach people that clinics never see. In UP's terms, it shows two of UP's ideas at work at the scale of millions: care offered, never imposed, and the people closest to a problem taking it on because it is there.[16,17]

The failures sit beside these gains. The World Health Organization and the World Bank reported in 2025 that an estimated 4.6 billion people still lack access to essential health services, and that 2.1 billion experience financial hardship to get care.[18] Antimicrobial resistance in bacteria, the evolution of germs that our medicines no longer kill, led directly to an estimated 1.14 million deaths in 2021, and a major modelling study forecast more than 39 million such deaths between 2025 and 2050.[19] And when an outbreak came that needed everyone, the world shared very unequally. COVID-19 was associated with about 14.9 million excess deaths in 2020 and 2021, and by December 2021, high- and middle-income countries had surpassed the 40 per cent target for the year, while just 7 per cent of people in low-income countries had received at least one dose.[20,21]

What the price of a medicine does

The medicine Shane Patrick Boyle could not afford was not new. Insulin was first given to a patient in Toronto in 1922, and its discoverers, Frederick Banting, Charles Best and James Collip, sold their patent to the University of Toronto for one dollar each, in a sale finalised in 1923.[22] Almost a century later, a man in Arkansas died because he could not raise $750 for a month of it.[1,2] In UP's terms, the gap between the two facts is not the cost of insulin. It is what the stand-in did to it. A price is meant to tell people what a thing costs to make and to ration it where it is scarce, and insulin is neither new nor scarce.

The same stand-in shapes which medicines get made. A medicine that cures a disease once earns less than one that must be taken for life, and, as Chapter 8 told, analysts writing to investors in 2018 about gene therapies asked plainly, "Is curing patients a sustainable business model?"[23] Antibiotics show the problem from the other side. A new antibiotic must be used as little as possible, so that bacteria do not learn to resist it, and a medicine that is

[15] Rekha Rachel Philip, Sairu Philip, Jaya Prasad Tripathy, Abdulla Manima and Emilie Venables, study of the oldest community-based palliative clinic in Kerala, *BMC Palliative Care* 17 (2018), DOI 10.1186/s12904-018-0278-4: the network sought "to develop a free of charge, sustainable, community led, service capable of offering comprehensive long-term care and palliative care"; "Funds for running the programme were raised locally by volunteers."; Kerala holds a large share of India's palliative care programmes "though it has only 3% of the country's population"; the network "has been described as an exemplar model of community-based palliative care for other low-resource countries world- wide". https://bmcpalliatcare.biomedcentral.com/track/pdf/10.1186/s12904-018-0278-4 . Checked at source, 14 Nov 2026.

[16] UP's agreed position on merit: "Labour is never forced: support and health care are offered, never imposed, and choosing not to work is not an illness." Full wording in UP's agreed positions (the Position Ledger).

[17] Core tenet: *Open participation: anyone may take part; those affected decide*, in full: "Anyone may take part in any problem, and the people it affects decide its outcome. There are no offices to hold: work is shared out, not owned, so no one gathers power by holding a position. Where work needs skill, skill is shown by open, testable standards that anyone can work toward and anyone can propose to change, and education is open to everyone, at every age, so anyone can gain the skills any work requires." Also in "The core of UP".

[18] World Health Organization, "Most countries make progress towards universal health coverage, but major challenges remain, WHO–World Bank report finds", news release (6 December 2025): "an estimated 4.6 billion people worldwide still lack access to essential health services"; "2.1 billion people experience financial hardship to access health care". https://www.who.int/news/item/06-12-2025-most-countries-make-progress-towards-universal-health-coverage-but-major-challenges-remain-who-world-bank-report-finds . Checked 1 Nov 2026.

[19] Institute for Health Metrics and Evaluation, press release on the GBD 2021 Antimicrobial Resistance Collaborators' study in *The Lancet* (16 September 2024): "In 2021, AMR led directly to 1.14 million deaths and was associated of a broader 4.71 million deaths."; "between 2025 and 2050 it is estimated AMR will lead directly to more than 39 million deaths". https://healthdata.org/node/12106 . Model estimates. Checked 1 Nov 2026.

[20] World Health Organization, news release on COVID-19 excess deaths (5 May 2022): "was approximately 14.9 million (range 13.3 million to 16.6 million)". https://www.who.int/news/item/05-05-2022-14.9-million-excess-deaths-were-associated-with-the-COVID-19-pandemic-in-2020-and-2021 . The figure is for 2020 and 2021. Checked 1 Nov 2026.

[21] KFF, *A Year of Vaccine Inequity* (22 December 2021): "By income-level, high- and middle-income countries have surpassed the 40% target for this year,"; "with low-income countries at just 7% of their populations having received at least one dose of a COVID-19 vaccine". https://www.kff.org/global-health-policy/a-year-of-vaccine-inequity/ . Checked 1 Nov 2026.

[22] "Fact Check: About the Claim That a Scientist Sold His Insulin Patent for $1" (Snopes, republished by Yahoo News, June 2024): "Canadian scientist Frederick Banting and his co-discoverers of insulin sold their patent to the University of Toronto for $1 in a deal that was finalized in 1923"; the University of Toronto Libraries hold scans of the original patent assignment, where the $1 "is clearly noted". https://ca.news.yahoo.com/fact-check-claim-scientist-sold-130000852.html . On the first injection: "Just over 100 years ago on January 11, 1922, a 14-year-old boy named Leonard Thompson was given an injection of insulin at Toronto General Hospital." History News Network. https://historynewsnetwork.org/article/183087 . Checked at source, 13 Nov 2026.

[23] CNBC (11 Apr 2018), "Goldman Sachs asks in biotech research report: 'Is curing patients a sustainable business model?'", reporting the Goldman Sachs note "The Genome Revolution" (April 10) by the analyst Salveen Richter: "Is curing patients a sustainable business model?"; Gilead's hepatitis C treatments "achieved cure rates of more than 90 percent"; "The company's U.S. sales for these hepatitis C treatments peaked at $12.5 billion in 2015, but have been falling ever since."; "GILD is a case in point, where the success of its hepatitis C franchise has gradually exhausted the available pool of treatable patients"; "While this proposition carries tremendous value for patients and society, it could represent a challenge for genome medicine developers looking for sustained cash flow." https://www.cnbc.com/2018/04/11/goldman-asks-is-curing-patients-a-sustainable-business-model.html . Checked at source, 13 Nov 2026.

used as little as possible earns little. The World Health Organization reported in June 2024 that 97 antibacterial products were in clinical development and that, overall, the pipeline and recently approved antibiotics "are insufficient to tackle the challenge of increasing emergence and spread of antimicrobial resistance".[24] The Pew Charitable Trusts, which has tracked the pipeline for years, concluded that "the antibiotic market is fundamentally broken", and found that small companies and biotech firms were responsible for 93 per cent of the antibiotics in clinical development, the large firms having moved to diseases with a larger and more predictable return.[25]

None of this means that the people who make medicines are callous, and many of them work for decades on medicines that fail. It means that the stand-in counts sales, while health counts people who are well, and the two do not always point the same way. UP's agreed position on the current system names the pattern: it often monetises a problem instead of solving it, and sometimes the problem's persistence is what pays.[26]

The loop between living conditions and health

The deepest cause of ill health is not in the clinic at all. In 2008 the World Health Organization's Commission on Social Determinants of Health, chaired by Sir Michael Marmot, concluded after three years of gathering evidence that "Social injustice is killing people on a grand scale."[27] Health inequalities, it found, come from the circumstances in which people are born, grow, live, work and age, and its starkest example was close to home for a rich country: a child born in one suburb of Glasgow could expect to live 28 years less than a child born 13 kilometres away.[28] Poor conditions make people ill, and illness makes people poorer: 2.1 billion people experience financial hardship to get care, as this chapter showed.[18] The two halves of the loop feed each other.

The evidence that breaking the loop works is already strong at one end. Cash transfer programmes in low- and middle-income countries, described above, were associated with significant reductions in the deaths of women and of children under five.[12,13] In UP's terms, that is evidence that meeting needs is itself a health measure, and it is the reason UP's agreed claim on health starts where it does. As UP's floors spread, much of the poverty behind ill health goes; the clinics come after.[29] Chapter 13 described how the floor would be met, and Chapter 18 takes up the other half of the conditions of life: clean air and water, homes and the places people live in.[30]

UP's agreed claim on health begins with what today's evidence already supports: community health work and lay counselling, added beside the current system's hospitals. It then projects that, as floors spread, much of the poverty behind ill health goes.[29]

[24] World Health Organization, Global Observatory on Health R&D, "Antibacterial products in clinical development for priority pathogens" (June 2024): "As of December 2023, a total of 97 products (57 antibiotics and 40 non-traditional antibacterials; chart A.1) were in clinical development"; "Overall, the clinical pipeline and recently approved antibiotics are insufficient to tackle the challenge of increasing emergence and spread of antimicrobial resistance." https://www.who.int/observatories/global-observatory-on-health-research-and-development/monitoring/antibacterial-products-in-clinical-development-for-priority-pathogens-(jun-2024) . Checked at source, 13 Nov 2026.

[25] The Pew Charitable Trusts, "World Health Organization Warns That Antibiotic Innovation Still Insufficient" (15 July 2024): "That's because, in part, the antibiotic market is fundamentally broken."; "Small companies and biotech firms are responsible for 93% of the antibiotics in clinical development."; major pharmaceutical companies have stayed away "in favor of investing in disease areas with a larger and more predictable return on investment". https://www.pew.org/en/research-and-analysis/articles/2024/07/15/world-health-organization-warns-that-antibiotic-innovation-still-insufficient . Checked at source, 13 Nov 2026. Pew's own analysis.

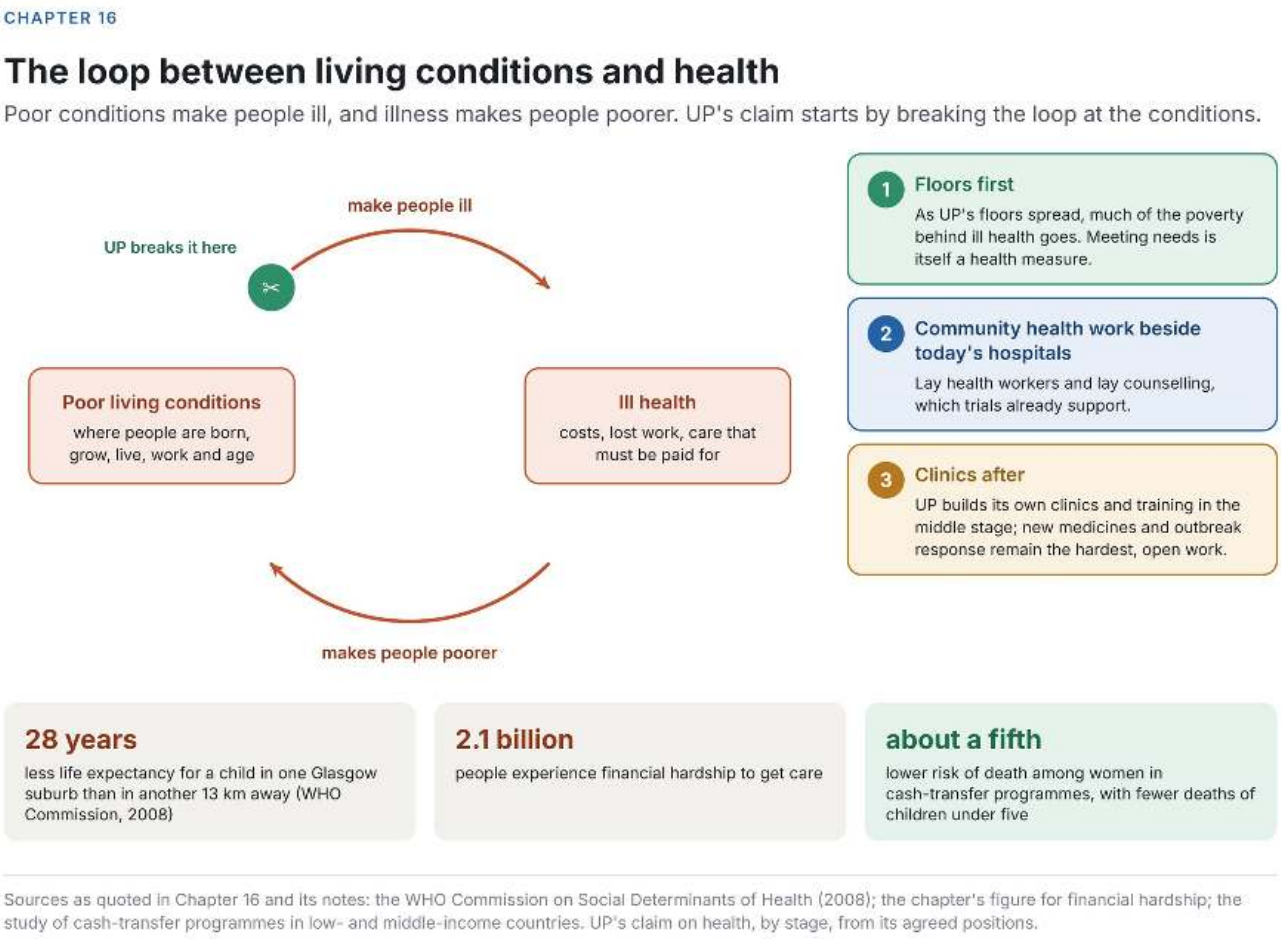
[26] UP's agreed position that the comparison with the current system is not symmetric: the current system often monetises a problem instead of solving it, and sometimes the problem's persistence is what pays. Full wording in UP's agreed positions (the Position Ledger).

[27] Commission on Social Determinants of Health, *Closing the gap in a generation: health equity through action on the social determinants of health*, Final Report, Executive Summary (World Health Organization, 2008): "Reducing health inequities is, for the Commission on Social Determinants of Health (hereafter, the Commission), an ethical imperative. Social injustice is killing people on a grand scale." WHO document WHO/IER/CSDH/08.1; executive summary read in a copy at https://issuu.com/mayahcohen/docs/who_ier_csdh_08.1_eng , and the quotation confirmed in Danny Dorling's commentary citing page 26 of the report (https://www.dannydorling.org/wp-content/files/dannydorling_publication_id0548.pdf). Checked 13 Nov 2026.

[28] WHO news release on the Commission's report (28 August 2008), as reproduced by News-Medical: "A child born in a Glasgow, Scotland suburb can expect a life 28 years shorter than another living only 13 kilometres away."; the differences "result from the social environment where people are born, live, grow, work and age." https://www.news-medical.net/news/2008/08/28/40989.aspx . Checked at source, 13 Nov 2026.

[29] UP's agreed staged claim on health (round 12c, card F6), in full: "Early on, UP adds community health work and lay counselling beside the old system's hospitals. As floors spread, much of the poverty behind ill health goes, and UP builds its own clinics and training. New medicines come from UP's own open science and invention, with far more people and AI working on them (12S); they and outbreak response are the hardest parts and remain open work." The early stage rests on today's evidence; the middle and completed stages are projections. Full wording in the round 12c record.

[30] Chapter 13, "What UP holds about needs", and Chapter 18, on settlement and the living world.



The loop between living conditions and health, and where UP's claim breaks it.

What UP holds about health

UP's aim, set out in the first of its tenets, is the health, happiness and wellbeing of all living things. For people, that aim is measured person by person, not as a total, so no one's wellbeing is traded away to raise an average.[31] A health system that does well on average while some people go without care fails that test, however good its average.

UP's floors, which no decision may cross, protect everyone's basic needs and freedoms, which no gain for others can buy, and its core names health care, beside food, water, shelter, education and connection, among those needs as a starting example for the collective to refine.[32] UP guarantees needs, not every want, and what counts as enough is set together and rises as capacity grows.[32,33] Care is offered, never imposed. UP's agreed position on merit says it plainly: support and health care are offered, never imposed, and choosing not to work is not an illness.[16]

Health in UP is wider than medicine. UP's agreed position on psychological needs adopts Self-Determination Theory's three, autonomy, competence and relatedness, as universal, and says UP is designed to make meeting them the default in all it does: a big upgrade to what is possible, not a claim that the current system meets none of

[31] Core tenet: *The aim: the health, happiness and wellbeing of all living things*: "For people it is measured person by person, not as a total, so no one's wellbeing is traded away to raise an average." Full wording in "The core of UP".
[32] Core tenet: *Floors that are never crossed*: the floors include "everyone's basic needs and protected freedoms, which no gain for others can buy"; "UP guarantees needs, not every want."; "As a starting example for the collective to refine: needs such as food, water, shelter, health care, education and connection". Full wording in "The core of UP".
[33] UP's agreed position on abundance: "UP guarantees needs (food, shelter, health care, education, connection), not every want. What counts as enough is set together and rises as capacity grows." Full wording in UP's agreed positions (the Position Ledger).

them.[34] UP's whole-system position counts health care backed by robotics and AI among the parts of UP that strengthen each other, alongside education open to everyone and improving quickly, a moneyless system that removes the motive for much of today's crime, automation that supplies basic needs at ever lower cost, and a society that works on its problems every day.[35]

UP's agreed claim on health is staged, and it is frank about what is hardest. Early on, UP adds community health work and lay counselling beside the current system's hospitals. As floors spread, much of the poverty behind ill health goes, and UP builds its own clinics and training. New medicines come from UP's own open science and invention, with far more people and AI working on them; they and outbreak response are the hardest parts and remain open work.[29] That last clause matters. UP does not claim to have solved how new medicines are made or how a pandemic is stopped. It names both as work.

Two of UP's principles shape how that work is done: a study lesson drawn from its core, and a core tenet. The lesson is that UP is never only a way of spreading what others have invented: in UP anyone can try anything that might solve a problem, the tools are commons, and an unpopular idea that works rises because of its results, not because a funder or a boss allowed it.[36] And health data, among the most personal data there is, stays under each person's control. UP's rules, code and records are public, but each person controls their own information and chooses what to share.[37] One way UP could run, given in its agreed positions as an illustration, is that data, health data included, is used only with permission: the question travels to the data, and only the answer leaves.[38] The AI that helps doctors and patients proposes and does work, but it never governs; people can always correct, pause or switch it off.[39]

UP at work: one illness, followed through

The question every reader brings is what happens when they are sick, so it helps to follow one illness through UP from start to finish. Take a man in Shane Patrick Boyle's position: living with type 1 diabetes, newly moved to a town, and running short of insulin. One way it could run, built from UP's tenets and agreed positions, follows. It is not an adopted procedure.

The need is a floor, not a purchase. Health care is among the basic needs that UP's floors protect, and no gain for others can buy them.[32] So the first question about his insulin is not whether he can pay for it but how it reaches him. Early on, while UP is small, the insulin still comes through the current system's pharmacies and insurers, paid for as he would pay now, with his own money his own; what UP adds is people who notice when he runs short and help him find it.[29,40] Later, as UP builds its own clinics and making, more of what he needs would come from UP itself.[29]

Care is offered by people nearby. A community health worker or a trained neighbour, the kind of worker Kerala and Zimbabwe already train, checks on him, and a clinic in reach monitors his blood sugar.[29] Care is offered, never imposed: he decides what care he accepts, and choosing differently is not treated as an illness.[16]

His data stays his. His readings, prescriptions and history are among the most personal records there are. He controls them and chooses what to share; one way UP could run is that the question travels to the data and only

[34] UP's agreed position on psychological needs, in full: "Autonomy, competence and relatedness are universal psychological needs (Self-Determination Theory). Good employers and schools already meet them inside today's system, and the book says so. But there it is the exception, and the same wage that supports it can withdraw it. UP is designed to make meeting these needs the default in every role: a big upgrade to what is possible, not a claim that today's system meets none of them." In the position, "the book" refers to the UP book, and the word "role" predates round 11, which settled that UP has no roles or offices in the old sense. Full wording in UP's agreed positions (the Position Ledger).

[35] UP's agreed position on judging UP as a whole system: "UP is a system whose parts strengthen each other: education open to everyone and improving quickly; a moneyless system that removes the motive for much of today's crime; automation that supplies basic needs at ever lower cost; health care backed by robotics and AI; and a society that works on its problems every day." Full wording in UP's agreed positions (the Position Ledger).

[36] UP's study lessons, lesson 15 (a lesson drawn from the settled core, not a Position Ledger entry): "Never describe UP as only spreading what others invented. In UP anyone can try anything that might solve a problem: the tools are commons, the result carries the power, and an unpopular idea that works rises because of its results, not because a funder or boss allowed it." Full wording in UP's study lessons.

[37] Core tenet: *Open systems, shared knowledge, private persons*: "The rules, code, records, decisions and reasons of UP are public, so anyone can check them."; "Each person controls their own information and chooses what to share." Full wording in "The core of UP".

[38] UP's agreed position on the data rule (round 12S, position 11, an illustration of one way UP could run): "data is used only with permission, the question travels to the data, and only the answer leaves; nothing individual is passed on or kept." Full wording in UP's agreed positions (the Position Ledger).

[39] Core tenet: *Technology serves; people decide*: "AI and automation coordinate, propose and do work. They never govern: people can always correct, pause or switch them off." Full wording in "The core of UP".

[40] Core tenet: *Freely joined, ethically grown*, in full: "UP is never imposed. No one is forced to join, to work or to give up what is theirs. It grows by being useful, building on what people already do, and it acts only by ethical means. A means is ethical when it serves the health, happiness and wellbeing of all and crosses none of the floors; UP never starts harm against anyone. What counts as ethical is defined and refined by the collective through UP's method." Also in "The core of UP".

the answer leaves.[37,38] The AI that helps him and his clinicians keep his dose right proposes and does work, but never governs; people can always correct, pause or switch it off.[39]

Each person counts. UP's aim is measured person by person, so a man who goes without insulin is a failure UP must count, not one it can average away.[31] If supplies run short, the shortage is treated as a problem to solve, and the people affected decide how what there is is shared while more is made.[41]

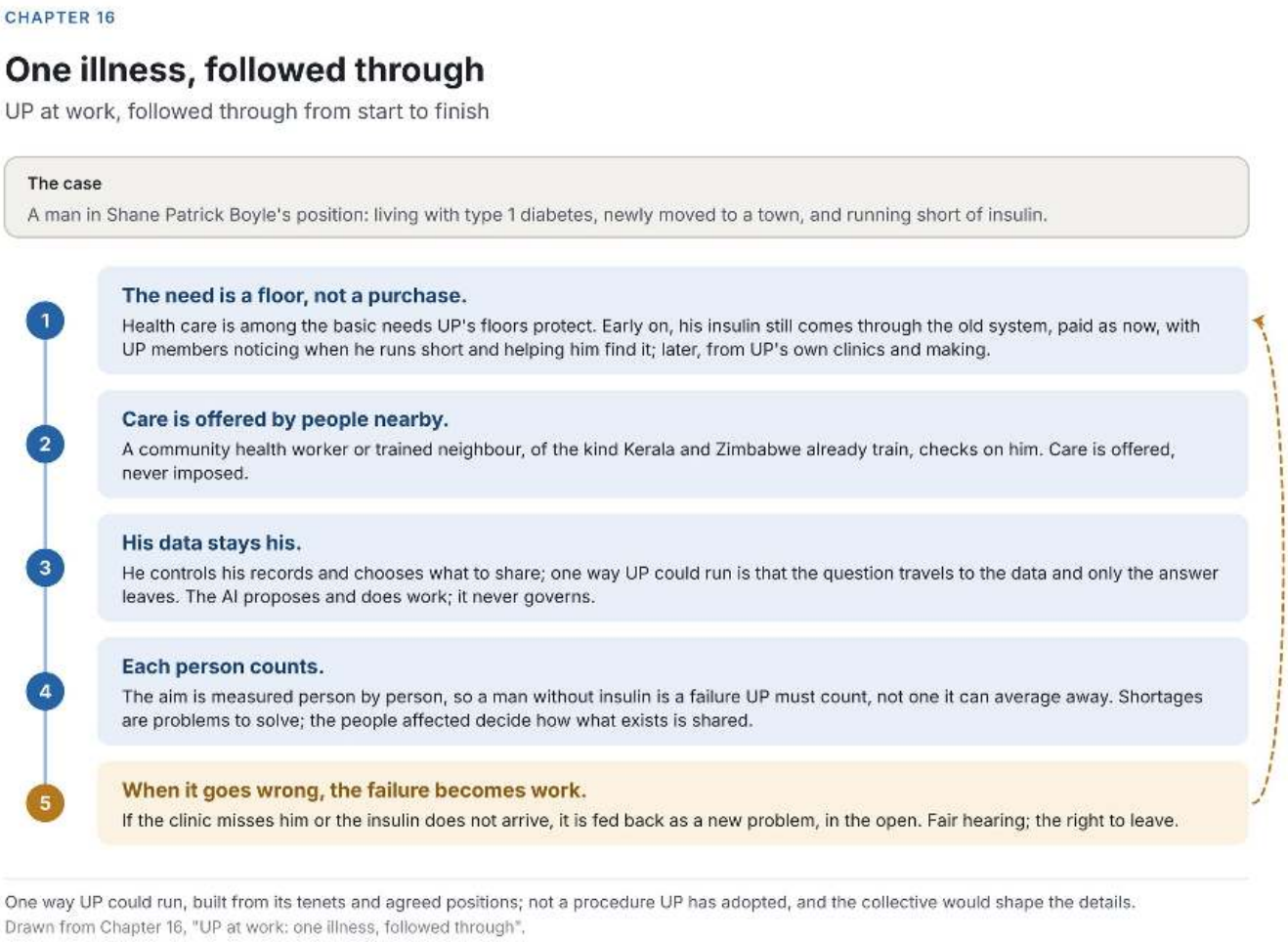
When it goes wrong, the failure becomes work. If the clinic misses him or the insulin does not arrive, the failure is fed back into UP as a new problem to solve, in the open, and anyone may take it up.[42] No one's freedom is restricted without a fair hearing, with the evidence open to them and a way to appeal, and he may leave any group or community at any time, taking what is his.[43]

Set beside what happened to Boyle, the difference is the one this chapter is about. His insulin existed, and a fundraising page stood between him and it. In UP the insulin would not wait on a price, and a neighbour who knew him would know he was running short.

[41] Core tenet: *The method: shared problem solving with evidence*, in full: "Everything in UP runs through one method. Problems are named, measured and offered as work to anyone willing to take them on, whether or not they are affected; the people a problem affects decide its outcome. No problem, solution or method belongs to the person who raised it: anyone may update, reframe or improve it. Solutions are proposed with their evidence, tested and compared, and a better idea replaces a worse one. Every claim that guides shared action can be tested and is open to being proved wrong. Work on the roots of problems is worth the most, but a problem can be worked from any angle. Facts are checked, unknowns become shared work, and matters of taste are never made rules for others. Evidence proposes; people decide." Also in "The core of UP".

[42] Core tenet: *Self-correction: nothing is final, including this*, in full: "Every failure of UP is fed back into it as a new problem to solve, so it keeps improving without revolution. Every part of UP, these tenets included, can be improved through its own method. UP is judged against both today's system and the ideal it aims at: the ideal shows the direction and the gap still to close, and today's record shows whether UP is already doing better. Downsides, risks and fringe problems are named openly and treated as work, never as reasons to keep a status quo that fails so many." Also in "The core of UP".

[43] Core tenet: *Floors that are never crossed*, in full (as amended on 28 October 2026): "UP keeps a set of floors that no decision may cross: everyone's basic needs and protected freedoms, which no gain for others can buy; the living world's capacity to recover, so damage that cannot be undone is never traded for a short-term need; the right to leave any group or community at any time, taking what is theirs; a truthful shared record, so facts, measures and decisions are never falsified; freedom of the mind, so no one's thinking is manipulated without their knowledge or consent; and a fair hearing, so no one's freedom is restricted without a fair, evidence-based hearing, with the evidence open to them and a way to appeal. UP guarantees needs, not every want. The collective defines and refines the floors through UP's method; it may clarify or raise them, but no decision may lower them or push anyone below them. As a starting example for the collective to refine: needs such as food, water, shelter, health care, education and connection; freedoms such as thought, belief, speech, movement and privacy." And: "A protected freedom such as movement may be restricted only to protect others or the person, only through an evidence-based court process, for the shortest time needed, and never below the needs floor. The hearing comes first, except briefly, to stop harm in progress, with a hearing promptly after. Leaving a group or community does not end a restriction set by a fair hearing. These limits are an open problem: they are the best that can be imagined now, and UP is built to find better and better solutions. Above the floors, everything is open to the method." Also in "The core of UP".



One illness, followed through: UP at work, step by step.

What could take the stand-ins' jobs over

Chapter 8's seven developments reach medicine in different ways.[44] Open science and shared knowledge are the most advanced. The AlphaFold Protein Structure Database, made by Google DeepMind with the European Bioinformatics Institute, "provides open access to over 200 million protein structure predictions to accelerate scientific research". Determining the structure of a single protein, as the cardiologist Eric Topol put it, "used to take many months or years, it now takes seconds", and within a year of its first release more than 500,000 researchers in 190 countries had used it.[45] The Drugs for Neglected Diseases initiative, described above, shows medicines developed through a non-profit model, in partnership with industry.[9,46] An open result can be built on by anyone, and that is how invention speeds up.

Insulin itself shows the open route being tried. In 2015 Anthony Di Franco, a computer scientist who has lived with type 1 diabetes since 2005, launched the Open Insulin Project at Counter Culture Labs, a community laboratory in Oakland, California, with a crowdfunding campaign that raised more than $16,000.[47] Its aim, in his words, was the "lowest cost protocol for producing insulin", worked out and documented so that existing generic makers could

[44] Chapter 8, "Money, and the jobs it does", "How money's jobs move to reality" and "How the pieces work together", with their notes: the seven developments.
[45] AlphaFold Protein Structure Database (EMBL-EBI and Google DeepMind), home page: "AlphaFold DB provides open access to over 200 million protein structure predictions to accelerate scientific research." https://www.alphafold.ebi.ac.uk/ ; Google DeepMind, "AlphaFold reveals the structure of the protein universe" (28 July 2022): "To date, more than 500,000 researchers from 190 countries have accessed the AlphaFold DB". https://deepmind.google/discover/blog/alphafold-reveals-the-structure-of-the-protein-universe/ ; Eric Topol, quoted in ScienceAlert (July 2022): "Determining the 3D structure of a protein used to take many months or years, it now takes seconds". https://www.sciencealert.com/ai-predicts-the-shape-of-nearly-every-protein-known-to-science . Checked at source, 13 Nov 2026.
[46] Drugs for Neglected Diseases initiative, *Achievements*: "To date, we have delivered seventeen new treatments, saving millions of lives." https://www.dndi.org/achievements/ . Checked 1 Nov 2026.

take it forward.[48] By 2018 it was an informal collaboration of about a dozen members in Oakland with volunteers in labs in other countries, and it had produced proinsulin from a culture of bacteria.[47] It has not yet put insulin in anyone's hands, and Di Franco himself has called the criticisms of such home-grown efforts valid.[48] What it shows is the direction UP's agreed position takes: in UP anyone can try anything that might solve a problem, the tools are commons, and an idea that works rises because of its results.[36] The open protein structures of AlphaFold and the insulin patent sold for a dollar each a century ago point the same way.

Automation, robotics and AI do the work of care and research at scale. UP's whole-system position counts health care backed by robotics and AI among the parts of UP that strengthen each other.[35] In UP the AI that helps doctors and patients proposes and does work, but it never governs, and people can always correct, pause or switch it off.[39] Doing more with less shows up in the lay health workers described above: the Friendship Bench and Ethiopia's health extension workers stretch the time of scarce doctors and nurses by giving trained members of the community the work they can do well.[10,11] Coordination that counts real things means health records that serve the patient. Each person controls their own information, and, as one way UP could run, the question travels to the data and only the answer leaves.[37,38]

The narrow and intense focus on what is truly scarce points at the hardest parts, which UP's agreed claim names itself: new medicines and outbreak response.[29] A new antibiotic that works against resistant bacteria is truly scarce, and so is the speed needed to stop a new virus. In UP, anyone can try anything that might solve a problem, the tools are commons, and an idea that works rises because of its results, not because a funder chose it.[36] UP's agreed claim projects that far more people and AI working on such problems, in the open, will invent faster. That is a projection, and the claim keeps both parts on the list of open work.[29]

How it could run, stage by stage

UP grows beside the current system, and its agreed position names three stages: early, when UP is a minority network inside the current system; middle, when it has its own productive base and most members' needs are met from what UP produces; and completed, when most people live mainly in UP.[49] UP's agreed claim on health is staged the same way.[29] In the reading UP's author has set out, now going through UP's method, what changes gradually is people, not UP: each person relies on the current system's priced care less as UP meets more of their health needs, and more people make that move.[50] The early stage rests on today's evidence. Each later stage is a projection, with what would have to be shown.

Early: a minority network inside the current system. Early on, UP adds community health work and lay counselling beside the current system's hospitals.[29] Members keep their doctors and their insurance, and their money is their own. The expected benefits are those the evidence already shows: depression treated on a bench by trained lay workers, the chronically ill visited at home by neighbours backed by professionals, and fewer people lost between appointments. People outside UP lose nothing, and community care of this kind tends to reach people the current system misses. What would have to be shown is that UP's community health work matches the results of the Friendship Bench and Kerala's network, in published outcomes.

[47] Makery, "Open Insulin, battle of the DIY diabetic" (24 April 2018): Anthony Di Franco, "computer scientist, type 1 diabetic since 2005 and cofounder of Counter Culture Labs in Oakland, California, launched the Open Insulin Project in 2015, buoyed by a crowdfunding campaign that raised more than $16,000."; "the Open Insulin Project is an informal collaboration that counts around a dozen active members at Counter Culture Labs in Oakland, as well as volunteers in a number of labs around the world"; "the Open Insulin Project team has so far successfully produced proinsulin from a culture of E. coli bacteria." https://www.makery.info/en/2018/04/24/open-insulin-la-bataille-du-diabete-diy/ . Checked at source, 14 Nov 2026.

[48] Vice, "After 92 Years, Biohackers Want to Finally Make Cheap and Generic Insulin", quoting Anthony Di Franco: "We're just trying to get the easiest, simplest to follow, and lowest cost protocol for producing insulin together and documented"; "we're going to see if existing generics manufacturers can take it and go forward with the next steps."; of the criticisms of such projects, these are "valid criticisms," Di Franco said. https://www.vice.com/en/article/after-92-years-biohackers-want-to-finally-make-cheap-and-generic-insulin . Checked at source, 14 Nov 2026.

[49] UP's agreed position on judging UP by stage, beside the current system: UP grows side by side with the current system, "early (a minority network inside it), middle (its own productive base; most members' needs met from what UP produces), completed (most people live mainly in UP)"; "Use today's evidence for the early stage; present the middle and completed stages as a reasoned projection from cited mechanisms, labelled as such." Full wording in UP's study lessons (lesson 13); the Position Ledger (round 12c, position 1) records the same division.

[50] Clarification of the tenet *Reality over fiction* and of UP's agreed position on useful fictions, set out by UP's author on 14 November 2026 and going through UP's method; until the UP Moderator enters it in the Position Ledger, it is the author's stated reading, not yet an agreed position. In substance: the gradual change is in people, not in UP; UP's own system does not run on money, prices, a UP government or UP companies; each person relies on money, governments and corporations less as they use UP more, and the number of people doing so grows; where UP meets the current system (taxes, land title, the legal form needed to hold property, partnership with local governments), it uses only what the law requires, openly recorded and kept to a minimum, and that contact shrinks toward none as the people of an area move fully to UP. Record: LXW Shared Brain, decisions, "2026-11-14 1015 … Gradual change is people's" and "2026-11-14 1005 …".

Middle: UP's own productive base (a projection). As floors spread, much of the poverty behind ill health goes, and UP builds its own clinics and training.[29] The expected benefit is the one the loop between living conditions and health predicts: food, shelter and a life without fear of losing them, met for members as a floor, would cut much of the illness that poverty causes, as cash transfers already do for the deaths of women and children.[12] Care would no longer wait on a price inside UP, and health data would stay with each person.[37] What would have to be shown is better health for members, measured person by person, against today's record.[31]

Completed: most people living mainly in UP (a projection). UP's agreed claim holds that new medicines come from UP's own open science and invention, with far more people and AI working on them, and that they and outbreak response remain the hardest parts and open work.[29] The expected benefit is health care backed by robotics and AI, among the parts of UP that strengthen each other, and medicines made because people need them rather than because they sell.[35] What would persist is the long and costly work of testing new medicines, and the hardest test of all, an outbreak that needs nearly everyone to act at once. At every stage UP is judged against today's record and against the ideal, and every failure is fed back into it as work.[42]

Table 16.1 lays the stages out side by side. Table 16.2 gives the expected benefits by stage, for members, for everyone else and for the living world.

Table 16.1. Health in UP, by stage. The early stage rests on today's evidence; the middle and completed stages are projections.

Stage	What changes	Real precedent	Why it is likely	What persists
Early	Community health work and lay counselling added beside today's hospitals	The Friendship Bench in Zimbabwe; Ethiopia's 40,000 health extension workers	Trained lay workers already deliver care that trials have tested	Hospitals, medicines and their prices remain in the current system
Middle (projection)	Floors remove much of the poverty behind ill health; UP builds its own clinics and training	Cash transfers associated with fewer deaths of women and young children	Meeting basic needs is already linked to lower mortality	New medicines and outbreak response, still open work
Completed (projection)	Health care backed by robotics and AI; new medicines from open science and invention	Non-profit drug development (fexinidazole; seventeen treatments from one initiative)	Far more people and AI working on each problem	New medicines and outbreak response, the hardest parts and still open work

Sources: notes to this section.[51]

Table 16.2. Expected benefits of health in UP, by stage. The early stage rests on today's evidence; the middle and completed stages are projections, drawn from UP's staged claim on health.

Stage	For members	For people outside UP	For the living world	How it would be shown
Early	Community health work and lay counselling beside today's care; the chronically ill visited at home	Nothing taken; community care reaches people clinics miss	Little directly	Outcomes matching the Friendship Bench and Kerala, published
Middle (projection)	Much of the poverty behind ill health gone; care not waiting on a price inside UP; data under each person's control	An open record of results, which anyone can check; anyone may join	Less illness from damaged living conditions	Better health for members, measured person by person
Completed (projection)	Care backed by robotics and AI; medicines made because people need them	Most people live mainly in UP, and no one is forced to	Medicines and care made inside physical limits	Judged against today's record and the ideal; outbreaks remain the hardest test

[51] Table 16.1: the staged claim is card U12 F6 (round 12c; note 29). Precedents: the Friendship Bench (note 10); Ethiopia's health extension workers (note 11); cash and mortality (notes 12 and 13); non-profit drug development (notes 9 and 46); outbreaks (notes 20 and 21). The middle and completed rows are projections (note 49).

Sources: notes to this section.[52]

The household that Chapter 1 introduced shows how this could feel from inside. The household, as always, is an illustration and not evidence.

> *Illustration: one way it could run. The early stage.* The grandfather has diabetes, and after his fall he is low in spirit. The town's UP community has trained a group of older volunteers in a tested form of talking therapy, and one of them sits with him on a bench outside the clinic once a week. A community health worker, also trained by UP volunteers, checks his blood sugar at home and makes sure his prescriptions are filled; the medicines themselves still come from the current system's pharmacy, at the current system's prices.
>
> *Illustration: one way it could run. The middle stage, a projection.* The household's food and shelter now come from UP's own production, and the grandfather's diet has changed with them: the community kitchen cooks for people with diabetes, and nobody chooses between food and medicine. The town's UP clinic, staffed partly by members who trained there, sees him every month. His health data stays his own; when the clinic's researchers want to know whether the kitchen's meals are working, the question goes to the data, and only the answer comes back.
>
> *Illustration: one way it could run. The completed stage, a projection.* An open research network, in which thousands of people and several AI systems work in the open, has produced a cheaper insulin that any community can make, one way the open work on new medicines could turn out. The grandfather's care is planned with him, never for him, and when a new virus appears in another country, the town joins the shared response at once, because it knows that an outbreak anywhere is a problem everywhere.

The strongest objections

The first objection is the one most often asked: without patents and profits, who will invent new medicines? It deserves a serious answer. On the objection's account, patents exist so that a company that spends years developing a medicine can recover what it spent, and much of today's new medicine comes from companies working on those terms. UP's agreed claim does not pretend this is solved. It says that new medicines come from UP's own open science and invention, with far more people and AI working on them, and it names them, with outbreak response, as the hardest parts and open work.[29] What UP adds is a rule about who may try. In UP anyone can try anything that might solve a problem, the tools are commons, and an unpopular idea that works rises because of its results, not because a funder or a boss allowed it.[36] The current system already has a precedent for medicines developed outside the usual profit model. Fexinidazole was developed, in its makers' words, "through an alternative non-profit R&D model", with a drug company, Sanofi, donating the medicine to the World Health Organization; the Drugs for Neglected Diseases initiative says it has now delivered seventeen new treatments.[9,46] That is not proof that open science can replace the pharmaceutical industry. It is evidence that useful medicines can come from non-profit research done in partnership with industry.

The second objection is the hardest, and UP's own claim names it: outbreaks. An epidemic does not respect the boundary between those who have joined a system and those who have not, and stopping one needs near-universal cooperation, fast. The record of COVID-19, with 7 per cent of people in low-income countries having received at least one dose while richer countries passed their 40 per cent target, shows how unequally the current system can share in a crisis.[21] But UP is never imposed, and in its early stage it is a minority network inside the current system.[53,49] It cannot stop an outbreak on its own, and it does not claim to. Outbreak response remains open work in UP's agreed claim.[29] One reading, not agreed doctrine, is that stopping an outbreak will always need cooperation beyond any one network.

A third objection is that lay counsellors and community health workers are second-best care, cheap substitutes for doctors. The trial evidence does not support calling them second-best: in the Friendship Bench trial, lay workers' therapy did better than standard care, and six months later far fewer of those who had it still had symptoms of depression.[10] UP's agreed claim adds community health work and lay counselling beside the current system's hospitals, not instead of them.[29]

[52] Table 16.2. Early row: notes 29, 10, 14 and 15. Middle row: notes 29, 12, 37 and 31. Completed row: notes 29, 35 and 42. Every entry in the middle and completed rows is a projection, drawn from UP's staged claim on health (note 29).

[53] Core tenet: *Freely joined, ethically grown*: "UP is never imposed. No one is forced to join, to work or to give up what is theirs." Full wording in "The core of UP".

A fourth objection is that people will refuse care, or demand care they do not need. UP's agreed position on merit is clear that health care is offered, never imposed.[16] And because UP guarantees needs, not every want, what counts as enough care is set together and rises as capacity grows.[32,33] Measured person by person, a person who goes without care is a failure UP must count, not average away.[31]

Back to Mena, Arkansas

Shane Patrick Boyle died about $50 short of a month of insulin, an old medicine that already existed. UP's answer begins with its floors, which protect everyone's basic needs and name health care among them as a starting example; its aim is measured person by person, and care is offered, never imposed.[32,31,16] Its agreed claim starts with community health work and lay counselling, which today's evidence supports; it projects that much of the poverty behind ill health goes as floors spread; and it names the rest, new medicines and outbreak response, as the hardest parts and open work.[29] UP's early stage would build on practices that today's evidence supports, such as the Friendship Bench and community health work; its middle and completed stages are projections, and every shortfall along the way is to be named openly and treated as work.[49,54]

Health depends on more than clinics: on families, on meaning, and on how people treat one another. Chapter 17 turns to those.

Chapter card: Chapter 16

- **Claim:** The current system has achieved more for health than any before it, through vaccines, public health and medicine, yet billions go without essential care or face financial hardship to pay for it, and people still die for want of medicines that exist. The price of a medicine can drift far from what it costs to make, and the business of making medicines rewards some cures and neglects others, such as new antibiotics. Ill health and poor living conditions feed each other. In UP the floors protect everyone's basic needs, with health care named among them as a starting example; the aim is measured person by person, and care is offered, never imposed. Early on UP adds community health work and lay counselling beside today's hospitals; it projects that, as floors spread, much of the poverty behind ill health goes. Open science, AI and lay health workers can take over much of what prices do in medicine, but new medicines and outbreak response are the hardest parts, and UP names them as open work.
- **Core lines:** the tenets *The aim* (person by person); *Floors that are never crossed* (health care among the needs, as a starting example); *Open systems, shared knowledge, private persons*; *Technology serves; people decide*. Agreed positions: psychological needs; care offered, never imposed; abundance and needs; the current system often monetises a problem instead of solving it; the whole system (health care backed by robotics and AI); the staged claim on health (round 12c). Study lesson 15: UP is never only spreading what others invented; anyone can try anything that might solve a problem. Given as an illustration: the data rule.
- **Rule of thumb:** "Does the medicine reach the person who needs it, and is the condition behind the illness being met too?"
- **What this is not:** a plan to close hospitals, a promise that every illness will be cured, or a claim that UP has solved the making of new medicines or the stopping of pandemics.
- **Check yourself:**
    1. Why could a man die for want of insulin a century after its discoverers sold the patent for a dollar each?
    2. Why does the market neglect new antibiotics, and what does the WHO say about the pipeline?
    3. What did the Commission on Social Determinants of Health conclude, and what is the loop between living conditions and health?
    4. What does UP add to health care first, and why those two things?
    5. Which of Chapter 8's developments could take over jobs that prices do in medicine? Give two examples.
    6. What did the Friendship Bench trial find?
    7. Why does UP call outbreak response one of the hardest parts?
    8. Follow one illness through UP: why is the insulin not a purchase, who offers care, who controls the records, and what happens if supplies run short?
    9. What did Kerala's neighbourhood network and the Open Insulin Project each show, and what benefits does Table 16.2 expect at each stage?
- **Open questions (for the wiki):** how open science pays for the long, costly trials that new medicines need; how a network that grows by choice responds to an outbreak that needs nearly everyone; which parts of today's health system UP should build beside first. (Improve this page.)

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[54] Core tenet: *Self-correction: nothing is final, including this*: "UP is judged against both today's system and the ideal it aims at"; "Downsides, risks and fringe problems are named openly and treated as work, never as reasons to keep a status quo that fails so many." Full wording in "The core of UP".

Chapter 17. Family, Meaning and Morality: Matters of Taste Are Never Rules

Adriane Burnett lives in Birmingham, Alabama, and works as a customer service representative for a manufacturing company. In 2024 she took home about $2,800 a month, and she spent more than a third of it on care for her three-year-old. So she took on more work, delivering food for DoorDash and Uber Eats, and to make the deliveries possible, her 14-year-old had to babysit.[1] The financial stress and the guilt over missing time with her children affected her health: she had panic attacks and fainted at work. She also had to file for bankruptcy and give up her car, because she had fallen behind on the payments.[1]

Burnett's story is harder than most, but its pressures are common, as the figures below show. What she is short of is time and money, and the two pull against each other: every hour she earns is an hour away from the children she is earning for. The question this chapter takes up is the one a parent in her position might ask of any new way of organising society. Would it help, or would it only add a new set of rules about how she should live?

That question has a second half that many readers ask first. Will UP tell people how to raise their children, what to believe or how to live? The chapter answers both halves. It looks at how the current system bears on family life, and at the stand-in behind much of the pressure Burnett felt: a wage that decides whether a family can live, paid for hours that are taken from the family. It sets out what UP holds about family, meaning and belief, and where morality comes from in UP if not from a rule handed down, with a building in Berlin that shows the idea in stone. It then follows one disagreement through UP, step by step, to show how a matter of taste is kept from becoming a rule. It looks at what could ease the pressure on families, with the evidence from Iceland of what families do with hours handed back, at how that could change at each stage of UP's growth and what each stage is expected to bring, and at the strongest objections, beginning with the fear that UP is hostile to religion.

How the current system bears on family life

The current system has given families important protections. The Universal Declaration of Human Rights, adopted in 1948, protects everyone's freedom of thought, conscience and religion, including the freedom to change one's religion or belief, and gives parents a prior right to choose the kind of education their children receive.[2] Since Sweden led the way in 1979, 70 states have banned all corporal punishment of children.[3] Research points the same way, though the studies are correlational: the World Health Organization reports that corporal punishment is linked to a range of negative outcomes for children across countries and cultures, and a review of five decades of research involving more than 160,000 children found that the more children are spanked, the more likely they are to defy their parents.[4,5]

[1] The Associated Press, "America's child care crisis is holding back moms without college degrees" (23 April 2024), as published by the *Bangor Daily News*: "Adriane Burnett takes home about $2,800 a month as a customer service representative for a manufacturing company."; "She spends more than a third of that on care for her 3-year-old."; "So she took on more work, delivering food for DoorDash and Uber Eats."; "To make the deliveries possible, her 14-year-old has to babysit."; "The financial stress and guilt over missing time with her kids have affected her health, Burnett said."; "She has had panic attacks and has fainted at work."; "Even so, Burnett had to file for bankruptcy and forfeit her car because she was behind on payments." https://www.bangordailynews.com/2024/04/23/nation/americas-child-care-crisis-is-holding-back-moms-without-college-degrees/ . The report places her in Birmingham, Alabama. The AP's own page could not be read. Checked 1 Nov 2026.

[2] United Nations, *Universal Declaration of Human Rights* (1948), Article 18: "Everyone has the right to freedom of thought, conscience and religion;"; "this right includes freedom to change his religion or belief,"; "and freedom, either alone or in community with others and in public or private,"; "to manifest his religion or belief in teaching, practice, worship and observance."; Article 26(3): "Parents have a prior right to choose the kind of education that shall be given to their children." https://www.un.org/en/about-us/universal-declaration-of-human-rights . Checked 1 Nov 2026.

[3] End Corporal Punishment (Global Partnership to End Violence against Children), *Countdown to universal prohibition*: "70 states have full prohibition of corporal punishment"; "25 more states have committed to reforming their laws to achieve a complete legal ban". https://endcorporalpunishment.org/countdown/ . The page's list begins with Sweden in 1979. Checked 1 Nov 2026.

[4] World Health Organization, *Corporal punishment and health*, fact sheet: "Corporal punishment is linked to a range of negative outcomes for children across countries and cultures"; "Some 17% of children have experienced severe physical punishment". https://www.who.int/news-room/fact-sheets/detail/corporal-punishment-and-health . Checked 1 Nov 2026.

[5] University of Texas at Austin, "Risks of Harm from Spanking Confirmed by Analysis of Five Decades of Research" (25 April 2016), on Elizabeth Gershoff and Andrew Grogan-Kaylor's meta-analysis in the *Journal of Family Psychology*: "looks at five decades of research involving over 160,000 children."; "The more children are spanked, the more likely they are to defy their parents". https://news.utexas.edu/2016/04/25/risks-of-harm-from-spanking-confirmed-by-researchers . The studies are correlational. Checked 1 Nov 2026.

The pressures sit beside the protections. Parents in the United States carry a heavier load of stress than other adults: in figures reported by the Surgeon General's 2024 advisory, 48 per cent of parents said that on most days their stress was completely overwhelming, against 26 per cent of other adults, and the advisory lists financial strain and time demands among parents' stressors.[6] In 2022, full-day care for one child cost families between 8.9 and 16 per cent of median family income.[7] The vast majority of parents say parenting is enjoyable and rewarding most of the time, but about four in ten say it is tiring, and 29 per cent say it is stressful, all or most of the time.[8]

Connection itself is a health matter. A review of 148 studies found that people with stronger social relationships had a 50 per cent greater likelihood of survival over the periods studied, an effect comparable with well-established risk factors for death.[9] In 2025 the World Health Organization's Commission on Social Connection reported that 1 in 6 people worldwide is affected by loneliness, which it linked to an estimated 100 deaths every hour, more than 871,000 a year.[10]

The current system has also not always kept its promise on belief. In 2023, by the Pew Research Center's count, 58 of the 198 countries and territories it studied had high or very high levels of government restrictions involving religion, one fewer than the peak of 59 a year earlier.[11]

What the stand-in does to a family's time

Burnett's story turns on a trade that the current system forces on millions of families. Her survival, and her children's, depended on a wage, so every hour she spent with them had to be bought back from the hours she could sell. When care for her youngest cost more than a third of what she took home, the only way to pay for it was to sell more hours, and the only way to sell them was to take her older child's time as well.[1] Chapter 14 traced the same bind in work: a wage that decides whether a person can live turns its other jobs into pressure, and the care a family needs is the work it is paid least for, or not at all.[12] Chapter 12 found that root under several rows of the scoreboard.[13]

The pressure has measurable costs. Parents in the United States report overwhelming stress far more often than other adults, and financial strain and time are among the reasons the Surgeon General's advisory gives.[6] Full-day care for one child cost between 8.9 and 16 per cent of median family income in 2022.[7] And the time that families lose is also time lost to connection, which is itself a health matter: people with stronger social relationships are markedly more likely to survive over the years researchers follow them, and loneliness, which affects 1 in 6 people in the world, was linked by the World Health Organization's commission to more than 871,000 deaths a year.[9,10]

None of this means that the current system is indifferent to families, and the protections it has written down, described below, are real. It means that as long as a family's survival is bought with hours sold, time with each other is what the family spends to stay alive. In UP's terms, the gap is not between families that care and families that do not. It is between the time a family needs and the time the stand-in leaves it.

[6] US Surgeon General, *Parents Under Pressure: The U.S. Surgeon General's Advisory on the Mental Health and Well-Being of Parents* (August 2024): "48% of parents say that most days their stress is completely overwhelming compared to 26% among other adults."; "Financial strain, economic instability, and poverty"; "Time demands". https://www.hhs.gov/surgeongeneral/reports-and-publications/parents/index.html . Checked 1 Nov 2026.

[7] US Department of Labor, Women's Bureau, news release (19 November 2024): "Nationwide, the NDCP finds families spend between 8.9 percent and 16 percent of their median income for full-day care"; "for one child with 2022 annual prices ranging from $6,552 to $15,600." https://www.dol.gov/newsroom/releases/wb/wb20241119 . Checked 1 Nov 2026.

[8] Rachel Minkin and Juliana Menasce Horowitz, Pew Research Center, *Parenting in America Today* (24 January 2023): "About four-in-ten parents (41%) say being a parent is tiring and 29% say it is stressful all or most of the time."; "The vast majority of parents say being a parent is enjoyable and rewarding all or most of the time". https://www.pewresearch.org/social-trends/2023/01/24/parenting-in-america-today/ . Checked 1 Nov 2026.

[9] Julianne Holt-Lunstad, Timothy B. Smith and J. Bradley Layton, *Social Relationships and Mortality Risk: A Meta-analytic Review*, *PLOS Medicine* 7(7): e1000316 (27 July 2010), abstract: "Across 148 studies (308,849 participants), the random effects weighted average effect size was OR = 1.50"; "(95% CI 1.42 to 1.59), indicating a 50% increased likelihood of survival"; "for participants with stronger social relationships."; "The influence of social relationships on risk for mortality is comparable with well-established risk factors for mortality." https://journals.plos.org/plosmedicine/article?id=10.1371/journal.pmed.1000316 . Observational studies. Checked 1 Nov 2026.

[10] World Health Organization, "Social connection linked to improved health and reduced risk of early death", news release (30 June 2025): "Loneliness is linked to an estimated 100 deaths every hour"; "revealing that 1 in 6 people worldwide is affected by loneliness"; "Social connection can protect health across the lifespan." https://www.who.int/news/item/30-06-2025-social-connection-linked-to-improved-heath-and-reduced-risk-of-early-death . The release gives the annual figure as more than 871,000 deaths, a modelled estimate. Checked 1 Nov 2026.

[11] Samirah Majumdar and Vivian Jacobs, Pew Research Center, "More Countries Had Elevated Levels of Social Hostilities Involving Religion in 2023" (15 June 2026): "58 countries (out of 198 analyzed) had high or very high levels of government restrictions involving religion in 2023"; "just one fewer than the peak number, 59, recorded in 2022." https://www.pewresearch.org/religion/2026/06/15/more-countries-had-elevated-levels-of-social-hostilities-involving-religion-in-2023/ . Checked 1 Nov 2026.

[12] Chapter 14, "What the wage does, and what it costs", "What could take the wage's jobs over" and "Care: the work that holds the rest up", with their notes (the labour budget; the fair rota as one possible way).

[13] Chapter 12, "Why the failures share roots" and Table 12.3, rows F2 and F5, with their notes.

What UP holds about family, meaning and belief

The short answer to this chapter's question is in two of UP's tenets. UP makes no rule for anyone on a matter of taste, and belief is among the protected freedoms its floors never cross; where a family's choices meet a child's own floors, the floors decide. The first tenet is a floor. Among the floors that no decision in UP may cross are everyone's protected freedoms, and UP's core gives thought, belief, speech, movement and privacy as a starting example of them, for the collective to refine. A separate floor protects freedom of the mind, so that no one's thinking is manipulated without their knowledge or consent.[14] The second is in UP's method. Facts are checked and unknowns become shared work, but matters of taste are never made rules for others.[15] UP's agreed position on public discourse applies the same line to everything said in UP: where a statement is a matter of taste, it is marked as such and can never be made a rule for others.[16] Even UP's coordinating AI is bound by it; it never rules on matters of taste.[17]

How a family arranges its days, what it eats, how it marks births, marriages and deaths, what it hopes for its children: where these are matters of taste, UP's method never makes them rules for others.[15] What a person believes, or does not believe, is among the freedoms the floors protect.[14] The limit is the floors themselves, which protect everyone's basic needs and freedoms, children's included, and which no gain for others can buy.[14]

UP also protects the private side of family life. Each person controls their own information and chooses what to share, so a household's life is not open to the community's inspection because the community's systems are open.[18] And UP is never imposed: no one is forced to join, and anyone may leave any group or community at any time, taking what is theirs.[19,14]

Where morality comes from in UP

If UP makes no rule on matters of taste, what holds it together? The question deserves a straight answer, because a society needs some shared sense of right and wrong, and many people find theirs in a tradition or a faith. UP's shared commitments are few, written down and open to anyone to read. Its aim is the health, happiness and wellbeing of all living things, measured for people person by person, never as a total.[20] Its floors are never crossed: everyone's basic needs and protected freedoms, the living world's capacity to recover, the right to leave, a truthful shared record, freedom of the mind and a fair hearing.[14] And it acts only by ethical means. A means is ethical, in the words of UP's core, when it serves the health, happiness and wellbeing of all and crosses none of the floors, and UP never starts harm against anyone. What counts as ethical is defined and refined by the collective through UP's method.[21]

That is a smaller morality than most traditions offer, and it is meant to be. It says what no one may do to anyone else, and what UP aims at together. It does not say how anyone should pray, marry, raise children or spend a Sunday, and it leaves room for every tradition that crosses none of the floors to go on giving its members a fuller answer. In UP's terms, morality has two layers. The thin layer is shared by everyone and defended by the floors. The thick layer, the one that gives a life its meaning, belongs to each person, family and community that chooses it, and where it is a matter of taste, it is never made a rule for anyone else.[15]

[14] Core tenet: *Floors that are never crossed*: the floors include "everyone's basic needs and protected freedoms, which no gain for others can buy"; "freedom of the mind, so no one's thinking is manipulated without their knowledge or consent"; "the right to leave any group or community at any time, taking what is theirs"; "As a starting example for the collective to refine: needs such as food, water, shelter, health care, education and connection; freedoms such as thought, belief, speech, movement and privacy." Full wording in "The core of UP".

[15] Core tenet: *The method: shared problem solving with evidence*: "Facts are checked, unknowns become shared work, and matters of taste are never made rules for others. Evidence proposes; people decide." Full wording in "The core of UP".

[16] UP's agreed position on public discourse (DP-007): "Where a claim can be checked, it is checked, with its sources and confidence shown."; "Where a statement is a matter of taste, it is marked as such and can never be made a rule for others." Full wording in UP's agreed positions (the Position Ledger).

[17] UP's agreed position on what the AI is, the coordinator that proposes: the AI "publishes evidence-based proposals with their data and confidence, marks what is still unknown as shared work for people and AI, and never rules on matters of taste." Full wording in UP's agreed positions (the Position Ledger).

[18] Core tenet: *Open systems, shared knowledge, private persons*: "Each person controls their own information and chooses what to share." Full wording in "The core of UP".

[19] Core tenet: *Freely joined, ethically grown*: "UP is never imposed. No one is forced to join, to work or to give up what is theirs. It grows by being useful, building on what people already do, and it acts only by ethical means." Full wording in "The core of UP".

[20] Core tenet: *The aim: the health, happiness and wellbeing of all living things*: "For people it is measured person by person, not as a total, so no one's wellbeing is traded away to raise an average." Full wording in "The core of UP".

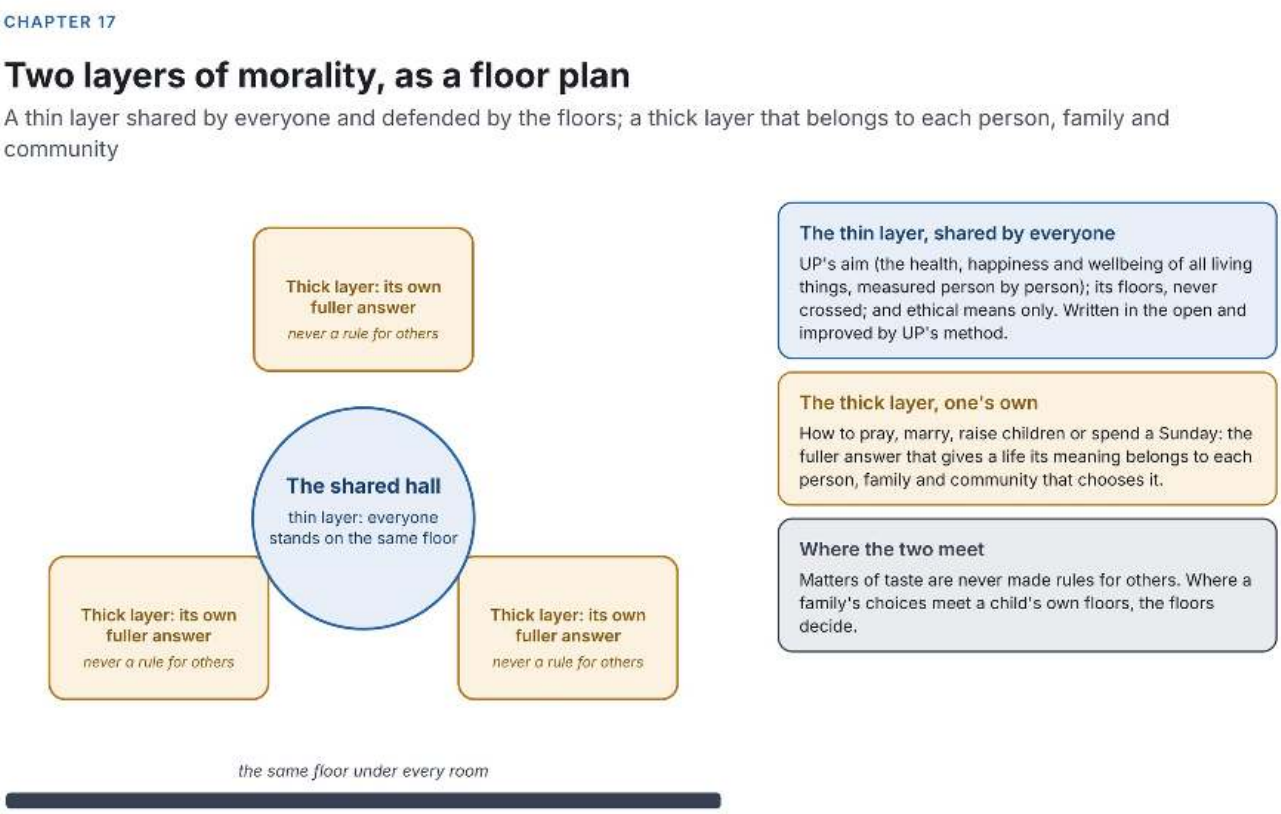
[21] Core tenet: *Freely joined, ethically grown*: "UP is never imposed. No one is forced to join, to work or to give up what is theirs."; "A means is ethical when it serves the health, happiness and wellbeing of all and crosses none of the floors; UP never starts harm against anyone. What counts as ethical is defined and refined by the collective through UP's method." Full wording in "The core of UP".

Berlin is building that two-layer arrangement in stone. On Petriplatz, on the old foundations of St Peter's Church, which was damaged in the Second World War and demolished in the GDR years, Jews, Christians and Muslims laid the foundation stone of the House of One on 27 May 2021.[22] The design, chosen in an international competition in 2012, puts a synagogue, a church and a mosque under one roof. Each faith keeps its own way of worship in its own room, and the three rooms are grouped around a high domed hall at the centre, a meeting space open to all.[23,22] Its founders explicitly invite people of other religions and world views, and the secular city around it, into that hall. The building was costed at 47 million euros, with nearly eight million still to be raised when the stone was laid, and four years were planned for its construction.[22] The House of One is one answer to a trend this chapter has already counted: in 2023, 58 of the 198 countries Pew studied had high or very high levels of government restriction on religion.[11] Where that trend gives one faith, or the state, the power to set the rules for everyone, the House of One gives each faith its own room and all of them a shared hall. It is a project of the current system, not of UP. In UP's terms, it shows the two layers of morality as a floor plan: the thick layer in each room, where every tradition gives its members its own fuller answer and none makes it a rule for the others, and the thin layer in the hall, where everyone stands on the same floor.[15,14]

The same line runs through how UP talks. UP's agreed position on public discourse says that a claim that can be checked is checked, with its sources and confidence shown, and a statement that is a matter of taste is marked as such and can never be made a rule for others.[16] UP's coordinating AI is bound by the same rule and never rules on matters of taste.[17] Morality in UP is therefore not handed down by an office, a text or a machine. The thin layer is written in the open and improved by UP's method; the thick layer is lived.

[22] House of One, "A cornerstone for church, synagogue and mosque" (27 May 2021): "a new type of sacred building is being built with a synagogue, a church and a mosque under one roof", connected by a meeting space at the centre of the building that is open to all; "The House of One will be built on the historic foundations of the former St. Peter's Church."; "The church, which was damaged in World War II, was completely demolished in GDR times."; "People of other religions and world views as well as the secular urban society are explicitly invited."; "The total cost of the building sums up to 47 million Euro."; "The remaining gap of nearly eight million Euro is to be closed by a large capital campaign."; "Four years are envisaged for the construction of the House of One." https://house-of-one.org/en/news/cornerstone-church-synagogue-and-mosque . Checked at source, 14 Nov 2026. This chapter does not claim the building is finished.

[23] Domus, "Kuehn Malvezzi's sacred site in Berlin approaches construction" (13 May 2021): "After winning an international architectural competition in 2012"; "The three Abrahamic religions claim their respective liturgical autonomy, with synagogue, church and mosque grouped around a central square."; "This, a high domed hall, is the central meeting area". https://www.domusweb.it/en/architecture/gallery/2021/05/13/kuehn-malvezzis-inclusive-sacred-site-approaches-construction.html . Checked 14 Nov 2026.



Two layers of morality, as a floor plan: each tradition's own room around a shared hall on one floor.

UP at work: one disagreement, followed through

UP's rule that "matters of taste are never made rules for others" is easy to accept until two people's tastes need the same room.[24] So it helps to follow one disagreement through UP from start to finish. Take the community kitchen that the town's UP members share, one of the commons Chapter 13 described.[25] Some members ask that the kitchen close on their holy day, because they believe the day should be kept free of work. Others rely on the kitchen for a hot meal that day, among them the care worker from Chapter 1, who works weekend shifts. What follows is one way UP could run. It is not a procedure UP has adopted.

The disagreement is named as a problem, not settled by whoever is loudest. It is written down and offered as work to anyone willing to take it on, and the people it affects, those who keep the day and those who eat there, decide its outcome.[24] No one gains the power to decide it by holding a position, because UP has no offices to hold.[26]

[24] Core tenet: *The method: shared problem solving with evidence*, in full: "Everything in UP runs through one method. Problems are named, measured and offered as work to anyone willing to take them on, whether or not they are affected; the people a problem affects decide its outcome. No problem, solution or method belongs to the person who raised it: anyone may update, reframe or improve it. Solutions are proposed with their evidence, tested and compared, and a better idea replaces a worse one. Every claim that guides shared action can be tested and is open to being proved wrong. Work on the roots of problems is worth the most, but a problem can be worked from any angle. Facts are checked, unknowns become shared work, and matters of taste are never made rules for others. Evidence proposes; people decide." Also in "The core of UP".

[25] Chapter 13, "What UP holds about needs" and "How the jobs of price get done", with their notes: the floor of needs, which never depends on work, and the agreed position on beautiful commons and modest private space.

[26] Core tenet: *Open participation: anyone may take part; those affected decide*, in full: "Anyone may take part in any problem, and the people it affects decide its outcome. There are no offices to hold: work is shared out, not owned, so no one gathers power by holding a position. Where work needs skill, skill is shown by open, testable standards that anyone can work toward and anyone can propose to change, and education is open to everyone, at every age, so anyone can gain the skills any work requires." Also in "The core of UP".

What is fact is checked; what is taste stays taste. How many people eat at the kitchen on that day, who cooks, and whether another kitchen is within reach are facts, and they are checked and published with their sources.[24,16] Whether the day is holy is a matter of belief. UP's method never makes it a rule for others, so the kitchen cannot be closed for everyone because some hold the day sacred. Nor can those who do not keep it make the believers work; belief is a protected freedom, and no one in UP is forced to work.[15,14,27]

The people affected decide how the shared space is shared. One way they could settle it: the kitchen stays open on the holy day, cooked by those who choose to cook that day, while the members who keep the day are released from the rota for it and take extra turns on another. Another way: a smaller kitchen opens that day elsewhere. The options and their evidence are published, and whichever is chosen can be changed when a better idea comes.[24,26]

The floors set the limits of any decision. Whatever the kitchen decides, it cannot leave anyone who depends on it for a meal, a child above all, without one that day; basic needs are a floor that no decision may cross.[28] And no one's thinking may be worked on without their knowledge or consent, so neither side may press the other to change its belief.[28]

A fair hearing, and the right to leave. A member who feels the decision wronged them can ask for a fair hearing, with the evidence open to them and a way to appeal, and anyone may leave the kitchen, or the community, at any time, taking what is theirs.[28]

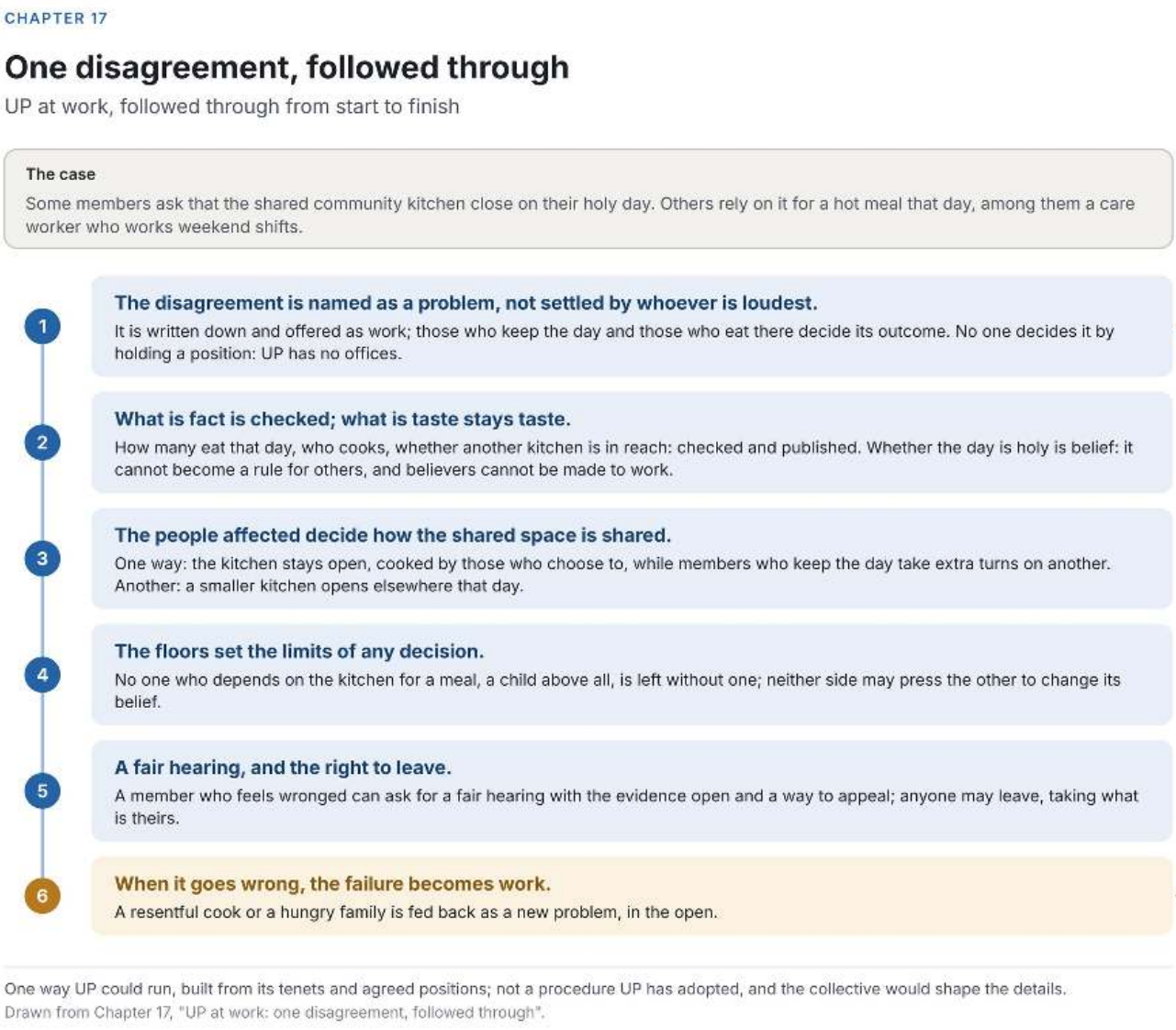
When it goes wrong, the failure becomes work. If the arrangement leaves a cook resentful or a family hungry, the failure is fed back into UP as a new problem to solve, in the open, and anyone may take it up.[29]

In the current system, a dispute like this is usually settled by whoever owns the room, or by a majority, or by law. In UP it is settled by the people it affects, inside floors no one may cross, and the one thing that cannot win is a demand that someone else live by your taste.

[27] Core tenet: *Freely joined, ethically grown*, in full: "UP is never imposed. No one is forced to join, to work or to give up what is theirs. It grows by being useful, building on what people already do, and it acts only by ethical means. A means is ethical when it serves the health, happiness and wellbeing of all and crosses none of the floors; UP never starts harm against anyone. What counts as ethical is defined and refined by the collective through UP's method." Also in "The core of UP".

[28] Core tenet: *Floors that are never crossed*, in full (as amended on 28 October 2026): "UP keeps a set of floors that no decision may cross: everyone's basic needs and protected freedoms, which no gain for others can buy; the living world's capacity to recover, so damage that cannot be undone is never traded for a short-term need; the right to leave any group or community at any time, taking what is theirs; a truthful shared record, so facts, measures and decisions are never falsified; freedom of the mind, so no one's thinking is manipulated without their knowledge or consent; and a fair hearing, so no one's freedom is restricted without a fair, evidence-based hearing, with the evidence open to them and a way to appeal. UP guarantees needs, not every want. The collective defines and refines the floors through UP's method; it may clarify or raise them, but no decision may lower them or push anyone below them. As a starting example for the collective to refine: needs such as food, water, shelter, health care, education and connection; freedoms such as thought, belief, speech, movement and privacy." And: "A protected freedom such as movement may be restricted only to protect others or the person, only through an evidence-based court process, for the shortest time needed, and never below the needs floor. The hearing comes first, except briefly, to stop harm in progress, with a hearing promptly after. Leaving a group or community does not end a restriction set by a fair hearing. These limits are an open problem: they are the best that can be imagined now, and UP is built to find better and better solutions. Above the floors, everything is open to the method." Also in "The core of UP".

[29] Core tenet: *Self-correction: nothing is final, including this*, in full: "Every failure of UP is fed back into it as a new problem to solve, so it keeps improving without revolution. Every part of UP, these tenets included, can be improved through its own method. UP is judged against both today's system and the ideal it aims at: the ideal shows the direction and the gap still to close, and today's record shows whether UP is already doing better. Downsides, risks and fringe problems are named openly and treated as work, never as reasons to keep a status quo that fails so many." Also in "The core of UP".



One disagreement, followed through: UP at work, step by step.

What could ease the pressure on families

What UP offers families is not advice. It is time and security, through the floor and the commons described in earlier chapters, and Chapter 8's developments show where they could come from.[30] UP's agreed positions hold that autonomy, competence and relatedness are universal psychological needs, and connection is among the needs its core names as a starting example.[31,32] The floor of needs, which never depends on work, cuts the link between a family's survival and the hours it sells.[25] As UP produces for its members' needs, survival stops depending on a job; that is UP's staged claim on work, and it is a projection.[33] Care, the work Burnett could not afford to buy, can be put on a community's labour budget and shared, with a published rota as one possible way, so that it no longer falls by default on whoever is nearest.[12] And the commons that Chapter 13 described, generous

[30] Chapter 8, "Money, and the jobs it does", "How money's jobs move to reality" and "How the pieces work together", with their notes: the seven developments.
[31] UP's agreed position on psychological needs: "Autonomy, competence and relatedness are universal psychological needs (Self-Determination Theory). Good employers and schools already meet them inside today's system, and the book says so. But there it is the exception, and the same wage that supports it can withdraw it." In the position, "the book" refers to the UP book. Full wording in UP's agreed positions (the Position Ledger).
[32] UP's agreed position on abundance: "UP guarantees needs (food, shelter, health care, education, connection), not every want. What counts as enough is set together and rises as capacity grows." Full wording in UP's agreed positions (the Position Ledger).
[33] UP's agreed staged claim on work (round 12c, card F5): "As UP produces for its members' needs, survival stops depending on a job, and AI and automation serve those needs rather than profit." Full wording in the round 12c record.

kitchens, gardens, workshops and quiet places shared by everyone, are places where families meet other families, which answers part of the loneliness the WHO's commission counted.[25,10]

The other developments work in the background. Automation that takes over the work nobody wants frees hours; open designs and shared tools mean fewer things to earn money for; and the focus on what is truly scarce puts people's time where it matters most, and for a family that is often time with each other.[12,30] UP reasons that, as these spread, more of a family's time becomes its own. That is a projection, and UP does not say what a family should do with the time. How it uses it is its own affair.

There is evidence of what families do with hours that are handed back. From 2015 to 2019, Reykjavík City Council and Iceland's national government ran two large trials in which public-sector workers moved to a week of 35 or 36 hours with no cut in pay; by the end they included 2,500 workers, more than 1 per cent of the country's working population.[34] In most of the workplaces, productivity and service provision stayed the same or improved, and wellbeing rose on measures from stress and burnout to health and work-life balance.[35] What matters for this chapter is what happened at home. Many men in heterosexual couples took a greater share of the cooking and cleaning, stress at home commonly fell, parents said that mornings had become "easier and less stressful", and the single parents in one study reported more time with their children.[35] After the trials, unions negotiated shorter hours, and by 2021 roughly 86 per cent of Iceland's working population had either moved to shorter hours or gained the right to shorten them.[35] Iceland is part of a wider trend. A follow-up report by the same researchers counted pilots since then in more than 60 companies in the United Kingdom and in the United States, Ireland and South Africa, and found that 78 per cent of Icelandic workers were satisfied with their working time.[36] The trials ran in public-sector workplaces, and they cut the week by about a tenth; they did not free anyone's survival from the hours they sell, and they are not UP. In UP's terms, they show the direction of UP's staged claim on work: as survival depends less on a job, time comes back to families, and what each family did with it was its own affair.[33,15]

How it could feel, stage by stage

UP grows beside the current system, and its agreed position names three stages: early, when UP is a minority network inside the current system; middle, when it has its own productive base and most members' needs are met from what UP produces; and completed, when most people live mainly in UP.[37] There is no staged claim for family life among UP's agreed positions; where how a family lives is a matter of taste, UP's method never makes it a rule for others.[15] What could change from stage to stage is the pressure on families, through the staged claims set out in earlier chapters: needs met from shared production, and survival that stops depending on a job.[25,33] The benefits below are drawn from those claims, from the evidence in this chapter and from UP's tenets, and they are labelled as such. In the reading UP's author has set out, now going through UP's method, what changes gradually is people, not UP: each family relies less on a wage to survive as UP meets more of its needs, and more families make that move.[38] The early stage rests on today's evidence. The later stages are projections, each with its test.

[34] Autonomy, "Going Public: Iceland's Journey to a Shorter Working Week", summary page (4 July 2021): "From 2015-2019, Iceland ran two large-scale trials of a reduced working week of 35-36 hours with no reduction in pay."; "Analysis of the results which included 2,500 workers – over 1% of Iceland's entire working population –"; "The trials also remained revenue neutral for both the city council and the government". https://autonomy.work/portfolio/icelandsww/ . Alda's own announcement of the same date: "The trials were run by both Reykjavik City and the Icelandic government." https://en.alda.is/2021/07/04/going-public-icelands-journey-to-a-shorter-working-week/ . Both checked at source, 14 Nov 2026.

[35] Alda (Association for Sustainability and Democracy) and Autonomy, *Going Public: Iceland's Journey to a Shorter Working Week* (June 2021), executive summary: "Productivity and service provision remained the same or improved across the majority of trial workplaces." (p. 6); "Worker wellbeing increased across a range of indicators, from perceived stress and burnout, to health and work-life balance." (p. 7); "In total, roughly 86% of Iceland's entire working population has now either moved to working shorter hours" "or have gained the right to shorten their working hours." (p. 7). On home life: "Many male participants in heterosexual relationships took a greater role in home duties after the trial started," "especially around cleaning and cooking." (p. 43); "Stress was commonly reduced in the home after reducing working hours."; "Parents often said that mornings at home had become easier and less stressful, as there was now more time to get to work." (p. 44); "One of the studies specifically looked into the effects of shorter working hours on single parents."; "The single parents reported having increased time they could spend with their children," (p. 45). Page numbers from the report's running headers. https://en.alda.is/wp-content/uploads/2021/07/ICELAND_4DW.pdf . Checked at source, 14 Nov 2026.

[36] The Autonomy Institute, *On Firmer Ground* (2024), a follow-up report on working time in Iceland published with Alda: "A large majority of Icelandic workers (78%) are satisfied with their present working time."; since the 2021 report, "an explosion of successful experimentation with shorter working hours around the world: from a pilot scheme of over 60 UK companies," "and similar pilots in the US, Ireland and South Africa". https://alda.is/wp-content/uploads/2024/11/on-firmer-ground.pdf . Checked 14 Nov 2026. Both reports are by organisations that campaign for shorter hours.

[37] UP's agreed position on judging UP by stage, beside the current system: UP grows side by side with the current system, "early (a minority network inside it), middle (its own productive base; most members' needs met from what UP produces), completed (most people live mainly in UP)"; "Use today's evidence for the early stage; present the middle and completed stages as a reasoned projection from cited mechanisms, labelled as such." Full wording in UP's study lessons (lesson 13); the Position Ledger (round 12c, position 1) records the same division.

[38] Clarification of the tenet *Reality over fiction* and of UP's agreed position on useful fictions, set out by UP's author on 14 November 2026 and going through UP's method; until the UP Moderator enters it in the Position Ledger, it is the author's stated reading, not yet an agreed position. In substance: the gradual change is in people, not in UP; UP's own system does not run on money, prices, a UP government or UP companies; each person relies on money,

Early: a minority network inside the current system. Early on, members keep their jobs and their wages, and their money is their own.[38] What UP adds is the commons and shared care: a community kitchen, a repair table and quiet places where families meet other families, and care that can be put on a community's labour budget and shared, so that it no longer falls by default on whoever is nearest.[25,12] The expected benefits are modest and are those today's evidence supports: less of the loneliness the WHO's commission counted, and a little more time and help for families like Burnett's.[10] Nothing about belief changes, because UP makes no rule on it. People outside UP lose nothing. What would have to be shown is that members report more time with their families and less loneliness, measured person by person, and that complaints of pressure on anyone's belief or way of life are heard fairly and in the open.[20,28]

Middle: UP's own productive base (a projection). As UP produces for its members' needs, survival stops depending on a job; that is UP's staged claim on work.[33] The expected benefit for families is the one Iceland's trials point toward, on a larger scale: hours handed back, more shared housework, easier mornings and more time between parents and children, and for a parent in Burnett's position, no longer having to trade time with her children for the money to keep them.[35,33] People outside UP see an open record of how members' time and wellbeing change, which anyone can check, and anyone may join. What would have to be shown is that members' time with their families rises and their stress falls against today's record, measured person by person, and that every child's floors are kept.[37,20]

Completed: most people living mainly in UP (a projection). UP's agreed positions name no completed stage for family life, so this paragraph is drawn from the staged claim on work and from the tenets. With most people living mainly in UP, a family's time would be largely its own, and the many thick moralities, religious and secular, would live side by side, each in its own room, on one shared floor.[33,15,14] What would persist is the danger this chapter names below, a UP way of life pressing on those who live differently; it is never solved once and for all, and it stays open work.[39] At every stage UP is judged against today's record and against the ideal, and every failure is fed back into it as work.[29]

Table 17.1 gives the expected benefits by stage. The household that Chapter 1 introduced shows how the stages could feel from inside. This is an illustration of one way UP could run, and never evidence.

> *Illustration: one way it could run. The early stage.* The care worker still works long shifts, and the household's evenings are short. Her son eats dinner alone three nights a week. The town's UP community changes little of that yet, but on Saturdays the three of them now spend the morning at the repair table and the community kitchen, together, because those are places the son wants to be. When a neighbour at the kitchen suggests that the boy should be going to church, the care worker says that is not her family's way, and nobody raises it again; it is a matter of taste, and in UP a matter of taste is never a rule for anyone else.
>
> *Illustration: one way it could run. The middle stage, a projection.* The household's needs are now met from UP's own production, and the care worker's survival no longer depends on her shifts. She works fewer of them. The family eats dinner together most nights. The grandfather, who goes to church every Sunday, takes his grandson fishing on Saturdays instead of watching him from the window. Nobody in the town tells the family how to spend its new time, and nobody asks.
>
> *Illustration: one way it could run. The completed stage, a projection.* The son, now grown, is raising a child of his own, in his own way, which is not quite the way he was raised. His mother disagrees with some of it, and says so. That is a family argument, as old as families, and it stays in the family. The grandfather, very old now, spends his mornings writing down the history of the town as he lived it, the hard years, the first repair table, the arguments at the kitchen, because he wants the children to know where their town came from. No one asked him to, and no one could. It is the kind of meaning UP never assigns and never forbids.

Table 17.1. Expected benefits for families in UP, by stage. The early stage rests on today's evidence; the middle and completed stages are projections, drawn from UP's staged claims on needs and on work and from its tenets.

governments and corporations less as they use UP more, and the number of people doing so grows; where UP meets the current system (taxes, land title, the legal form needed to hold property, partnership with local governments), it uses only what the law requires, openly recorded and kept to a minimum, and that contact shrinks toward none as the people of an area move fully to UP. Record: LXW Shared Brain, decisions, "2026-11-14 1015 … Gradual change is people's" and "2026-11-14 1005 …".

[39] Core tenet: *Self-correction: nothing is final, including this*: "Downsides, risks and fringe problems are named openly and treated as work, never as reasons to keep a status quo that fails so many." Full wording in "The core of UP".

Stage	For members	For people outside UP	For the living world	How it would be shown
Early	Shared commons where families meet; care shared on a rota; wages and beliefs their own	Nothing taken; no rule on anyone's way of life	Little directly	More time with family and less loneliness, measured person by person; complaints of pressure heard in the open
Middle (projection)	Survival no longer tied to a job; hours handed back to families, as in Iceland's trials but larger	An open record of members' time and wellbeing, which anyone can check; anyone may join	Little directly	Time with family up and stress down against today's record; every child's floors kept
Completed (projection)	A family's time largely its own; many traditions side by side on one shared floor	Most people live mainly in UP, and no one is forced to	Every way of life inside the living world's floors	Judged against today's record and the ideal; pressure towards a single UP way of life treated as open work

Sources: notes to this section.[40]

The strongest objections

The first objection is that UP is secular at heart, and that a system built on evidence will treat religion as an error to be corrected. It is a fair worry for anyone whose faith matters to them. UP's answer is in its floors. Belief is among the freedoms UP's core gives as a starting example, for the collective to refine, of the protected freedoms its floors never cross, and freedom of the mind is a floor of its own.[14] Where a religious statement makes a claim that can be checked, UP checks it, with its sources and confidence shown, as it does every claim; but checking is not ruling, and where a statement is a matter of taste, it is marked as such and can never be made a rule for others.[16,15] A believer and an atheist in UP stand on the same floor. The current system has written the same freedom into the Universal Declaration of Human Rights, and UP credits it; as this chapter showed, many governments still restrict it.[2,11]

A second objection is that without a shared morality handed down by a tradition, a society has nothing to hold it together. UP's shared commitments are written down in its core: among them its aim, the health, happiness and wellbeing of all living things, measured for people person by person, not as a total; and its floors, which are never crossed.[20,14] Where a question of meaning is a matter of taste, UP's method never makes an answer to it a rule for others.[15]

The third objection is the most serious, and it is the danger that persists: that a "UP way of life" will form anyway. Communities that share work, food and decisions develop habits, and habits can turn into pressure on anyone who lives differently. UP's agreed position on cooperation is candid that behaviour is powerfully shaped by the environment.[41] UP's guards against that pressure are its tenets: UP is never imposed; matters of taste are never made rules for others; no one's thinking may be manipulated without their knowledge or consent; and anyone may leave any group or community at any time, taking what is theirs.[19,15,14] None of those guards stops a neighbour from disapproving. What they do is forbid disapproval from becoming a rule, and keep everyone's right to leave. Whether that is enough in practice is the kind of downside UP names openly and treats as work.[39]

Back to Birmingham

Adriane Burnett did not need anyone to tell her how to raise her children. She needed time with them and money to care for them, and the cost of care made her trade one for the other.[1] UP's answer is deliberately limited. It makes no rule for her on a matter of taste, and belief is among the protected freedoms its floors never cross.[15,14] What it

[40] Table 17.1. Early row: notes 25, 12, 10, 20 and 28. Middle row: notes 33, 35, 37 and 20. Completed row: notes 33, 15, 14, 28, 39 and 29. Every entry in the middle and completed rows is a projection; the completed row is drawn from UP's staged claim on work and its tenets, because UP's agreed positions name no completed stage for family life.

[41] UP's agreed position that people are cooperative by nature, as amended on 31 Oct 2026: "Behaviour is powerfully shaped by the environment. People are cooperative by nature, and cooperation lasts where contributions are visible and limits are agreed together (Ostrom)." Full wording in UP's agreed positions (the Position Ledger).

offers is indirect, and staged: as UP grows, needs met from what UP produces and survival that stops depending on a job. Both are projections, not promises.[33,37] What a family does with the time that frees is its own affair.

Families live in places, and places sit on a living world. Chapter 18 turns to where and how people settle.

Chapter card: Chapter 17

- **Claim:** The current system protects freedom of belief and has begun to protect children from violence, yet it leaves many families trading time with each other for the hours that keep them alive, because a wage decides survival. UP makes no rule for anyone on a matter of taste. Belief and thought are among the protected freedoms its floors never cross, freedom of the mind is a floor of its own, and where a family's choices meet a child's own floors, the floors decide. UP's morality is thin and shared, its aim, its floors and its ethical means, and the thick morality that gives a life its meaning belongs to each person, family and community. What UP offers families is indirect and projected: the floor of needs, shared care and the commons, so that more of a family's time is its own.
- **Core lines:** the tenets *The aim* (person by person); *Floors that are never crossed* (protected freedoms; freedom of the mind; the right to leave); *The method* (matters of taste are never made rules for others); *Open systems, shared knowledge, private persons* (each person controls their own information); *Freely joined, ethically grown* (never imposed; ethical means, defined and refined by the collective). Agreed positions: public discourse (taste marked as such); the AI never rules on matters of taste; psychological needs; behaviour shaped by the environment; the staged claim on work.
- **Rule of thumb:** "Is this a matter of taste? Then it is never a rule for others."
- **What this is not:** a secular programme, a parenting manual, a morality handed down by an office or a machine, or a "UP way of life" for everyone to follow.
- **Check yourself:**
    1. What trade did Adriane Burnett's wage force on her family, and which stand-in is behind it?
    2. Which two tenets keep UP out of decisions about belief and family life?
    3. What is the difference between UP's thin morality and the thick morality of a tradition, and who owns each?
    4. What is the difference between a matter of taste and a matter the floors decide?
    5. What does UP offer families, and why is it indirect?
    6. Why is a "UP way of life" a danger UP must guard against?
    7. Follow one disagreement through UP: how does the community kitchen settle its holy-day question, what can never be made a rule for others, and what limits any decision?
    8. What did Iceland's shorter working week and Berlin's House of One each show, and what benefits does Table 17.1 expect at each stage?
- **Open questions (for the wiki):** where the line falls between a family's choices and a child's own protected freedoms; how a community that shares so much keeps from pressing its own habits on its members; how the collective should refine what counts as ethical. (Improve this page.)

Chapter 18. Settlement and the Living World

On 29 June 2021, the village of Lytton, in the canyon country of British Columbia, set a new Canadian record high temperature of 49.6 degrees Celsius. It was the third day in a row that Lytton had broken the national record.[1,2] Shortly after setting the record, Lytton was largely destroyed in a wildfire. About 90 per cent of the small town burned to the ground; the fire killed two people and displaced 1,200.[3,1] Across British Columbia, the heat dome brought the premature deaths of almost 600 people.[1] The RCMP was later unable to determine what caused the blaze.[4]

Scientists at World Weather Attribution found that the heat wave that week was virtually impossible without human-caused climate change, and would have been at least 150 times rarer without it; even in today's warmer climate, they estimated it to be about a 1-in-1,000-year event.[3] Four years after the fire, Lytton was still far from rebuilt. As of 31 May 2025 the village had issued 20 building permits for homes, which the mayor counted as the return of a quarter of the pre-fire buildings (permits issued, not homes finished), and core businesses such as a grocery store had not yet returned.[5]

Lytton's story puts in one place the two questions of this chapter. Where and how would people live in UP? And what would UP do about the living world and the climate on which every settlement depends? This chapter is the home of three failures on the scoreboard in Chapter 12: climate and planetary limits, waste, and the part of housing that concerns how and where people build.[6] Chapter 12 traced all three, in large part, to the same root as the failures in the chapters before this one. The costs a business does not pay, from the air it fouls to the warming it adds, fall outside its books; more is earned from a product that fails than from one that lasts; and prices that governments hold below cost tell people that fuel is cheaper than it is.[7] This chapter looks first at how the current system treats the living world, then at what those stand-ins do to it. It turns next to what UP holds and to what could take the stand-ins' jobs over, with a Danish island that took its energy into its own hands and a movement that mends what others throw away. It then follows one disputed wind turbine through UP, step by step, to show how a decision about the land is made. Finally it looks at how settlement, climate and waste could change at each stage of UP's growth and what each stage is expected to bring, and at the strongest objections.

How the current system treats the living world, and where it falls short

The current system has built cheaper tools for cutting emissions, and it deserves credit for that first. In 2024, 91 per cent of new renewable power projects commissioned around the world were more cost-effective than any new fossil fuel alternative.[8] The parties to the Convention on Biological Diversity have adopted a target, not yet a result, that by 2030 at least 30 per cent of areas of degraded land, inland water, coastal and marine ecosystems should

[1] Environment and Climate Change Canada, *Canada's top 10 weather stories of 2021* (December 2021): "set a new Canadian record high temperature of 49.6 °C on June 29"; "90% of the small town of Lytton had burned to the ground"; "The raging wildfire resulted in 2 deaths and displaced 1200."; "the premature deaths of almost 600 people". https://www.canada.ca/en/environment-climate-change/services/top-ten-weather-stories/2021.html . The figure of almost 600 deaths is for British Columbia during the heat dome. Checked 1 Nov 2026.

[2] CBC News, "For 3rd straight day, B.C. village smashes record for highest Canadian temperature at 49.6 C" (29 June 2021): "Lytton, B.C., has broken the record for the hottest temperature ever recorded in Canada"; "hitting a scorching 49.6 C on Tuesday." https://www.cbc.ca/lite/story/1.6084203 . Checked 1 Nov 2026.

[3] World Weather Attribution, *Western North American extreme heat virtually impossible without human-caused climate change* (July 2021): "was virtually impossible without human-caused climate change"; "would have been at least 150 times rarer without human-induced climate change."; "Shortly after setting the record, Lytton was largely destroyed in a wildfire". https://www.worldweatherattribution.org/western-north-american-extreme-heat-virtually-impossible-without-human-caused-climate-change/ . The same page estimates the event at about 1 in 1,000 years in today's climate. Checked 1 Nov 2026.

[4] CBC News, report on the RCMP investigation into the 2021 Lytton wildfire (September 2024): "The fire killed two people,"; "unable to determine what caused the blaze"; "no evidence to suggest the fire was intentionally set". https://www.cbc.ca/lite/story/1.7320809 . Checked 1 Nov 2026.

[5] Village of Lytton, mayor's message on the fourth anniversary of the 2021 fire (26 June 2025): "As of May 31, the Village had issued 20 building permits for residential uses"; "That is the return of one quarter of the pre-fire buildings."; "have not yet returned". https://www.lytton.ca/index.php/news/mayors-message-fourth-anniversary-2021-fire . The message names core businesses such as a grocery store among those not yet returned. Checked 1 Nov 2026.

[6] Chapter 12, Table 12.1, failures F1 (climate), F8 (housing) and F11 (waste).

[7] Chapter 12, "Why the failures share roots" and Table 12.3, rows F1 (climate), F8 (housing) and F11 (waste), with their notes.

[8] IRENA, press release "91% of New Renewable Projects Now Cheaper Than Fossil Fuels Alternatives" (22 July 2025): "Notably, 91% of new renewable power projects commissioned last year were more cost-effective than any new fossil fuel alternatives." https://www.irena.org/News/pressreleases/2025/Jul/91-Percent-of-New-Renewable-Projects-Now-Cheaper-Than-Fossil-Fuels-Alternatives (read in the Internet Archive's copy, https://web.archive.org/web/2025/https://www.irena.org/News/pressreleases/2025/Jul/91-Percent-of-New-Renewable-Projects-Now-Cheaper-Than-Fossil-Fuels-Alternatives , because irena.org blocks automated reading). "Last year" is 2024. Checked at source, 31 Oct 2026.

be under effective restoration.[9] And the IPCC has assessed what could help. It projects that integrated planning for compact, resource-efficient urban growth, with homes and jobs close together, mixed land use and transit-oriented development, could reduce greenhouse gas emissions by 23 to 26 per cent by 2050 compared with business as usual. It warns that urban land could triple between 2015 and 2050, with significant implications for future carbon lock-in.[10]

Yet the damage is still growing. Energy-related emissions of carbon dioxide rose again in 2025, by around 0.4 per cent, to a new high of nearly 38.4 billion tonnes.[11] The cheaper tools also meet resistance where they would be built. In the United States, researchers at Columbia Law School identified 567 renewable energy projects across 48 states that had faced significant local opposition, and found that by the end of 2025 at least 888 state laws and local ordinances restricting where such projects may go had been adopted.[12] And electronic waste, at least, is growing faster than it is recovered: in 2022 the world generated a record 62 billion kilograms of it, and since 2010 the amount of e-waste has grown five times faster than its compliant collection and recycling.[13]

UP's agreed claim on climate, set out in full below, takes from these facts that the solutions exist and are already cheaper, and adds that UP invents better ones as its main work.[14] The rest of this chapter sets out how UP would treat the land, the climate and the things people make.

What the stand-ins do to the living world

A price is meant to tell people what a thing costs, and for the living world it often tells them wrong. The plainest case is fuel. Governments around the world spent USD 916 billion supporting fossil fuels in 2024, by the OECD's and the International Energy Agency's count, most of it to hold down the price people pay.[15] The IEA has long argued that such subsidies "distort markets, send the wrong price signals to users", and discourage the adoption of cleaner energy.[16] Some of that support protects poor households from energy costs they could not otherwise bear, and the help is real. But in UP's terms it is a stand-in correcting a stand-in: a price held below the real cost of the fuel, to make up for the fact that people's warmth and light depend on what they can pay.

The costs that fall outside the books are the larger case, and Chapter 10 described how they arise.[17] The warming that destroyed Lytton was not charged to anyone who caused it. And the rule that more is earned from replacing a thing than from making it last, which the lightbulb makers of 1924 wrote into a cartel's contract, still shapes how much is thrown away. Electronic waste has grown five times faster than its proper collection and recycling since

[9] Convention on Biological Diversity, Kunming-Montreal Global Biodiversity Framework, Target 2: "Ensure that by 2030 at least 30 per cent of areas of degraded terrestrial, inland water, and coastal and marine ecosystems"; "are under effective restoration, in order to enhance biodiversity". https://www.cbd.int/gbf/targets/2 . Targets, not results. Checked 1 Nov 2026.

[10] IPCC, *Climate Change 2022: Mitigation of Climate Change*, Working Group III, Chapter 8, "Urban systems and other settlements", Executive Summary: "Urban land areas could triple between 2015 and 2050, with significant implications for future carbon lock-in."; "Integrated spatial planning to achieve compact and resource-efficient urban growth"; "transit-oriented development (TOD) could reduce GHG emissions between 23% and 26%"; "by 2050 compared to the business-as-usual scenario". https://www.ipcc.ch/report/ar6/wg3/chapter/chapter-8/ . Projections, not measurements. Checked 1 Nov 2026.

[11] International Energy Agency, *Global Energy Review 2026* (April 2026): growth in energy-related CO2 emissions slowed in 2025, "rising by around 0.4%, the slowest rate since 2021", with total emissions "reaching a new high of nearly 38.4 billion tonnes (Gt)". https://www.iea.org/reports/global-energy-review-2026/co2-emissions . Checked at source on 31 Oct 2026; revised each year.

[12] Sabin Center for Climate Change Law, Columbia Law School, "Widespread Local Opposition, Often Driven by Misinformation, Continues to Hamper Renewable Energy Development", *Climate Law Blog* (3 September 2026): "We also identified 567 renewable energy projects across 48 states"; "that have faced significant local opposition."; "By the end of 2025, at least 888 state laws and local ordinances"; "restricting the siting of renewable energy projects had been adopted across 48 states." https://blogs.law.columbia.edu/climatechange/?p=29623 . The counts come from the Sabin Center's own tracking, so they are a floor. Checked 1 Nov 2026.

[13] ITU and UNITAR, *The Global E-waste Monitor 2024*, executive summary (March 2024): "in 2022, a record 62 billion kg of e-waste was generated globally"; "the amount of e-waste has grown 5 times faster than compliant collection and recycling since 2010"; documented formal collection and recycling "will decline to 20 per cent in 2030" from "22.3 per cent in 2022" on current trends. https://ewastemonitor.info/wp-content/uploads/2024/03/GEM_2024_18-03_web_executive-Summery.pdf . The comparison of "5 times faster" is between the tonnes added, not growth rates. Checked at source, 31 Oct 2026.

[14] UP's agreed staged claim on climate and planetary limits (round 12c, card F1): "Early on, UP members cut their own emissions and prove what works, a small effect on the climate."; "As UP grows, the effect becomes large: the solutions exist and are already cheaper, UP invents better ones as its main work"; "demand moves out of the old system with its people, and leakage shrinks as the share acting grows."; "Warming already locked in persists at every stage. Local disputes over siting are work for UP's method". Full wording in the round 12c record.

[15] OECD, "Government support for fossil fuels remains high despite a 10% decline" (December 2025), on the *OECD Inventory of Support Measures for Fossil Fuels: Policy Trends up to 2025*, with IEA data: "the global cost of support measures for fossil fuels fell from USD 1 031 billion in 2023 to USD 916 billion in 2024"; "In 2024, most government support for fossil fuels continued to go to consumption, accounting for 84% of the total fiscal cost." https://www.oecd.org/en/about/news/announcements/2025/12/government-support-for-fossil-fuels-remains-high-despite-a-10-decline.html . Checked at source, 13 Nov 2026.

[16] International Energy Agency, "Energy subsidies" topic page: "The IEA has long advocated removing or at least reducing fossil fuel subsidies because they distort markets, send the wrong price signals to users, widen fiscal deficits in emerging and developing economies, and discourage the adoption of cleaner renewable energies." https://www.iea.org/topics/energy-subsidies . Checked at source, 13 Nov 2026.

[17] Chapter 10, "The corporation, and the jobs it does" and "What running on corporations costs", with their notes: the costs a business does not pay, which fall outside its books.

2010, as this chapter showed.[18,13] The pattern UP's agreed position names applies here too: the current system often monetises a problem instead of solving it.[19]

None of this means that the current system cannot act on climate, and the cheap renewables and the restoration targets described above show that it can. It means that the stand-ins keep pulling decisions away from the real world, so that every gain has to be won against them, one rule at a time.

What UP holds about settlement and the living world

Among the floors that no decision may cross is the living world's capacity to recover, so that damage that cannot be undone is never traded for a short-term need.[20] UP's agreed position on clashes between people and the planet sets out what that means in practice. Meeting everyone's needs and protecting the biosphere are both floors, and when they clash, that is a failure to solve: the problem goes to the widest crowd and gets top priority. If a decision cannot wait, people come first, in the smallest way and for the shortest time, while restoration continues, with one exception. Damage that cannot be undone, such as a drained aquifer, a lost species or lost topsoil, is never traded for a short-term need; the need is met another way.[21] Inside those limits, physical accounting (energy budgets, carbon caps, water footprints, materials and life-cycle assessment) sets the planet's hard limits. Inside them, several measures are used together, and choices between different needs are made openly by the people affected, through UP's decision steps, never by an efficiency score.[22]

How people live on the land follows from the same commitments. UP's agreed position on space puts its beauty, work and effort into the commons first: generous, beautiful public places, gardens, pools, kitchens, eating and living areas, and quiet corners where anyone can be alone, make large private spaces unnecessary, following the thinking of the architect Paolo Soleri. Private space is modest and comfortable: a place to sleep, a small work area, a small living space, a small kitchen and eating space, a very good bathroom and some storage. The limits are set together through UP's decision steps, with evidence from many people, with open exceptions for disability, care and work and, in time, a measure of the whole footprint, not just floor area. They are norms for health, happiness and sustainability, not punishments, and they rise as abundance grows.[23] One way UP could run, given in its agreed positions as an illustration, is that condensing settlement removes duplication, and the land it frees returns to the living world.[24]

[18] Markus Krajewski, "The Great Lightbulb Conspiracy", *IEEE Spectrum* (24 Sep 2014): at a meeting in Geneva on 23 December 1924, "the group founded the Phoebus cartel, a supervisory body that would carve up the worldwide incandescent lightbulb market"; "The household lightbulb in 1924 was already technologically sophisticated"; "the burning time was easily 2,500 hours or more."; "By early 1925, this became codified at 1,000 hours for a pear-shaped household bulb"; "If any factory submitted bulbs lasting longer or shorter than the regulated life span for its type," … "the factory was obliged to pay a fine." https://spectrum.ieee.org/the-great-lightbulb-conspiracy . Checked at source, 13 Nov 2026.

[19] UP's agreed position that the comparison with the current system is not symmetric: the current system often monetises a problem instead of solving it, and sometimes the problem's persistence is what pays. Full wording in UP's agreed positions (the Position Ledger).

[20] Core tenet: *Floors that are never crossed*, in full (as amended on 28 October 2026): "UP keeps a set of floors that no decision may cross: everyone's basic needs and protected freedoms, which no gain for others can buy; the living world's capacity to recover, so damage that cannot be undone is never traded for a short-term need; the right to leave any group or community at any time, taking what is theirs; a truthful shared record, so facts, measures and decisions are never falsified; freedom of the mind, so no one's thinking is manipulated without their knowledge or consent; and a fair hearing, so no one's freedom is restricted without a fair, evidence-based hearing, with the evidence open to them and a way to appeal. UP guarantees needs, not every want. The collective defines and refines the floors through UP's method; it may clarify or raise them, but no decision may lower them or push anyone below them. As a starting example for the collective to refine: needs such as food, water, shelter, health care, education and connection; freedoms such as thought, belief, speech, movement and privacy." And: "A protected freedom such as movement may be restricted only to protect others or the person, only through an evidence-based court process, for the shortest time needed, and never below the needs floor. The hearing comes first, except briefly, to stop harm in progress, with a hearing promptly after. Leaving a group or community does not end a restriction set by a fair hearing. These limits are an open problem: they are the best that can be imagined now, and UP is built to find better and better solutions. Above the floors, everything is open to the method." Also in "The core of UP".

[21] UP's agreed position "People first; irreversible damage is never traded" (round 3): "The AI's job is to meet everyone's needs and protect the biosphere; both are floors. When they clash, it is a failure to solve: the problem goes to the widest crowd and gets top priority. If a decision cannot wait, people come first, in the smallest way and for the shortest time, while restoration continues — with one exception: damage that cannot be undone, such as a drained aquifer, a lost species or lost topsoil, is never traded for a short-term need; the need is met another way. That kind of damage is UP's motivation as well as its threat: choices made in a few decades have already destroyed what people could otherwise have enjoyed for thousands of years. The AI proposes and does not assign; people choose their work, and any plan can be overridden through the decision steps". Full wording in UP's agreed positions (the Position Ledger).

[22] UP's agreed position that physical accounting sets the limits and people weigh the choices (round 6): "Physical accounting (energy budgets, carbon caps, water footprints, materials and life-cycle assessment) sets the planet's hard limits. Inside them, several measures are used together, and choices between different needs, such as a clinic or a cultural centre, are made openly by the people affected, through the decision steps (#1), never by an efficiency score." Full wording in UP's agreed positions (the Position Ledger).

[23] UP's agreed position on space: "UP puts its beauty, work and effort into the commons first. Generous, beautiful public places - gardens, pools, kitchens, eating and living areas, and quiet corners where anyone can be alone - make large private spaces unnecessary, following the thinking of Paolo Soleri. Private space is modest and comfortable: a place to sleep, a small work area, a small living space, a small kitchen and eating space, a very good bathroom and some storage. The limits are set together through the decision steps in [#1], with evidence from many people"; with "open exceptions for disability, care and work; and, in time, a measure of the whole footprint, not just floor area. The limits are norms for health, happiness and sustainability, not punishments, and they rise as abundance grows." Full wording in UP's agreed positions (the Position Ledger).

UP's agreed claims on climate, housing and waste are staged. On climate, early on UP members cut their own emissions and prove what works, a small effect on the climate. As UP grows, the effect becomes large: the solutions exist and are already cheaper, UP invents better ones as its main work, demand moves out of the current system with its people, and leakage shrinks as the share acting grows. Warming already locked in persists at every stage, and local disputes over siting are work for UP's method.[14,25] On housing, early on UP upgrades and builds with its members' own hands and land. As its production grows, homes are built from open designs to meet the shelter floor, and settlement condenses: beautiful shared commons beside modest private rooms, with freed land returned to the living world, the part of the card that draws on the illustration above. Land enters UP as members convert what they own, and land still held outside UP, and local objections to new homes, are work for UP's method.[26,24] On waste, early on UP repairs and recovers; once it makes its own goods, from open designs built to last and to shared standards so parts are interchangeable, with no profit in replacement, waste falls at the source, though physical limits on recycling persist.[27]

Finally, UP has to decide who counts as affected when people a decision affects cannot speak: future generations, young children and other living things. One way UP could run, given in its agreed positions as an illustration and never a directive, is that they are represented by simulations, several independent ones with their assumptions published, which give input but never a vote.[28]

What could take the stand-ins' jobs over

Chapter 8's seven developments are perhaps clearest of all in the living world.[29] Abundance that technology creates is already arriving in energy: renewables are now cheaper than new fossil power for most new projects, as this chapter showed, and clean energy that is cheap enough makes every other need easier to meet without burning anything.[8] Doing more with less shrinks the load: the IEA reported that the world's energy intensity was on course to improve by 1.8 per cent in 2025, though it noted that the rate falls well short of the goal of 4 per cent by 2030 set at COP28.[30]

The strongest case of a community taking its energy into its own hands comes from Denmark. In 1997 Samsø, an island of about 4,000 people off the coast of Jutland, won a national competition to become a model renewable energy community. At the start only 5 per cent of its electricity came from local wind turbines, and most of its power came by undersea cable from a grid that coal supplied.[31,32] The island built 11 turbines on land by 2000 and 10 offshore in 2002, with district heating plants fuelled by local biomass, solar panels and electric vehicles, and

[24] UP's agreed positions on settlement and space: condensing settlement (round 12S, position 12, an illustration of one way UP could run): "condensing settlement (Soleri) removes duplication"; "Freed land returns to the living world." And, settled in round 3: "UP puts its beauty, work and effort into the commons first." Private space is modest and comfortable, and the limits "are set together through the decision steps". Full wording in UP's agreed positions (the Position Ledger).

[25] UP's agreed position that inventing solutions together is UP's primary activity: "In UP anyone can try anything that might solve a problem; tools are commons; the result carries the power". Full wording in UP's agreed positions (the Position Ledger, round 12S, position 1).

[26] UP's agreed staged claim on housing and the built environment (round 12c, card F8): "Early on, UP upgrades and builds with its members' own hands and land. As UP's production grows, homes are built from open designs to meet the shelter floor, and settlement condenses: beautiful shared commons beside modest private rooms, with freed land returned to the living world"; "Land enters UP as members convert what they own"; "Land still held outside UP, and local objections to new homes, are work for UP's method." Full wording in the round 12c record.

[27] UP's agreed staged claim on waste and planned obsolescence (round 12c, card F11): "Early on, UP repairs and recovers. Once UP makes its own goods, from open designs built to last and to shared standards so parts are interchangeable"; "with no profit in replacement, waste falls at the source. Physical limits on recycling persist." Full wording in the round 12c record.

[28] UP's agreed position on voiceless stakeholders (round 12S; an illustration of one way UP could run, never a directive): future people, young children and other living things are represented by simulations, several independent ones with their assumptions published, which give input but never a vote. Full wording in UP's agreed positions (the Position Ledger).

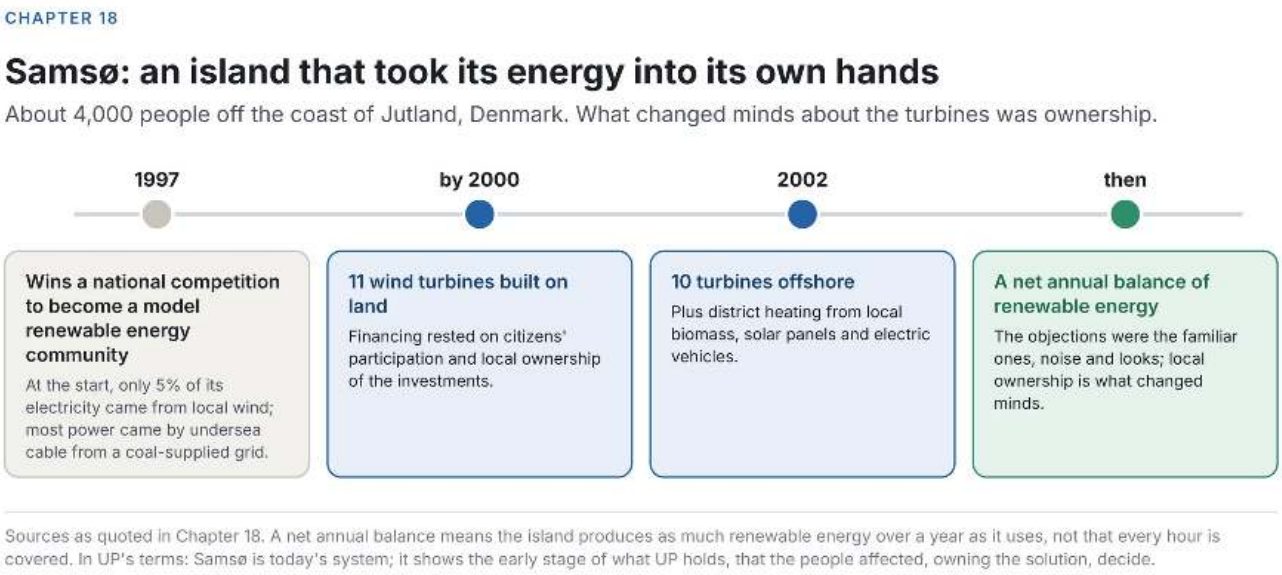
[29] Chapter 8, "Money, and the jobs it does", "How money's jobs move to reality" and "How the pieces work together", with their notes: the seven developments.

[30] International Energy Agency, news release "Global progress on energy efficiency picks up in 2025", on its report *Energy Efficiency 2025*: "global primary energy intensity – the main metric for tracking efficiency progress – is on course to improve by 1.8% this year, up from just 1% in 2024"; "The global rate of improvement currently falls well short of the goal of 4% by 2030 that was set at COP28 in Dubai in 2023". https://www.iea.org/news/global-progress-on-energy-efficiency-picks-up-in-2025 . Checked at source, 13 Nov 2026.

[31] Nordregio, *Green Growth in Nordic Regions: 50 ways to make it happen* (2016), case "Samsø": "Samsø is a 114 km² Danish island 15 kilometres off the Jutland Peninsula with a community of approximately 4,000 people. In 1997, Samsø won a government competition to become a model renewable energy community."; "When the project was initiated only 5% of the island's electricity consumption was generated by local wind turbines." https://archive.nordregio.org/en/Publications/Publications-2016/GREEN-GROWTH-IN-NORDIC-REGIONS-50-ways-to-make-/Clean-tech-and-renewable-energy–/Local/index.html . Checked 14 Nov 2026.

[32] UNFCCC, "Green Island" (blog, 11 April 2022): "Samsø Municipality made the decision to become a "renewable energy island" by 2007."; in 1997 "the island's electricity came via an undersea cable from mainland Denmark's grid, with coal supplying most of the power."; by 2000, "11 wind turbines supplied the island's 22 villages with energy"; in 2002, "10 offshore wind turbines were installed."; the core of the financing model was the "participation of citizens and stakeholders and local ownership of the renewable energy investments."; "Samsø will become completely carbon-free by 2030."; Søren Hermansen of the Samsø Energy Academy: "It is hard to say if we are on track now." https://unfccc.int/news/green-island . Checked at source, 14 Nov 2026.

reached a net annual balance of renewable energy.[32,33] The objections were the ones this chapter has already met in the United States: some residents worried about noise and about how the turbines would look.[34] What changed minds was ownership. The financing rested on the participation of citizens and on local ownership of the investments.[32] Farmers who put up turbines on land were persuaded to share ownership with nearby landowners, and the municipality, private owners and cooperatives shared the offshore ones.[34] The open discussion on the island, the European Commission's energy programme later wrote, let people see what the change would mean for their community and led to local co-ownership.[35] The island has since set itself the goal of being carbon-free by 2030, and its own energy academy's director has said it is hard to say whether it is on track.[32] Samsø is one case of a wider trend, community energy owned by the people who live beside it. It stands against the trend this chapter counted in the United States, where by the end of 2025 at least 888 state laws and local ordinances restricted where such projects may go.[12] It is a project of the current system, built with state funding and private ownership, not UP. In UP's terms, it shows two of UP's ideas at the scale of a whole island: the people a problem affects decide its outcome, and opposition is met with open evidence and a share in the result rather than with force.[36,37]



Samsø: an island that took its energy into its own hands.

Open designs and shared standards end the reason to sell a replacement. Since 28 December 2024, phones, tablets, cameras, headphones and many other portable devices sold in the European Union must use a common USB-C charging port, and laptops followed in April 2026. The European Commission, which had sought a common charger since 2009, said the rule would "reduce the number of chargers you need to buy, help minimise electronic

[33] UNFCCC, "Samsø: An Island Community Pointing to the Future | Denmark": the transformation came "through a series of renewable energy investments, namely 11 on-shore and 10 off-shore wind turbines, 4 local biomass-fuelled district-heating plants, solar panels and electric vehicles, which enabled Samsø to reach 100% net annual balance of renewable energy." https://unfccc.int/ru/node/307070 . Checked 14 Nov 2026.

[34] Philip Warburg, "Denmark's Renewable Energy Island Comes of Age", Boston University (undated; written about twenty years after 1997): "At first, the rollout of windpower had some island residents worried. Noise was one concern; the visual prominence of turbines was another."; "persuading farmers to share ownership of their turbines with nearby landowners"; of the offshore turbines, "Five of these are owned by the Samsø island municipality; three are privately owned; another two are under cooperative ownership." https://www.bu.edu/igs/?p=2331 . Checked at source, 14 Nov 2026.

[35] European Commission, ManagEnergy, "Samsø Energy Academy: Climate action with people at the center" (20 April 2023): "The open discussion that took place on Samsø allowed citizens to see what this change would mean for the island and their community and led to local co-ownership of on-shore and off-shore wind turbines, biomass-fueled district heating, solar panels". https://managenergy.ec.europa.eu/managenergy-discover/managenergy-news/samso-energy-academy-climate-action-people-center-2023-04-20_en . Checked 14 Nov 2026.

[36] Core tenet: *Open participation: anyone may take part; those affected decide*, in full: "Anyone may take part in any problem, and the people it affects decide its outcome. There are no offices to hold: work is shared out, not owned, so no one gathers power by holding a position. Where work needs skill, skill is shown by open, testable standards that anyone can work toward and anyone can propose to change, and education is open to everyone, at every age, so anyone can gain the skills any work requires." Also in "The core of UP".

[37] Core tenet: *The method: shared problem solving with evidence*, in full: "Everything in UP runs through one method. Problems are named, measured and offered as work to anyone willing to take them on, whether or not they are affected; the people a problem affects decide its outcome. No problem, solution or method belongs to the person who raised it: anyone may update, reframe or improve it. Solutions are proposed with their evidence, tested and compared, and a better idea replaces a worse one. Every claim that guides shared action can be tested and is open to being proved wrong. Work on the roots of problems is worth the most, but a problem can be worked from any angle. Facts are checked, unknowns become shared work, and matters of taste are never made rules for others. Evidence proposes; people decide." Also in "The core of UP".

waste".[38] It is a small rule about a small part. But it shows the principle that UP's agreed claim on waste builds on: goods made from open designs, built to last and to shared standards so that parts are interchangeable, with no profit in replacement, so that waste falls at the source.[27] A new way of using things means fewer of them made: a tool shared by a street, as Chapter 13 described, is one tool made instead of many.[39]

The repair table in the household's town has a real model. On 18 October 2009 Martine Postma, a Dutch former journalist, organised the first Repair Café in Amsterdam: a free meeting place where people bring broken things and volunteers with repair skills help them mend them, with the tools and materials supplied.[40] Since 2011 a foundation she started has supported local groups that want to run their own, and by the foundation's count there are now more than 2,500 Repair Cafés worldwide, a movement that aims to keep repair skills alive in society and to push for products that can be repaired.[40] It answers the trend this chapter counted: electronic waste growing five times faster than its proper collection and recycling.[13] It cannot reverse that trend alone, because it works at the end of a product's life, after the design that made it hard to fix. In UP's terms, it shows the early stage of UP's staged claim on waste, repairing and recovering, and the reason for the next stage: waste falls at the source only when goods are made from open designs, built to last and to shared standards, with no profit in replacement.[27]

Coordination that counts real things is the core of UP's answer to the living world. Physical accounting, the record of energy, carbon, water, materials and life cycles, sets the planet's hard limits inside every decision instead of outside the books, and choices between needs are made openly by the people affected, never by an efficiency score.[22] The United Nations' framework for ecosystem accounting, which Chapter 13 described, shows that official statistics can already count what nature supplies in physical terms.[39] And the narrow and intense focus on what is truly scarce points at land itself. A place by the sea or a view from a hill cannot be multiplied, and UP shares such places by rotation or by a decision of the people affected, never by price. It also designs places that many people can enjoy at once, which is the thinking behind condensed settlement, given as one way UP could run.[39,24]

In UP's terms, these developments do not ask anyone to love the planet more than they do now. They change what decisions rest on. When a decision counts the energy, carbon, water and materials it uses, the damage that a price leaves out is in front of the people deciding, and the floor that damage which cannot be undone is never traded for a short-term need is there to stop them.[20,21]

Settlement: the land a people needs

The question of where people live is, on UP's reading, partly a question of how much land each of them takes. The IPCC, as this chapter showed, assessed that compact, resource-efficient urban growth, with homes and jobs close together and transit within reach, could reduce emissions by 23 to 26 per cent by 2050, and warned that urban land could triple between 2015 and 2050.[10] Paolo Soleri, whom Chapter 3 placed among UP's sources, drew the same conclusion long before. In 1970 he and his followers began building Arcosanti in the Arizona desert, a dense town made for walking that he called an arcology, a fusion of architecture with ecology, meant to leave the land around it to the living world.[41] UP's agreed position on space takes the same direction without adopting Soleri's

[38] European Commission, "EU common charger rules: Power all your devices with a single charger" (28 December 2024): "This will reduce the number of chargers you need to buy, help minimise electronic waste and simplify your everyday life."; "From 28 April 2026, they will also apply to laptops." https://commission.europa.eu/news/eu-common-charger-rules-power-all-your-devices-single-charger-2024-12-28_en ; Directive (EU) 2022/2380 (Legislative Observatory summary: provisions applicable "from 28.12.2024 and 28.4.2026 depending on the category or class of radio equipment"). https://oeil.europarl.europa.eu/oeil/en/procedure-document-summary/pdf?id=1726604 ; Government of Ireland press release (27 December 2024): "Since 2009, the European Commission has been seeking to limit the fragmentation of the market for charging interfaces for mobile phones and similar devices." https://www.gov.ie/en/press-release/af996-one-size-fits-all-phone-and-electronic-charger-directive-to-come-into-place . Checked at source, 13 Nov 2026.

[39] Chapter 13, "What could take the stand-ins' jobs over" and "How the jobs of price get done", with their notes: tool and thing libraries; the UN framework for ecosystem accounting; positional goods shared by rotation or decision, never by price.

[40] Repair Café International Foundation, "About" (repaircafe.org): "Repair Cafés are free meeting places and they're all about repairing things (together)."; with tools and materials on hand and "expert volunteers, with repair skills in all kinds of fields"; "There are over 2,500 Repair Cafés worldwide."; Martine Postma organised the first, in Amsterdam, on "October 18, 2009."; "Since 2011, this non-profit organisation has provided professional support" to local groups; Repair Cafés form "a worldwide movement that strives to preserve repair skills in society and to promote more repairable products." https://www.repaircafe.org/en/about/ . Checked at source, 14 Nov 2026. The count is the foundation's own.

[41] SAH Archipedia (Mark C. Vinson), "Arcosanti": "Soleri conceived Arcosanti in 1963 as a model urban settlement housing between 5,000 and 7,000 residents; he and his followers began building the first structures in 1970"; "Only about ten percent complete"; "in the high desert near Cordes Junction". https://sah-archipedia.org/buildings/AZ-01-025-0005 (archived copy: https://web.archive.org/web/20251117055952/https://sah-archipedia.org/buildings/AZ-01-025-0005). Arcosanti, "FAQs": "Arcosanti has a small community of diverse people, including families, who reside there year-round." https://arcosanti.org/visit/faqs/ (read in a browser). Arcosanti, "What is Arcology?": "Arcology, in which architecture and ecology become one integral process, suggests that cities should evolve similarly." https://arcosanti.org/vision/what-is-arcology/ (archived copy: https://web.archive.org/web/2026/https://arcosanti.org/vision/what-is-arcology/). See also Chapter 1. Checked at source, 31 Oct 2026. The description of the arcology ("a fusion of architecture with ecology") follows Chapter 3.

plans: generous commons first, modest private space, limits set together that rise as abundance grows, and, as one way UP could run, condensed settlement with the freed land returned to the living world.[23,24]

The direction comes with the limits UP's core sets. No one is forced to move or to give up what is theirs, and land enters UP only as its owners choose to convert it.[42,26] What UP offers instead of force is a place that people want to live in: a home built from an open design, a garden, a kitchen and a quiet room shared with neighbours, and land beyond the edge of town that is a wood again instead of a car park. Whether people choose it, and in what numbers, is something UP's open records would show.

UP at work: one turbine on the hill, followed through

The question this chapter's objections keep returning to is what happens when the living world, a need and the neighbours all pull different ways. So it helps to follow one decision through UP from start to finish. Take the town from Chapter 1, where UP's members want a wind turbine on the hill above the high street to power the new homes, and the neighbours below it object. The steps below are one way UP could run, built from its tenets and agreed positions. The collective would shape the details.

The need is named and measured. The town's energy need is set out as a problem, with the numbers, and offered as work to anyone willing to take it on, whether or not they live in the town; the people it affects decide its outcome.[37]

The real costs are counted. Each option, the turbine on the hill, panels on every roof, a share in a turbine elsewhere, is set out with its energy, carbon, materials and life cycle, so that the costs a price leaves outside the books are in front of the people deciding. Choices between needs are made openly by the people affected, never by an efficiency score.[22]

The floors rule some options out. If the hill holds something that cannot be replaced, a rare bird's only nesting ground or soil that would not come back, that option is out whatever it would save. Damage that cannot be undone is never traded for a short-term need, and the need is met another way.[20,21]

Those who cannot speak are heard. The birds, the young children and the town's grandchildren cannot argue at a meeting. One way UP could run, given in its agreed positions as an illustration, is that several independent simulations, with their assumptions published, speak for them; they give input, but never a vote.[28]

The people affected decide, and no one is forced. The neighbours who would live under the turbine and the members who need the power decide together; no one holds an office that lets them decide alone.[36] The hill can be used only if those who own it have chosen to bring it into UP, because land enters UP as members convert what they own and no one is forced to give up what is theirs.[26,43]

A fair hearing, and the right to leave. A neighbour who feels wronged can ask for a fair hearing, with the evidence open and a way to appeal, and anyone may leave any group or community at any time, taking what is theirs.[44]

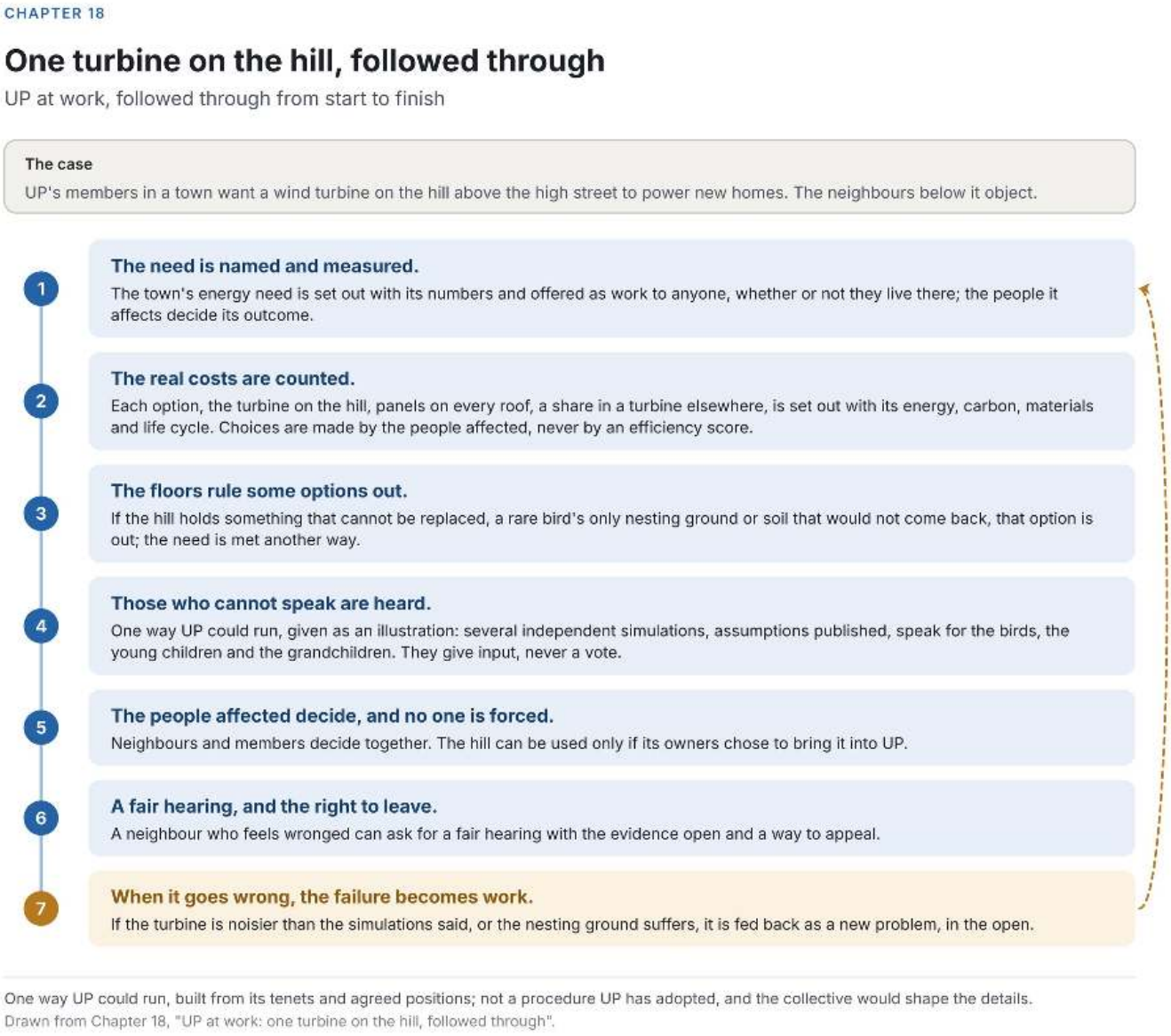
[42] Core tenet: *Freely joined, ethically grown*, in full: "UP is never imposed. No one is forced to join, to work or to give up what is theirs. It grows by being useful, building on what people already do, and it acts only by ethical means. A means is ethical when it serves the health, happiness and wellbeing of all and crosses none of the floors; UP never starts harm against anyone. What counts as ethical is defined and refined by the collective through UP's method." Also in "The core of UP".

[43] Core tenet: *Freely joined, ethically grown*, in full: "UP is never imposed. No one is forced to join, to work or to give up what is theirs. It grows by being useful, building on what people already do, and it acts only by ethical means. A means is ethical when it serves the health, happiness and wellbeing of all and crosses none of the floors; UP never starts harm against anyone. What counts as ethical is defined and refined by the collective through UP's method." Also in "The core of UP".

[44] Core tenet: *Floors that are never crossed*, in full (as amended on 28 October 2026): "UP keeps a set of floors that no decision may cross: everyone's basic needs and protected freedoms, which no gain for others can buy; the living world's capacity to recover, so damage that cannot be undone is never traded for a short-term need; the right to leave any group or community at any time, taking what is theirs; a truthful shared record, so facts, measures and decisions are never falsified; freedom of the mind, so no one's thinking is manipulated without their knowledge or consent; and a fair hearing, so no one's freedom is restricted without a fair, evidence-based hearing, with the evidence open to them and a way to appeal. UP guarantees needs, not every want. The collective defines and refines the floors through UP's method; it may clarify or raise them, but no decision may lower them or push anyone below them. As a starting example for the collective to refine: needs such as food, water, shelter, health care, education and connection; freedoms such as thought, belief, speech, movement and privacy." And: "A protected freedom such as movement may be restricted only to protect others or the person, only through an evidence-based court process, for the shortest time needed, and never below the needs floor. The hearing comes first, except briefly, to stop harm in progress, with a hearing promptly after. Leaving a group or community does not end a restriction set by a fair hearing. These limits are an open problem: they are the best that can be imagined now, and UP is built to find better and better solutions. Above the floors, everything is open to the method." Also in "The core of UP".

When it goes wrong, the failure becomes work. If the turbine is noisier than the simulations said, or the nesting ground suffers after all, the failure is fed back into UP as a new problem to solve, in the open. Local disputes over siting are named in UP's agreed claim on climate as work for its method.[45,14]

Set beside what the Columbia researchers counted, the difference is in what a dispute rests on. Today a project is often stopped by a rule written to stop it, or pushed through by whoever owns the land. In UP it rests on the real costs, counted in the open, and on the decision of the people it affects, inside floors that protect what cannot be replaced.



One turbine on the hill, followed through: UP at work, step by step.

How it could run, stage by stage

UP grows beside the current system, and its agreed position names three stages. Early, UP is a minority network inside the current system; middle, it has its own productive base and most members' needs are met from what UP

[45] Core tenet: *Self-correction: nothing is final, including this*, in full: "Every failure of UP is fed back into it as a new problem to solve, so it keeps improving without revolution. Every part of UP, these tenets included, can be improved through its own method. UP is judged against both today's system and the ideal it aims at: the ideal shows the direction and the gap still to close, and today's record shows whether UP is already doing better. Downsides, risks and fringe problems are named openly and treated as work, never as reasons to keep a status quo that fails so many." Also in "The core of UP".

produces; and completed, most people live mainly in UP.[46] UP's agreed claims on climate, housing and waste are staged the same way.[14,26,27] In the reading UP's author has set out, now going through UP's method, what changes gradually is people, not UP: each household relies less on the current system's power, housing market and throwaway goods as UP meets more of its needs, and more households make that move. Where UP meets the current system, land title among them, it uses only what the law requires.[47] The early stage rests on today's evidence. The middle and completed stages are projections, and each names its test.

Early: a minority network inside the current system. Early on, UP's members cut their own emissions and prove what works, upgrade and build with their own hands and land, and repair and recover; the effect on the climate is small.[14,26,27] Members keep their homes and their money, which are their own.[47] The expected benefits are those today's evidence shows: shared roofs and turbines that a community owns, as on Samsø, and things mended instead of thrown away, as in the Repair Cafés.[32,40] People outside UP lose nothing. What would have to be shown is the emissions and waste of UP's members, published and measured against today's record, so that what works can be copied and what does not can be dropped.[48]

Middle: UP's own productive base (a projection). As UP's production grows, homes are built from open designs to meet the shelter floor, settlement condenses into beautiful shared commons beside modest private rooms, and UP makes its own goods from open designs built to last.[26,27] The expected benefits are a home for every member as a floor, less waste at the source, and an effect on the climate that grows as demand moves out of the current system with its people and leakage shrinks.[14] In one way UP could run, the land that condensed settlement frees is returned to the living world.[24] People outside UP see an open record of what UP uses and saves, which anyone can check, and anyone may join. What would have to be shown is emissions and waste falling against today's record as UP's share grows, leakage measured rather than assumed, and freed land counted.[14,48]

Completed: most people living mainly in UP (a projection). UP's agreed claims name no separate completed stage, so this paragraph is drawn from the claim on climate and from the tenets. With most people living mainly in UP, its effect on the climate would be large, and every decision would count the energy, carbon, water and materials it uses, inside the floor that protects the living world's capacity to recover.[14,22,20] What would persist is the warming already locked in and the physical limits on recycling, at every stage.[14,27] UP is judged against today's record and against the ideal, and every failure is fed back into it as work.[45]

Table 18.1 lays the stages out side by side. Table 18.2 lists the benefits expected at each stage and how each would be shown.

Table 18.1. Settlement, climate and waste in UP, by stage. The early stage rests on today's evidence; the middle and completed stages are projections.

Stage	What changes	Real precedent	Why it is likely	What persists
Early	Members cut their own emissions and prove what works; they upgrade and build with their own hands and land; they repair and recover	Renewables now cheaper than new fossil power for most new projects	The solutions exist and are already cheaper	A small effect on the climate; warming already locked in; most land and production outside UP
Middle (projection)	Homes built from open designs to meet the shelter floor; settlement	None at scale yet (projection)	The solutions exist and are already cheaper, UP invents better ones	Warming already locked in; land still held outside UP and local

[46] UP's agreed position on judging UP by stage, beside the current system: UP grows side by side with the current system, early (a minority network inside it), middle (its own productive base, with most members' needs met from what UP produces) and completed (most people live mainly in UP); the early stage rests on today's evidence, and the middle and completed stages are reasoned projections from cited mechanisms, labelled as such. Full wording in UP's study lessons (lesson 13).

[47] Clarification of the tenet *Reality over fiction* and of UP's agreed position on useful fictions, set out by UP's author on 14 November 2026 and going through UP's method; until the UP Moderator enters it in the Position Ledger, it is the author's stated reading, not yet an agreed position. In substance: the gradual change is in people, not in UP; UP's own system does not run on money, prices, a UP government or UP companies; each person relies on money, governments and corporations less as they use UP more, and the number of people doing so grows; where UP meets the current system (taxes, land title, the legal form needed to hold property, partnership with local governments), it uses only what the law requires, openly recorded and kept to a minimum, and that contact shrinks toward none as the people of an area move fully to UP. Record: LXW Shared Brain, decisions, "2026-11-14 1015 … Gradual change is people's" and "2026-11-14 1005 …".

[48] Core tenet: *Self-correction: nothing is final, including this*: every failure of UP is fed back into it as a new problem to solve; every part of UP, the tenets included, can be improved through its own method; UP is judged against both the current system and the ideal it aims at; downsides, risks and fringe problems are named openly and treated as work. Full wording in "The core of UP".

Stage	What changes	Real precedent	Why it is likely	What persists
	condenses (card F8, drawing on an illustration of one way UP could run): beautiful shared commons beside modest private rooms, with freed land returned to the living world; UP makes its own goods from open designs built to last and to shared standards so parts are interchangeable, so waste falls at the source		as its main work, demand moves out of the current system with its people, and leakage shrinks as the share acting grows	objections to new homes, which are work for UP's method; physical limits on recycling
Completed (projection)	No separate claim on the cards beyond card F1: as UP grows, the effect on the climate becomes large	None yet (projection)	Not claimed separately on the cards	Warming already locked in persists at every stage; physical limits on recycling persist

Sources: notes to this section.[49]

Table 18.2. Expected benefits of settlement, climate and waste in UP, by stage. The early stage rests on today's evidence; the middle and completed stages are projections, drawn from UP's staged claims on climate, housing and waste and from its tenets.

Stage	For members	For people outside UP	For the living world	How it would be shown
Early	Energy from shared roofs and community-owned turbines; things mended, not thrown away; homes and money their own	Nothing taken; repair skills and results shared in the open	A small effect on the climate; less waste	Members' emissions and waste published against today's record
Middle (projection)	A home for every member as a floor; beautiful commons beside modest private rooms; goods built to last	An open record of what UP uses and saves, which anyone can check; anyone may join	A larger effect on the climate as UP grows; waste falling at the source; freed land returned (one way UP could run)	Emissions and waste falling as UP's share grows; leakage measured; freed land counted
Completed (projection)	Every decision counting real costs, inside the floors	Most people live mainly in UP, and no one is forced to	A large effect on the climate; the living world's capacity to recover kept as a floor	Judged against today's record and the ideal; warming already locked in and limits on recycling persist

Sources: notes to this section.[50]

The household that Chapter 1 introduced shows how this could feel from inside. As in earlier chapters, the household illustrates; it proves nothing.

> *Illustration: one way it could run. The early stage.* The town's UP members put solar panels on the community kitchen and the tool library and publish what they save. The care worker's son, now handy with wiring, helps fit them. The repair table mends the grandfather's old radio instead of throwing it away. None of this changes the town's emissions much, and nobody pretends it does.

[49] Table 18.1: the staged claims are cards U12 F1, F8 and F11 (round 12c; notes 14, 26 and 27). Precedent: renewables (note 8). The middle and completed rows are projections (note 46).
[50] Table 18.2. Early row: notes 14, 26, 27, 32, 40 and 48. Middle row: notes 26, 27, 14, 24 and 48. Completed row: notes 14, 22, 20, 27 and 45. Every entry in the middle and completed rows is a projection; the completed row is drawn from the claim on climate and the tenets, because UP's agreed claims name no separate completed stage.

Illustration: one way it could run. The middle stage, a projection. Members who own homes on the town's edge have chosen to convert them to UP, and a new cluster of homes is going up near the high street, built from open designs: modest private rooms around a shared garden, kitchen and quiet room, beautiful enough that people want to live there. A proposed wind turbine on the hill is disputed by the neighbours, and the dispute is posted as a problem for everyone affected to work on, with simulations of the hill's wildlife and of the town's grandchildren giving input but never a vote.

Illustration: one way it could run. The completed stage, a projection. The old estate on the town's edge, empty since its owners moved into the new homes, has been taken down, and the land is a wood again. The household's goods are made to last and to be mended. The summers are still hotter than they were, because the warming already locked in persists; the town's buildings are designed for it.

The strongest objections

The first objection is that a minority acting alone cannot change the climate, and that what it saves will simply be used by others. The objection's name for this is leakage: when one group cuts its emissions, cheaper fuel and production elsewhere can absorb part of the gain. UP's agreed claim acknowledges leakage. Early on, UP's effect on the climate is small; it becomes large only as UP grows, because the solutions exist and are already cheaper, UP invents better ones as its main work, demand moves out of the current system with its people, and leakage shrinks as the share acting grows.[14] That is a projection, not a forecast of how fast UP will grow.[46]

The second objection is that condensed settlement means people crammed together against their will. UP's agreed position answers it in two ways. The commons come first and are meant to be generous and beautiful, with quiet corners where anyone can be alone, and private space is modest and comfortable, under limits that are norms for health, happiness and sustainability, not punishments, and that rise as abundance grows.[23] And UP is never imposed: no one is forced to join or to give up what is theirs, and land enters UP as members convert what they own.[42,26]

The third objection is that local people will veto anything new, as they already do. UP's agreed claims name local disputes over siting, and local objections to new homes, as work for UP's method.[14,26] One way UP could run, given in its agreed positions as an illustration, is that those who cannot speak for themselves, future generations, young children and other living things, are represented in such disputes by several independent simulations with published assumptions, which give input but never a vote.[28] Whether that settles disputes better than today's planning systems is open, and UP names it as work.[48]

What persists at every stage is the warming already locked in. UP's agreed claim says so plainly: warming already locked in persists at every stage.[14] The rule that governs everything else in this chapter is the one UP's floors set: damage that cannot be undone is never traded for a short-term need.[20,21]

Back to Lytton

Lytton set its record in a heat that, by the scientists' estimate, was virtually impossible without human-caused climate change; the fire that followed has no known cause, and four years later the village was still rebuilding.[3,4,5] UP cannot undo that fire, and its own agreed claim says that warming already locked in persists at every stage.[14] What UP sets against it is a floor and a direction. The floor is that damage that cannot be undone is never traded for a short-term need.[20,21] The direction is beautiful commons beside modest private space, homes built from open designs, goods built to last, and, in one way UP could run, condensed settlement that returns land to the living world; that direction is staged, and its middle and completed stages are projections.[23,26,27,24,46]

Even a world that lives well within its limits will have disputes, harms and emergencies. Chapter 19 turns to justice, safety and what happens when things go wrong.

Chapter card: Chapter 18

- **Claim:** The current system has made clean power cheaper than fossil power for most new projects, yet emissions keep rising, local opposition and siting laws stand in the way of new renewable projects, and electronic waste grows faster than it is recovered. Stand-ins drive much of it: costs left outside the books, more earned from replacing than from

lasting, and fuel prices held below cost. UP's floors include the living world's capacity to recover: damage that cannot be undone is never traded for a short-term need. Physical accounting puts the real limits inside every decision; open designs and shared standards end the reason to sell a replacement; clean energy and doing more with less shrink the load. UP puts its beauty and effort into the commons first, beside modest private space; one way UP could run, given as an illustration, is that settlement condenses as UP grows and freed land returns to the living world, a projection. Warming already locked in persists at every stage.

- **Core lines:** the tenets *Floors that are never crossed* (the living world's capacity to recover); *Reality over fiction*; *Freely joined, ethically grown* (never imposed); *Self-correction*. Agreed positions: people first, irreversible damage never traded; beautiful commons, modest private space; physical accounting sets the limits; the current system often monetises a problem instead of solving it; the staged claims on climate, housing and waste (round 12c). Given as illustrations: condensing settlement and freed land; voiceless stakeholders represented by simulations.
- **Rule of thumb:** "Can the damage be undone? If not, it is never traded. And does the decision count the real cost, or only the price?"
- **What this is not:** a plan to move anyone from their home, a promise to stop warming already locked in, or a claim that a small network can change the climate on its own.
- **Check yourself:**
    1. Name three ways a stand-in for the real world drives damage to the living world.
    2. What does the EU's common charger show about shared standards and waste?
    3. How does physical accounting change what a decision rests on?
    4. What does UP do when meeting a need and protecting the biosphere clash?
    5. What did Soleri propose, and what does UP take from it without adopting it?
    6. Why does UP's agreed claim say its early effect on the climate is small?
    7. How could UP give a voice to people and creatures who cannot speak in a decision?
    8. Follow one turbine on the hill through UP: what is counted, what rules an option out, who decides, and what happens if it goes wrong?
    9. What did Samsø and the Repair Cafés each show, and what benefits does Table 18.2 expect at each stage?
- **Open questions (for the wiki):** how land held outside UP is brought into shared use without force; how disputes over siting are settled fairly and fast; which goods should move first to open designs and shared standards. (Improve this page.)

Chapter 19. Justice, Safety and Emergencies

On a Thursday morning in September 2025, Bryan Hooper, Sr. was released from Stillwater Correctional Facility in Minnesota after more than 27 years in prison for a murder he did not commit.[1,2] He had been found guilty of the premeditated murder in 1998 of Ann Prazniak, who was 77, and given three life sentences with the possibility of release after 30 years.[2] A key witness testified against him. Police had questioned her at least seven times and threatened her with her own murder charges, and jailhouse informants in the case have since recanted their statements too.[3] Years later the witness came forward, not only to take back her testimony but to confess to killing Ms. Prazniak and hiding her body.[1] After a review by the county's own prosecutors, Judge Marta Chou found that Mr. Hooper's conviction "was tainted by false evidence", and the Hennepin County Attorney, Mary Moriarty, apologised to him and his family for her office's role in that injustice.[1]

Hooper's case shows both sides of today's justice system. It failed him for 27 years: a witness under pressure, informants whose statements did not hold, and a jury that heard false testimony. It was corrected in the end only after the witness confessed, through a prosecutor's review of its own conviction and a judge who said plainly what had gone wrong. This chapter takes up the question that Chapter 12 left for it: what happens in UP when someone harms someone else? It is the home of the justice failure on the scoreboard in that chapter.[4] Chapter 9 showed that government, one of the great shared fictions, stands in for the trust that strangers could not otherwise have in one another, and Chapter 7 set out the floor of a fair hearing that no decision in UP may cross.[5,6] This chapter puts the two together. It looks first at how the current system handles harm and where it falls short, then at what its stand-ins do to justice and at what UP holds. It then follows one harm through UP, step by step, to show what would happen if someone hurt you. It looks at what could take the stand-ins' jobs over, with New Zealand's family group conferences and Bangladesh's cyclone volunteers among the cases, at how justice could run at each stage of UP's growth and what each stage is expected to bring, and at the strongest objections.

How the current system handles harm, and where it falls short

Today's justice systems deserve credit first, because keeping the peace among strangers is one of the oldest jobs any society has, and the current system has done it better and better. Reviewing the historical records in 2003, the criminologist Manuel Eisner concluded that serious violence between people "decreased remarkably in Europe between the mid-sixteenth and the early twentieth centuries". A synthesis of English records suggests that homicide fell from about twenty a year per 100,000 people in the Middle Ages to about one in the twentieth century, though Eisner warns that most explanations for the fall, the strengthening of states among them, are "post hoc".[7] Some of the current system work remarkably well. Norway's correctional service holds that the punishment

[1] Hennepin County Attorney's Office, *Bryan Hooper, Sr. exonerated after spending 27 years in prison for a crime he did not commit* (4 September 2025): "Bryan Hooper, Sr. has been exonerated and is expected to be released from Stillwater Correctional Facility today."; "has been incarcerated for over 27 years"; the key witness "had come forward not only to recant her testimony against Mr. Hooper, but to confess to killing Ms. Prazniak and concealing her body."; Judge Marta Chou: "Mr. Hooper's conviction was tainted by false evidence."; County Attorney Mary Moriarty: "I want to again apologize to him and his family for our office's role in that injustice." https://www.hennepinattorney.org/news/news/2025/September/hooper-exoneration . Checked word for word at source, 1 Nov 2026.

[2] Jack Dura, Associated Press, *Minnesota man imprisoned for 27 years is free after witness confesses to the murder* (6 September 2025, carried by KSL.com): "premeditated murder"; "three life sentences with the possibility of release after 30 years"; "released Thursday morning from Stillwater Correctional Facility". https://www.ksl.com/article/news/utah/police-and-courts/minnesota-man-imprisoned-for-27-years-is-free-after-witness-confesses-to-the-murder/51370335 . Checked word for word at source, 1 Nov 2026.

[3] Great North Innocence Project, *Bryan Hooper, Sr. exonerated after spending 27 years in prison for a crime he did not commit* (4 September 2025): the key witness "was questioned by police at least seven times."; "she was threatened with her own murder charges by police."; "In the years since Mr. Hooper's conviction, these individuals have also recanted their statements" (the jailhouse informants). https://www.greatnorthinnocenceproject.org/news/bryan-hooper-sr-exonerated-after-spending-27-years-in-prison-for-a-crime-he-did-not-commit . DNA evidence was not what freed him. Checked word for word at source, 1 Nov 2026.

[4] Chapter 12, Table 12.1, row F10 (war, violence and crime), and Table 12.2, which gives UP's staged claim for the same row.

[5] Chapter 9, "Government, and the jobs it does" (among them keeping the peace and setting common rules that strangers can rely on) and "What running on government costs", with their notes; Chapter 8, "Stories that let strangers work together" and "Money, and the jobs it does"; and Chapter 10, "The corporation, and the jobs it does".

[6] Chapter 7, "A fair hearing, and the limits on any restriction", with its notes, including Norway's principle of normality and the UN standard on basic living conditions for all prisoners.

[7] Manuel Eisner, "Long-Term Historical Trends in Violent Crime", *Crime and Justice* 30 (2003): "Serious interpersonal violence decreased remarkably in Europe between the mid-sixteenth and the early twentieth centuries."; "A range of theoretical explanations for the long-term decline have been offered, including the effects of the civilizing process, strengthening state powers, the Protestant Reformation, and modern individualism, but most theorizing has

is the loss of liberty and that the sentencing court removes no other rights, that no one should serve a sentence under stricter conditions than the community's security needs, and that life inside should resemble life outside as much as possible; health care, education and libraries are brought in from the community rather than run by the prison, as Chapter 7 described.[8,6] Of the people released from Norwegian prisons in 2020, 16 per cent received a new prison or community sentence within two years, the lowest share of the five Nordic countries, against 21 per cent in Iceland, 28 in Finland, 31 in Denmark and 33 in Sweden; the report notes that the pandemic reduced prosecutions and court activity that year.[9] And the system can correct its own mistakes once they come to light, as Bryan Hooper's release shows.

Yet much harm goes unanswered. In England and Wales, 7.3 per cent of police-recorded crimes against victims had ended in a charge or summons in the year to March 2026, a provisional figure that rises as cases close. In the United States, just under half of the violent crimes reported to the police in 2025 were cleared by an arrest or by other means, and a cleared case is not a conviction.[10] In Sweden, 26 per cent of homicides in the criminal milieu between 2018 and 2021 were cleared with someone linked to the act itself.[11] And some of the answers are harms in their own right. In Japan, Human Rights Watch reports a conviction rate at trial of 99.8 per cent, says that Japan's Code of Criminal Procedure allows suspects to be held for up to 23 days before indictment, and describes suspects being questioned without a lawyer; the rate counts only the cases prosecutors choose to bring, so it does not by itself show that innocent people are convicted.[12] Around the world, about 11.5 million people are held in prisons, nearly 1.8 million of them in the United States, according to the World Prison Population List of 2024.[13]

New tools bring new errors. In January 2020, Detroit police arrested Robert Williams at his home in front of his wife and young daughters, after his driver's licence photo was wrongly flagged as a likely match to a man seen on security video; he was held, by the account of the ACLU, which represented him, for thirty hours, and prosecutors

been post hoc."; of Ted Robert Gurr's 1981 synthesis, built on English records: "The curve suggested that typical rates may have been about twenty homicides per 100,000 population in the High and Late Middle Ages, dropping to ten around 1600, and ending after an extended downswing at about one per 100,000 in the twentieth century."; after studies of Kent, Scandinavia and the Netherlands: "there remains little doubt about the empirical cogency of the broad picture Gurr painted." https://www.vrc.crim.cam.ac.uk/system/files/documents/manuel-eisner-historical-trends-in-violence.pdf . Checked at source, 1 Nov 2026.

[8] Kriminalomsorgen (Norwegian Correctional Service), *About the Norwegian Correctional Service* (no date; page copyright 2026): "The punishment is the restriction of liberty; no other rights have been removed by the sentencing court."; "No-one shall serve their sentence under stricter circumstances than necessary for the security in the community."; "During the serving of a sentence, life inside will resemble life outside as much as possible."; "Prisons do not have their own staff delivering medical, educational, or library services."; "These are imported from the community." https://www.kriminalomsorgen.no/informasjon-paa-engelsk.536003.no.html . Checked word for word at source, 1 Nov 2026.

[9] Ragnar Kristoffersen (ed.), *Correctional Statistics of Denmark, Finland, Iceland, Norway and Sweden 2018-2022*, University College of Norwegian Correctional Service (KRUS), 2024, section 2.11, "Reconvictions within two years of released sentenced prisoners": the figures "Refer to the numbers of new unconditional prison or community sentences/services within two years after year of release". Table values for 2020 releases: Norway 16 per cent (516 of 3,177), Iceland 21, Finland 28, Denmark 31, Sweden 33. https://www.fangelsi.is/media/skjol/Nordic-Statistics-2018_2022_final.pdf . Norway's footnote to the table: "The COVID-19 pandemic led to reduced number of registered crimes and less activity in prosecutions" "and courts, which may have affected the reconviction rate in 2020." Table values and footnote checked against the PDF, 13 Nov 2026.

[10] Federal Bureau of Investigation, Uniform Crime Reporting, *Reported Crimes in the Nation, 2025* (Quick Stats, 2026): "Nationwide, 47.4% of violent crimes and 17.4% of property crimes were cleared"; "by arrest or exceptional means." The figures cover crimes reported to the police by participating agencies. https://cde.ucr.cjis.gov/LATEST/resources/reports/Reported%20Crimes%20in%20the%20Nation%202025%20Quick%20Stats.pdf . "Cleared" means an arrest or an exceptional closure, not a conviction. Home Office, *Crime outcomes in England and Wales 2025 to 2026* (23 July 2026): the proportion of victim-based crimes "resulting in a charge/summons from 6.3% in the year to March 2025 to 7.3% in the latest year"; "no suspect having been identified, with 40.9% of cases closed this way in the year ending March 2026". The figures cover police-recorded crimes, and the latest year's rate rises as open cases close. The two countries' measures are different and are not comparable with each other. https://www.gov.uk/government/statistics/crime-outcomes-in-england-and-wales-2025-to-2026/crime-outcomes-in-england-and-wales-2025-to-2026 . Checked 1 Nov 2026.

[11] Brå (Swedish National Council for Crime Prevention), *Homicide in Sweden since 1990*, Report 2024:6 (15 April 2025): "A total of 26 per cent of all homicides in the criminal milieu in 2018-2021 have been cleared,"; "with one or more individuals being linked to the act of violence itself." https://bra.se/english/publications/archive/2025-04-15-homicide-in-sweden-since-1990 . Checked word for word at source, 1 Nov 2026.

[12] Human Rights Watch, *Japan: "Hostage Justice" System Violates Rights* (25 May 2023): "the conviction rate at trial is 99.8 percent."; suspects may be detained "for up to 23 days before indictment"; and police "question them without a lawyer". https://www.hrw.org/news/2023/05/25/japan-hostage-justice-system-violates-rights . Checked word for word at source, 1 Nov 2026.

[13] Birkbeck, University of London, news release "Prison populations continue to rise in many parts of the world, with 11.5 million held in prisons worldwide" (1 May 2024), on Helen Fair and Roy Walmsley, *World Prison Population List* (14th edition), Institute for Crime & Justice Policy Research: "Approximately 11.5 million people are held in penal institutions throughout the world"; "According to published prison population numbers, the total worldwide prison population stands at 10.99 million."; "There are nearly 1.8 million prisoners in the United States of America." https://www.bbk.ac.uk/news/prison-populations-continue-to-rise-in-many-parts-of-the-world-with-11-5-million-held-in-prisons-worldwide . The higher figure adds estimates for people held in detention centres in China and prison camps in North Korea, and pre-trial prisoners held in police facilities. Checked at source, 13 Nov 2026.

eventually dropped the charges.[14,15,16] In June 2024 the city agreed to pay him $300,000 and to stop arresting people on facial recognition results alone, with a federal court given monitoring and enforcement powers for four years.[15,14]

In one respect Hooper's case is not rare. In 2020 the National Registry of Exonerations, which lists people convicted in the United States and later cleared, studied the first 2,400 cases on its list. Misconduct by officials had contributed to the false convictions of 54 per cent of them; police committed misconduct in 35 per cent and prosecutors in 30. The most common kind was hiding evidence that could have cleared the accused, which happened in 44 per cent of the cases.[17] These are the cases in which the error was found, so they do not show how often misconduct happens in all cases. They show what most often goes wrong when an innocent person is convicted.

What the stand-ins do to justice

Chapters 8 to 10 traced how money, government and corporations, the great shared fictions, stand in for things that people could not see or handle directly.[5] Justice has stand-ins of its own, and three of them do most of the damage.

The first is money, as the thing worth taking. Most crime that people experience is about taking money or goods. In England and Wales, the crime survey for the year to March 2026 estimated 9.6 million incidents of the crimes it counts, of which 4.5 million were fraud and 2.6 million theft.[18] On those figures, about three in every four were crimes of taking. Not every theft or fraud is driven by need, and the end of money would not end greed or anger. But a great deal of crime exists because money can be taken, and because people who lack it are pushed toward taking it. UP's agreed position on judging it as a whole system names, among the parts that strengthen each other, "a moneyless system that removes the motive for much of today's crime".[19]

The second is time served, as a stand-in for repair. A sentence measures harm in years, because years can be counted and compared. What a victim lost, and what would make it right, are harder to count, and a sentence does not measure them. A sentence can also add harm of its own. The Norwegian study met again in the objections below found that imprisonment there reduced reoffending, and that for people who had been working before

[14] Sarah Cwiek, Michigan Public, *"It didn't make sense at all": Wrongful facial recognition arrest in Detroit leads to landmark settlement* (28 June 2024): "Detroit Police arrested Williams at his Farmington Hills home in front of his wife and their young daughters."; "There was no real case against him, so prosecutors eventually dropped the charges."; "the settlement also gives a federal court monitoring and enforcement powers for the next four years." https://www.michiganpublic.org/criminal-justice-legal-system/2024-06-28/it-didnt-make-sense-at-all-wrongful-facial-recognition-arrest-leads-to-landmark-settlement . Checked word for word at source, 1 Nov 2026.

[15] Ed White, Associated Press, *Detroit paying $300,000 to man wrongly accused of theft, making changes in use of facial technology* (28 June 2024, carried by News4Jax): "The city of Detroit has agreed to pay $300,000 to a man who was wrongly accused of shoplifting"; "His driver's license photo was incorrectly flagged as a likely match to a man seen on security video"; "Detroit police will be prohibited from arresting people based solely on facial recognition results". https://www.news4jax.com/tech/2024/06/28/detroit-paying-300000-to-man-wrongly-accused-of-theft-making-changes-in-use-of-facial-technology/ . Checked word for word at source, 1 Nov 2026.

[16] American Civil Liberties Union, *Williams v. City of Detroit* (case page): the police "subjected him to thirty hours of detention in an overcrowded, dirty cell." https://aclu.org/cases/williams-v-city-of-detroit-face-recognition-false-arrest . The ACLU represented Mr. Williams. Checked word for word at source, 1 Nov 2026.

[17] Samuel R. Gross, Maurice Possley, Kaitlin Roll and Klara Stephens, National Registry of Exonerations, *Government Misconduct and Convicting the Innocent: The Role of Prosecutors, Police and Other Law Enforcement* (released September 2020; dated 2021 in the University of Michigan Law School repository): "It is based on first 2,400 exonerations listed in the National Registry of Exonerations."; "Official misconduct contributed to the false convictions of 54% of defendants who were later exonerated."; "Police officers committed misconduct in 35% of cases."; "Prosecutors committed misconduct in 30% of the cases."; "Concealing exculpatory evidence—the most common type of misconduct—occurred in 44% of exonerations." https://repository.law.umich.edu/pub_law_archive/776 . The report measures misconduct in cases that ended in exoneration, not in all cases. Checked at source, 13 Nov 2026.

[18] Office for National Statistics, *Crime in England and Wales: year ending March 2026* (statistical bulletin, 23 July 2026): "There were an estimated 9.6 million incidents of CSEW headline crime in the YE March 2026 survey"; "There were an estimated 4.5 million incidents of fraud in the year ending (YE) March 2026"; "The CSEW for year ending (YE) March 2026 estimated 2.6 million theft incidents". https://www.ons.gov.uk/peoplepopulationandcommunity/crimeandjustice/bulletins/crimeinenglandandwales/yearendingmarch2026/pdf . The Crime Survey for England and Wales asks people aged 16 and over about crimes they experienced, reported or not. "About three in every four" is this chapter's arithmetic: 4.5 and 2.6 million together are 74 per cent of 9.6 million. Checked at source, 13 Nov 2026.

[19] UP's agreed position S, "Judge UP as a whole system, against today's system" (CANON, 22 Oct 2026): "Problems are linked in trees that show their common roots, so the work goes to solutions that solve many problems at once. The bigger a problem, the more people it affects and the more attention and effort it draws, so the system works like a marketplace of problems, biggest first, and any area where UP does not yet do better than today's system gets attention first. UP is a system whose parts strengthen each other: education open to everyone and improving quickly; a moneyless system that removes the motive for much of today's crime; automation that supplies basic needs at ever lower cost; health care backed by robotics and AI; and a society that works on its problems every day." The same position says: "Its starting point will not be great; it is built to improve much faster than today's systems." Full wording in UP's agreed positions (the Position Ledger).

prison it brought a lasting loss of work.[20] A record of time served is easy to keep. It is not the same as a harm repaired.

The third is secrecy, as a stand-in for trust. Strangers cannot check what police and prosecutors do, so they are asked to trust the institutions instead, and the institutions keep their files closed. Much of the time that trust is earned. When it is not, closed files are where things go wrong: a witness questioned again and again under threat, as in Hooper's case, or evidence that could clear the accused kept back, as in 44 per cent of the exonerations above.[3,17] UP's agreed positions on justice name this root directly: most problems in justice come from secrets and hidden power.[21] Each stand-in was the best tool available when it was invented. Each now has competition.

What UP holds about justice and safety

UP's agreed positions on justice begin with a claim and a limit. The claim, which the early stage does not make and the stage table below treats as a projection, is that in UP most crime is removed, eliminated or dramatically reduced, and that laws remain, centred on the crime that is left.[21,22] The limit is that the laws themselves are meant to be universal norms of right and wrong, as far from subjective as possible, though that may never be fully achieved, and that health, happiness and wellbeing is a very good way to measure them.[21]

Enforcement, in UP's agreed positions, has one layer: trained, professional law enforcement, the one level of authority agreed in an earlier round, natural in the way that a parent has authority over a child for the child's own wellbeing.[21] Its whole work is open to anyone, except in the most special circumstances, which need still more careful handling and become public on short timelines. Authority over it lies with the people and the process, and it is to be watched by many at all times, because most problems in justice come from secrets and hidden power.[21] Courts rest on evidence, not on public opinion; evidence and its evaluation could even be crowdsourced, as long as there is a structure for weighing facts and evidence.[21]

UP allows some people to be confined to protect themselves and others, but only under the fair-hearing floor.[21] No one's freedom is restricted without a fair, evidence-based hearing, with the evidence open to them and a way to appeal. A protected freedom such as movement may be restricted only to protect others or the person, only through an evidence-based court process, for the shortest time needed, and never below the needs floor. The hearing comes first, except briefly, to stop harm in progress, with a hearing promptly after, and leaving a group or community does not end a restriction set by a fair hearing. UP's core calls these limits an open problem: the best that can be imagined now, which UP is built to improve.[23] The substance of the evidence is always open to the person; where a witness's safety is at risk, a court may protect the witness's identity, and that decision can be appealed.[24]

[20] Manudeep Bhuller, Gordon B. Dahl, Katrine V. Løken and Magne Mogstad, "Incarceration, Recidivism, and Employment", *Journal of Political Economy* 128(4):1269–1324 (2020), abstract: "Using a random judge design and panel data from Norway, we estimate that imprisonment discourages further criminal behavior, with reoffense probabilities falling by 29 percentage points and criminal charges dropping by 11 over a 5-year period."; "Previously employed individuals experience lasting negative employment effects."; "time spent in prison with a focus on rehabilitation can be preventive for a large segment of the criminal population". https://www.journals.uchicago.edu/doi/10.1086/705330 . Checked at source, 1 Nov 2026.

[21] UP's agreed positions on justice and enforcement (Round 13, 28 Oct 2026; positions 1 to 6, paraphrased): most crime is removed, eliminated or dramatically reduced, and laws remain, centred on what remains [WHY]; laws are universal norms of right and wrong, as little subjective as possible, which may not be fully possible, with health, happiness and wellbeing a very good way to measure [WHAT]; one layer of trained professional law enforcement, the one level of authority agreed in round 4a [WHAT]; its entire work open to anyone except in the most special circumstances, which need more sensitive handling and short timelines before becoming public, with authority over it held by the people and the process, watched by many all the time [WHAT]; courts rest on evidence, not public opinion, and evidence and evaluation could be crowdsourced given a structure for weighing facts and evidence [WHAT]; confinement is allowed to protect the person and others [WHAT], within the T6 floor (Round 13b). Full wording in UP's agreed positions (the Position Ledger).

[22] UP's agreed position on judging UP by stage, beside the current system: UP grows side by side with the current system, early (a minority network inside it), middle (its own productive base, with most members' needs met from what UP produces) and completed (most people live mainly in UP); the early stage rests on today's evidence, and the middle and completed stages are reasoned projections from cited mechanisms, labelled as such. Full wording in UP's study lessons (lesson 13).

[23] Core tenet: *Floors that are never crossed*, in full (as amended on 28 October 2026): "UP keeps a set of floors that no decision may cross: everyone's basic needs and protected freedoms, which no gain for others can buy; the living world's capacity to recover, so damage that cannot be undone is never traded for a short-term need; the right to leave any group or community at any time, taking what is theirs; a truthful shared record, so facts, measures and decisions are never falsified; freedom of the mind, so no one's thinking is manipulated without their knowledge or consent; and a fair hearing, so no one's freedom is restricted without a fair, evidence-based hearing, with the evidence open to them and a way to appeal. UP guarantees needs, not every want. The collective defines and refines the floors through UP's method; it may clarify or raise them, but no decision may lower them or push anyone below them. As a starting example for the collective to refine: needs such as food, water, shelter, health care, education and connection; freedoms such as thought, belief, speech, movement and privacy." And: "A protected freedom such as movement may be restricted only to protect others or the person, only through an evidence-based court process, for the shortest time needed, and never below the needs floor. The hearing comes first, except briefly, to stop harm in progress, with a hearing promptly after. Leaving a group or community does not end a restriction set by a fair hearing. These limits are an open problem: they are the best that can be imagined now, and UP is built to find better and better solutions. Above the floors, everything is open to the method." Also in "The core of UP".

One way UP could run, given in its agreed positions as an illustration, is to take today's best-functioning justice systems as models and make them more universal: rights and freedoms respected, very high clearance rates, and consequences focused on rehabilitation and on the wellbeing of the accused and of their victims.[25] Another is that open information systems are used when the circumstances require it, since the more open a society is, the easier evidence should be to find, and that AI, which has not reached its potential here, helps solve crimes and find and remove their causes.[25] UP's agreed positions also name the danger plainly: justice is a critical place, full of dangers such as abuse of power and false evidence, which need a great deal of attention; answering them is left to the collective, since many people are interested in the problem and in creating solutions.[26]

Emergencies are where many systems give themselves extra power, and UP's agreed position refuses to. UP has no lasting authority and no emergency powers. In an emergency everyone acts quickly for everyone's benefit, with many trained responders ready; authority belongs to the event, is one layer deep, like a parent's, and ends when the event ends. A larger event does not create greater authority, only more single-layer authority: many teams, each one layer deep, coordinated through shared information, all under the same public oversight. The public, acting on evidence and measured outcomes, is the authority over everyone who acts, and the best answer to emergencies is to prevent them, so that work comes first. The rule itself is open to improvement by anyone who finds a better way that gives up no freedom and guards better against oligarchy and tyranny.[27]

UP at work: one harm, followed through

The question every reader brings to this chapter is what would happen if someone hurt them, so it helps to follow one harm through UP from start to finish. Take a fight outside the town's community kitchen in which one man breaks another's jaw. Early on, while UP is a small network inside the current system, a harm like this goes to the current system's police and courts, as it would now; UP relies on the current system's law for protection, as any community does.[28] What follows is how it could run once UP has its own productive base, in the middle stage, and it is a projection. It is one way UP could run, built from its agreed positions, not a procedure UP has adopted, and the collective would shape the details.

The harm is stopped first. Anyone nearby may act to stop harm in progress. A trained member of UP's one layer of law enforcement may hold the man who struck the blow, but only briefly, to stop the harm, and a fair hearing follows promptly.[23,21]

The case is open; the people in it are not. The work of law enforcement on the case is open to anyone, so that many can watch it, because most problems in justice come from secrets and hidden power.[21] The injured man's medical records and the private lives of everyone involved are not public property; each person controls their own information.[29]

[24] UP's agreed clarification of the fair-hearing floor (CANON-CLARIFICATION, 1 Nov 2026): "The words of T6 are unchanged. The substance of the evidence is always open to the person. Where a witness's safety is at risk, a court may protect the witness's identity, and that decision can be appealed. Other hard cases are left to UP's method." Full wording in UP's agreed positions (the Position Ledger).

[25] UP's agreed positions on justice (Round 13, positions 7 and 8; [HOW], an illustration of one way UP could run, never a directive), paraphrased: today's best-functioning justice systems as the models, made more universal, with rights and freedoms respected, very high justice and clearance rates, and consequences focused on rehabilitation and the wellbeing of the accused and their victims; open information systems used when circumstances require, the more open the society the easier evidence is to find; AI, not yet at its full potential here, with many opportunities to solve crimes, learn more about their causes and remove them. Full wording in UP's agreed positions (the Position Ledger).

[26] UP's agreed position on justice (Round 13, position 9; [COLLECTIVE]), paraphrased: justice is a critical place, full of dangers, and must be treated as such; the dangers of abuse of power, false evidence and much else need a great deal of attention, and many people are interested in the problem and in creating solutions. Full wording in UP's agreed positions (the Position Ledger).

[27] UP's agreed position "One layer of authority, however large the event" (round 4, CANON 22 Oct 2026), in full: "UP has no lasting authority and no emergency powers. In an emergency everyone acts quickly for everyone's benefit, with many trained responders ready. Authority belongs to the event, is one layer deep, like a parent's, and ends when the event ends. A larger event does not create greater authority, only more single-layer authority: many teams, each one layer deep, coordinated through shared information, all under the same public oversight. The public, acting on evidence and measured outcomes, is the authority over everyone who acts. The best answer to emergencies is to prevent them, and that work comes first. The rule is itself open to improvement: anyone may propose a better way to handle emergencies that gives up no freedom and guards better against oligarchy and tyranny." Full wording in UP's agreed positions (the Position Ledger).

[28] UP's agreed staged claim on war, violence and crime (round 12c, card F10): "UP reduces violence at its roots, and most crime is removed, eliminated or dramatically reduced (Round 13)."; "The middle stage is the most exposed, and UP's protection then rests on legality, numbers and nonviolent action."; "As cities and nations join, their weapons and armies are dismantled and converted into law enforcement, emergency aid and rapid response, and nuclear weapons into power (12S, an illustration)."; "Armed states and groups outside UP persist while they stay outside." Full wording in the round 12c record.

[29] Core tenet: *Open systems, shared knowledge, private persons*: "The rules, code, records, decisions and reasons of UP are public, so anyone can check them. UP's technology (the knowledge, code, data and designs UP produces) stays only in UP: everyone taking part in UP may use, study and improve it, and no one may enclose it. Each person controls their own information and chooses what to share." Full wording in "The core of UP".

Evidence decides, not opinion. The court rests on evidence, not on public opinion. The substance of the evidence is always open to the accused, and where a witness's safety is at risk, the court may protect the witness's identity, a decision that can itself be appealed.[21,24]

The machine proposes; people decide. If a camera's footage is run through an AI that suggests who struck the blow, that suggestion is a lead, never a finding; AI in UP proposes and never governs, and a decision about anyone's freedom rests on evidence weighed by people at a fair hearing.[30,23]

The answer aims at repair. Once the facts are found, the consequence is focused on rehabilitation and on the wellbeing of the man who was hurt and of the man who hurt him.[25] If the injured man is willing, the two can meet face to face, as in the restorative conferences that the evidence below supports.[31] Confinement is possible only to protect others or the man himself, through an evidence-based court process, for the shortest time needed, and never below the needs floor; and leaving the community does not end a restriction set by a fair hearing.[23]

The roots become work. Why the fight happened, drink, a debt, an old grievance, a man with nothing to lose, is a problem in its own right, named and offered as work to anyone willing to take it on.[32] The trials in Liberia, below, show what work on the roots can do.[33]

When it goes wrong, the failure becomes work. If the hearing gets it wrong, there is a way to appeal, and the failure is fed back into UP as a new problem to solve, in the open.[23,34]

Set beside Bryan Hooper's case, the difference is in what was hidden. His conviction rested on a witness questioned again and again under threat, in files no outsider could read.[3] In this projection, the work of the case is open to many, and the accused can read the substance of everything the court reads.

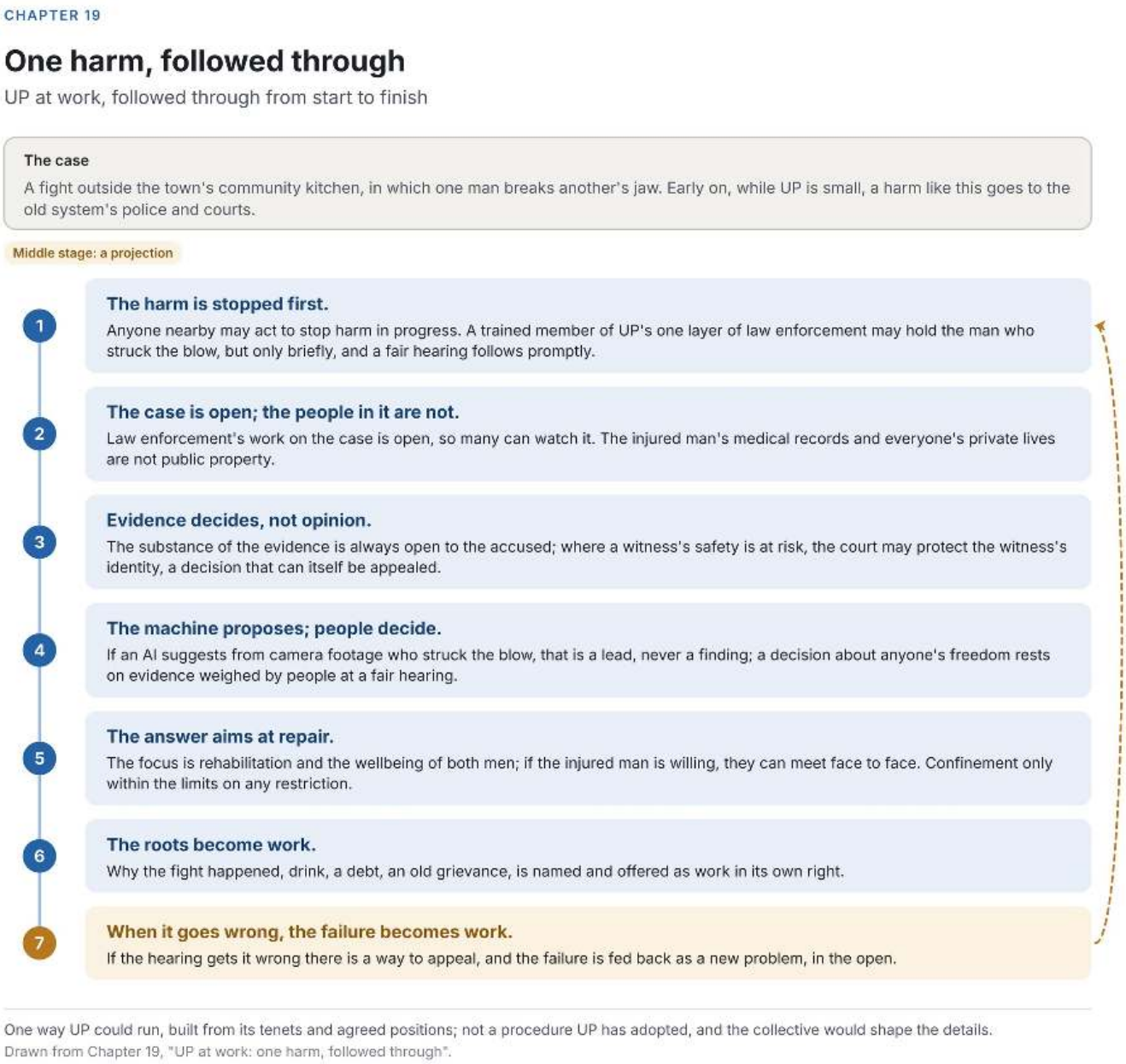
[30] Core tenet: *Technology serves; people decide*, in full: "AI and automation coordinate, propose and do work. They never govern: people can always correct, pause or switch them off. No single AI system or operator controls coordination: the AI systems UP uses are open, more than one, checked against each other, and watched for concentrated power like everything else. Because an AI may one day be shown to have experiences of its own, UP studies the question carefully and would extend its aim to any being shown to feel." Also in "The core of UP".

[31] Heather Strang, Lawrence Sherman, Evan Mayo-Wilson, Daniel Woods and Barak Ariel, *Restorative Justice Conferencing (RJC) Using Face-to-Face Meetings of Offenders and Victims: Effects on Offender Recidivism and Victim Satisfaction. A Systematic Review*, Campbell Systematic Reviews 2013:12: face-to-face conferences "resulted in offenders committing significantly less crime than their counterparts"; victims taking part "express higher levels of satisfaction with the handling of their cases" and are less inclined "to want to seek revenge". https://doi.org/10.4073/csr.2013.12 (abstract read at https://doaj.org/article/a8fe1c7e7bc84b10b7739295a7d9f09d). The trials covered conferences that offenders and victims agreed to. Checked word for word at source, 1 Nov 2026.

[32] Core tenet: *The method: shared problem solving with evidence*, in full: "Everything in UP runs through one method. Problems are named, measured and offered as work to anyone willing to take them on, whether or not they are affected; the people a problem affects decide its outcome. No problem, solution or method belongs to the person who raised it: anyone may update, reframe or improve it. Solutions are proposed with their evidence, tested and compared, and a better idea replaces a worse one. Every claim that guides shared action can be tested and is open to being proved wrong. Work on the roots of problems is worth the most, but a problem can be worked from any angle. Facts are checked, unknowns become shared work, and matters of taste are never made rules for others. Evidence proposes; people decide." Also in "The core of UP".

[33] Christopher Blattman, Julian C. Jamison and Margaret Sheridan, "Reducing Crime and Violence: Experimental Evidence from Cognitive Behavioral Therapy in Liberia", *American Economic Review* 107(4):1165–1206 (April 2017), abstract: "We recruited criminally engaged men and randomized one-half to eight weeks of cognitive behavioral therapy"; "We also randomized $200 grants."; "Cash alone and therapy alone initially reduced crime and violence, but effects dissipated over time."; "When cash followed therapy, crime and violence decreased dramatically for at least a year." https://doi.org/10.1257/aer.20150503 (abstract read at https://ore.exeter.ac.uk/repository/handle/10871/31809). Checked at source, 13 Nov 2026.

[34] Core tenet: *Self-correction: nothing is final, including this*: every failure of UP is fed back into it as a new problem to solve; every part of UP, the tenets included, can be improved through its own method; UP is judged against both the current system and the ideal it aims at; downsides, risks and fringe problems are named openly and treated as work. Full wording in "The core of UP".



One harm, followed through: UP at work, step by step.

What could take the stand-ins' jobs over

Chapter 8 set out seven developments that could take over the jobs of the fictions, each already under way somewhere in the current system.[35] In justice and safety most of them are at work, and each has its evidence and its limits.

Needs met, so that much of the motive goes. Abundance and automation, the first two developments, make it possible to meet everyone's needs as a floor, and the evidence that meeting needs reduces crime, though it comes from small trials, is striking. In Liberia, the economist Christopher Blattman and his colleagues recruited men involved in crime and violence and randomly offered them eight weeks of cognitive behavioural therapy, a grant of $200, both, or neither. Cash alone and therapy alone each cut crime and violence at first, but the effects faded; "When cash followed therapy, crime and violence decreased dramatically for at least a year."[33] Ten years later,

[35] Chapter 8, "Money, and the jobs it does", "How money's jobs move to reality" and "How the pieces work together", with their notes: the seven developments.

among the 999 men the researchers followed, antisocial behaviour such as robbery and drug-selling was still lower among those who had received the therapy, alone or with the cash, and most of all among the men who had been at highest risk.[36] The therapy was cheap and was led by people who were not specialists. A floor is not a single grant, and Liberia is not every country, but the direction is the one UP's agreed position expects: as needs are met, much of the motive for crime goes.[19]

New Zealand shows repair taking the place of time served, at the scale of a country. Its Children, Young Persons, and Their Families Act of 1989, now called the Oranga Tamariki Act, set up the Youth Court and the family group conference, which New Zealand was the first country to develop.[37,38] At a conference, the young person who offended, their family and the victims come together with a coordinator and a police representative, discuss what happened and try to agree a plan for repairing the harm; when the plan is completed, that is the end of the matter.[39] By 2014, less than a third of young offenders were prosecuted in the Youth Court.[39] Most young offenders expressed remorse at their conference, some victims have found the conferences a helpful part of their healing, and the country's independent monitor reports that conferences can be more successful when victims attend.[39,40] They are not a cure, and not every victim comes. Conferences of this kind are part of the international trend toward restorative justice whose evidence, in the systematic review this chapter cites, shows less reoffending and more satisfied victims.[31] In UP's terms, they show the second stand-in losing its job: instead of counting harm in years, the people a harm affects decide together how it is put right.[41,25]

Open records, checked by many. Open designs and shared knowledge, the fifth development, change who can check the evidence. The more open a society is, UP's agreed position holds, the easier evidence should be to find.[25] The current system already relies on outsiders who check its work because the problem is there: the registry that counted the exonerations above was built and is kept by legal researchers, not by the courts whose mistakes it records.[17] UP's tenet on open systems makes such checking the rule rather than the exception. UP's rules, records, decisions and reasons are public, so anyone can check them, and "Each person controls their own information and chooses what to share."[29] In justice the tenet cuts both ways. The work of law enforcement is open; the private lives of victims, witnesses and the accused are not public property. That is why UP's agreed position keeps an exception for the most special circumstances, which become public on short timelines, and why a court may protect a witness whose safety is at risk.[21,24]

AI that proposes, and people who decide. Machines that do more of the work and coordination that counts real things, the second and sixth developments, reach justice through AI. UP's agreed position sees many opportunities for AI to help solve crimes and to find and remove their causes, and says that it has not yet reached its potential here.[25] Robert Williams's arrest shows the caution that goes with it: a machine's suggestion was treated as a finding, and a man was taken from his home in front of his family. The settlement that followed set a rule close to the one UP's core sets for all of its technology, since Detroit police may no longer arrest anyone on facial recognition results alone.[15] In UP, "AI and automation coordinate, propose and do work. They never govern";

[36] Christopher Blattman, Sebastian Chaskel, Julian C. Jamison and Margaret Sheridan, "Cognitive Behavioral Therapy Reduces Crime and Violence over Ten Years: Experimental Evidence", *American Economic Review: Insights* 5(4):527–545 (December 2023), abstract: "We followed 999 high-risk men in Liberia 10 years after randomization into: 8 weeks of low-cost, nonspecialist-led therapy; $200 cash; both; or neither."; "antisocial behaviors (such as robbery and drug-selling) fell 0.2 standard deviations from therapy alone"; "men who received therapy plus cash were 0.25 standard deviations less anti-social"; "In both cases, impacts were concentrated in men exhibiting highest baseline risk." https://doi.org/10.1257/aeri.20220427 (abstract read at https://ore.exeter.ac.uk/repository/handle/10871/133285 and https://econpapers.repec.org/RePEc:aea:aerins:v:5:y:2023:i:4:p:527-45). Checked at source, 13 Nov 2026.

[37] Gabrielle Maxwell, "Youth offenders", *Te Ara – the Encyclopedia of New Zealand*: "The Children, Young Persons, and Their Families Act 1989 (renamed the Oranga Tamariki Act in 2017) has governed responses to child and youth offending since it was enacted. The Youth Court and the family group conference system was established under this act." https://teara.govt.nz/mi/node/157559 . Checked 14 Nov 2026.

[38] *Aotearoa New Zealand Social Work* journal, study of a 2019 pilot between New Zealand Police, Oranga Tamariki and Victim Support: "In 1989, Aotearoa New Zealand was the first country in the world to develop the Family Group Conference (FGC) as a means to implement the values and principles of the Oranga Tamariki Act (1989)." https://anzswjournal.nz/anzsw/article/view/869/762 . Checked 14 Nov 2026.

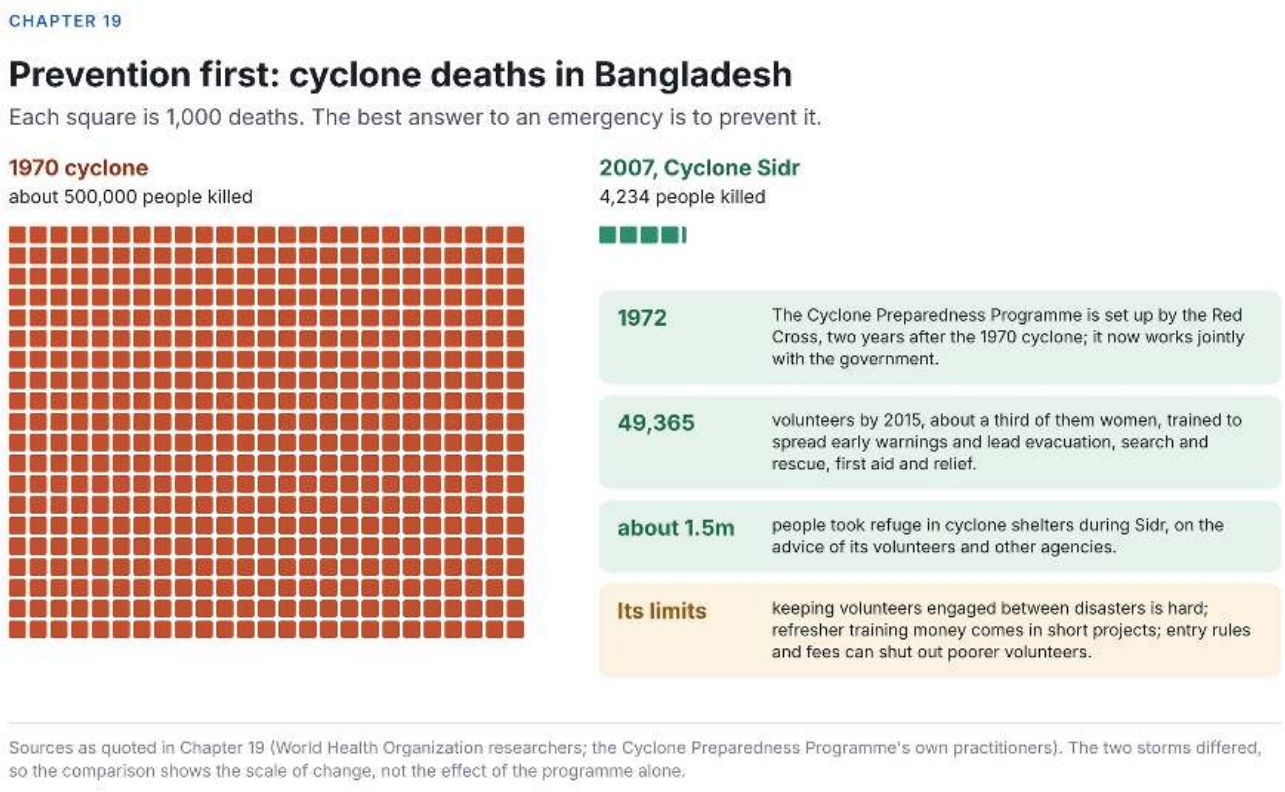
[39] Gabrielle Maxwell, "Youth offenders – Youth justice in the 1990s and 21st century", *Te Ara – the Encyclopedia of New Zealand* (published 28 March 2011, updated 1 August 2017): "The young person, their family or whānau and the victims come together with a coordinator and a representative of the police."; "The group discusses what has happened and tries to reach an agreement about a recommended plan for repairing harm."; "When plans are completed this is the end of the matter."; "In 2014 less than a third (31%) of young offenders were prosecuted in the Youth Court."; "Most young offenders expressed remorse for their actions as part of a family group conference."; "Some victims of youth offending find family group conferences a helpful part of the healing process." https://teara.govt.nz/en/youth-offenders/page-3 . Checked at source, 14 Nov 2026.

[40] Aroturuki Tamariki (Independent Children's Monitor), *Experiences of Care in Aotearoa 2023/24*, "Family group conferences": "A youth justice FGC is a restorative process that supports rangatahi to reduce or stop their offending. Youth justice FGCs can be more successful when victims attend." https://aroturuki.govt.nz/reports/outcomes-23-24/fgc . Checked 14 Nov 2026.

[41] Core tenet: *Open participation: anyone may take part; those affected decide*, in full: "Anyone may take part in any problem, and the people it affects decide its outcome. There are no offices to hold: work is shared out, not owned, so no one gathers power by holding a position. Where work needs skill, skill is shown by open, testable standards that anyone can work toward and anyone can propose to change, and education is open to everyone, at every age, so anyone can gain the skills any work requires." Also in "The core of UP".

people can always correct, pause or switch them off, and a decision about anyone's freedom rests on evidence that the person can see and challenge.[30,23]

Shared information in an emergency, and prevention first. Emergencies show the same developments at work at their fastest. When an earthquake struck Haiti in January 2010, the World Bank and satellite companies released high-resolution imagery of the country under open licences, and more than 450 volunteers of OpenStreetMap, the open map of the world, from an estimated 29 countries used it to make the most detailed map of Haiti in existence within a few weeks.[42] Their maps went to the search-and-rescue and relief teams working in the ruins.[43] The mappers were volunteers, people solving a problem because it was there, with the tools and the data open to them. Bangladesh shows the other half of UP's rule, that the best answer to an emergency is to prevent it. A cyclone in 1970 killed about 500,000 people there; a severe cyclone in 2007 killed 4,234. Researchers writing in the World Health Organization's bulletin credit the fall to modern early warning systems, shelters and evacuation plans, coastal embankments, coastal forests and awareness at the level of each community, and to a Cyclone Preparedness Programme, run by the Bangladesh Red Crescent Society, that works through trained volunteers.[44] Both cases worked through many people acting quickly on shared information, not through greater authority at the top, which is the shape of UP's agreed position on emergencies.[27]



Prevention first: cyclone deaths in Bangladesh, 1970 and 2007, and the volunteer programme between them.

[42] Robert Soden, "4 Years On, Looking Back at OpenStreetMap Response to the Haiti Earthquake", World Bank Blogs (29 October 2014): the World Bank and satellite companies "released high-resolution satellite imagery under open licensing schemes that facilitate wide distribution and use"; "Over 450 OpenStreetMap volunteers from an estimated 29 countries" used the imagery, "creating the most detailed map of Haiti in existence in just a few weeks". https://blogs.worldbank.org/en/latinamerica/4-years-looking-back-openstreetmap-response-haiti-earthquake . Checked at source, 13 Nov 2026.

[43] OpenStreetMap Foundation, press release "Map volunteers help Haiti Search & Rescue" (24 January 2010): volunteers "are providing essential maps to Search & Rescue and Relief teams responding to the Haiti earthquake." https://wiki.osm.org/w/images/0/0b/Haiti_OpenStreetMap_release.pdf . Checked at source, 13 Nov 2026.

[44] Ubydul Haque, Masahiro Hashizume, Korine N. Kolivras, Hans J. Overgaard, Bivash Das and Taro Yamamoto, "Reduced death rates from cyclones in Bangladesh: what more needs to be done?", *Bulletin of the World Health Organization* 90(2):150–156 (2012): "cyclone-related mortality in Bangladesh has declined by more than 100-fold over the past 40 years, from 500 000 deaths in 1970 to 4234 in 2007."; "This has been achieved by modernizing early warning systems, developing shelters and evacuation plans, constructing coastal embankments, maintaining and improving coastal forest cover and raising awareness at the community level."; "Cyclone preparedness has improved following the launch of the Cyclone Preparedness Programme by the Bangladesh Red Crescent Society in 1970."; the programme works "by increasing the effectiveness of volunteers". https://doi.org/10.2471/BLT.11.088302 (read at https://scielosp.org/pdf/bwho/2012.v90n2/150-156/en). Other sources date the programme to 1972 and give lower estimates for 1970. Checked at source, 13 Nov 2026.

Bangladesh's Cyclone Preparedness Programme shows what that prevention looks like from the inside. It was set up in 1972 by the Red Cross, two years after a cyclone that killed around half a million people, and it now works jointly with the government.[45] By 2015 it had 49,365 volunteers, about a third of them women, trained to spread early warnings and to lead evacuation, search and rescue, first aid and relief.[45] When Cyclone Sidr struck in 2007, around 1.5 million people took refuge in cyclone shelters on the advice of its volunteers and other agencies.[45] Its own practitioners name its limits: keeping volunteers engaged between disasters is hard, the money for refresher training comes in short-term projects, and the entry rules and fees can shut out poorer people who would volunteer.[45] It belongs to a wider trend, early warning that reaches every household, which the World Health Organization's bulletin credits, with shelters and embankments, for the fall in deaths.[44] In UP's terms, it shows UP's rule on emergencies at work in the current system: many trained people ready, acting quickly on shared information, each team one layer deep, and prevention first.[27]

A narrow focus on what remains. The last of the seven developments is an intense focus on what is truly scarce. In justice, what remains even in UP's projection is the hard core: harm that does not come from need, and the skill and time it takes to find the truth about it. UP's agreed position on the whole system sends attention to the biggest problems first, like a marketplace of problems, and any area where UP does not yet do better than the current system gets attention first.[19] Force from outside UP is the hardest case of all. Chapter 12 set out the record on turning weapons to other uses, from the summit at Reykjavik in 1986 to bomb-grade uranium turned into fuel for power stations.[46]

None of this is proven at scale. The Liberia trials are small and far from every setting; open records can expose the innocent as well as the guilty if privacy is not protected; AI can be wrong, as it was about Robert Williams; and volunteers who map a disaster do not replace trained responders. UP's agreed positions say plainly that justice is a critical place, full of dangers such as abuse of power and false evidence, and leave the answers to the collective, as work.[26,34]

How it could run, stage by stage

UP grows beside the current system, and its agreed position names three stages: early, when UP is a minority network inside the current system; middle, when it has its own productive base and most members' needs are met from what UP produces; and completed, when most people live mainly in UP.[22] UP's agreed claim on war, violence and crime is staged the same way.[28] In the reading UP's author has set out, now going through UP's method, what changes gradually is people, not UP: UP never becomes a government, its members remain under the laws of the places they live, and where UP meets the current system it uses only what the law requires.[47] The early stage rests on today's evidence. The later stages are projections, each with what would have to be shown.

Early: a minority network inside the current system. Early on, UP works on the roots, therapy, cash and the floors, which has reduced violence where it has been tried, and relies on the current system's law for protection, as any community does.[28,33] The expected benefits for members are those the evidence shows at small scale: less violence where needs are met, and harms between neighbours settled face to face where both sides agree, with the old courts still there.[33,31] People outside UP lose nothing, and the open record of what UP tries is there for anyone to check. What would have to be shown is that UP's roots work cuts violence among its members as the Liberia trials did, in published results.[33,34]

[45] Haseeb Md Irfanullah and Sazzad Hossain Miah, "Capitalising on the Cyclone Preparedness Programme (CPP) to build community resilience in Bangladesh", Humanitarian Practice Network, ODI (20 January 2015): "It was established in 1972 by the Red Cross two years after a super cyclone that killed around half a million people."; "The CPP currently has 49,365 volunteers (32,910 men and 16,455 women)."; in 2007, on the advice of CPP volunteers and other humanitarian agencies, "around 1.5 million people took refuge in cyclone shelters when Cyclone Sidr hit Bangladesh."; "CPP volunteers are trained in early warning dissemination, evacuation, search and rescue, first aid and relief operations."; keeping volunteers "engaged, motivated and committed between hazardous events is a challenge."; the article also names short-term project funding for refresher training and entry criteria, including fees, as challenges. https://odihpn.org/?p=78071 . Checked at source, 14 Nov 2026.

[46] Chapter 12, "The three gaps", with its notes on the Reykjavik summit of 1986, the treaty of 1987 and the 1993 agreement under which 500 tonnes of bomb-grade uranium from Russia became fuel for American power stations; and UP's agreed position on weapons and armies (round 12S, position 6, an illustration of one way UP could run).

[47] Clarification of the tenet *Reality over fiction* and of UP's agreed position on useful fictions, set out by UP's author on 14 November 2026 and going through UP's method; until the UP Moderator enters it in the Position Ledger, it is the author's stated reading, not yet an agreed position. In substance: the gradual change is in people, not in UP; UP's own system does not run on money, prices, a UP government or UP companies; each person relies on money, governments and corporations less as they use UP more, and the number of people doing so grows; where UP meets the current system (taxes, land title, the legal form needed to hold property, partnership with local governments), it uses only what the law requires, openly recorded and kept to a minimum, and that contact shrinks toward none as the people of an area move fully to UP. Record: LXW Shared Brain, decisions, "2026-11-14 1015 … Gradual change is people's" and "2026-11-14 1005 …".

Middle: UP's own productive base (a projection). UP's agreed claim holds that most crime is removed, eliminated or dramatically reduced as UP reduces violence at its roots, and that what remains is handled by one layer of trained law enforcement, open and watched by many, with courts that rest on evidence, under the fair-hearing floor.[28,21] The expected benefits are far less of the crime of taking, since UP's system as a whole removes the motive for much of it; harms answered by repair rather than by years served; and no one's freedom restricted without a fair hearing.[19,25,23] This is also UP's most exposed stage: its protection rests on legality, numbers and nonviolent action.[28] What would have to be shown is crime and reoffending falling among members against today's record, clearance of the crime that remains, and every restriction of freedom recorded with its hearing.[22,34]

Completed: most people living mainly in UP (a projection). UP's agreed claim names no separate completed stage beyond what happens as cities and nations join, so this paragraph is drawn from that claim, from Round 13 and from the tenets. One way UP could run, given as an illustration, is that as cities and nations join, their weapons and armies are dismantled and converted into law enforcement, emergency aid and rapid response, and nuclear weapons into power.[28] The expected benefit is a world in which harm is rare, answered openly, and met in emergencies by many teams, each one layer deep, with no emergency powers.[21,27] What would persist is the danger of abuse of power and false evidence, which needs constant attention, and armed states and groups outside UP for as long as they stay outside.[26,28] UP is judged against today's record and against the ideal, and every failure is fed back into it as work.[34]

Table 19.1 sets the stages side by side. Table 19.2 gives the benefits by stage, with how each would be shown.

Table 19.1. Justice, safety and emergencies in UP, by stage. The early stage rests on today's evidence; the middle and completed stages are projections.

Stage	What changes	Real precedent	Why it is likely	What persists
Early	Roots work (therapy, cash, floors), which reduces violence where it has been tried; UP relies on the current system's law for protection, as any community does	Liberia: therapy and cash; Norway's low reconviction; restorative conferences with fewer repeat offences	Shown in trials, at small scale	Today's police, courts and prisons
Middle (projection)	Most crime removed, eliminated or dramatically reduced; what remains handled by one layer of trained law enforcement, open and watched by many, with courts that rest on evidence and consequences focused on rehabilitation and on the wellbeing of the accused and of victims, under the fair-hearing floor	None at scale yet (projection)	UP reduces violence at its roots	The most exposed stage: UP's protection rests on legality, numbers and nonviolent action
Completed (projection)	As cities and nations join, their weapons and armies are dismantled and converted into law enforcement, emergency aid and rapid response, and nuclear weapons into power (an illustration of one way UP could run)	Partial: the nuclear treaty of 1987; uranium from warheads turned into fuel (Chapter 12)	Not claimed separately on the card	Armed states and groups outside UP, while they stay outside; abuse of power and false evidence, which need constant attention

Sources: notes to this section.[48]

Table 19.2. Expected benefits of justice, safety and emergencies in UP, by stage. The early stage rests on today's evidence; the middle and completed stages are projections, drawn from UP's staged claim on war, violence and crime, its agreed positions on justice (Round 13) and its tenets.

Stage	For members	For people outside UP	For the living world	How it would be shown
Early	Less violence where needs are met; harms between neighbours settled face to face where both agree; the old courts still there	Nothing taken; UP's results open to check	Little directly	Violence among members falling, as in the Liberia trials, in published results
Middle (projection)	Most crime removed or reduced; harm answered by repair; no one's freedom restricted without a fair hearing	Law enforcement whose work anyone can watch; anyone may join	Little directly	Crime and reoffending down against today's record; every restriction recorded with its hearing
Completed (projection)	Harm rare and answered openly; emergencies met by many single-layer teams	Weapons and armies converted as cities and nations join (an illustration)	Less of the damage that war and weapons do (an illustration)	Judged against today's record and the ideal; abuse of power and false evidence watched for constantly

Sources: notes to this section.[49]

The household that Chapter 1 introduced shows how this could feel from inside. Here too the household is an illustration, never evidence.

> *Illustration: one way it could run. The early stage.* A delivery van backs into the wall of the town's community kitchen and drives off. The driver is found through the kitchen's camera and, instead of a claim and a court date, agrees to a face-to-face meeting with the volunteers who run the kitchen. He apologises, helps rebuild the wall over two weekends, and still eats there on Fridays. Everything else in the town's justice still runs through the old police and courts.
>
> *Illustration: one way it could run. The middle stage, a projection.* Tools go missing from the town's tool library. The town's one layer of trained law enforcement opens a case that anyone can follow, and the evidence is open to the young man accused. At the hearing it shows he borrowed the tools on a friend's card and returned them late; the case is closed, and the record of how it was decided stays public. The grandfather, who once sat on a jury in the current system, says it is the first trial he has seen where the accused could read everything the court read.
>
> *Illustration: one way it could run. The completed stage, a projection.* The town has not had a case in its hearing room for most of a year. The member of law enforcement who lives on the high street spends her days on the flood-warning rota and on training the teenagers who want to join it. When the river rises one spring, a dozen teams, each with its own lead and none in charge of the others, move people out of the low streets, working from the same shared map; when the water goes down, so does their authority. The grandfather writes it into his history of the town.

The strongest objections

The first objection is that without punishment there will be chaos. Prison, on this view, protects people by keeping dangerous offenders away and deters others, and any system that talks mainly of rehabilitation will be soft on harm. The evidence is more interesting than either side expects. A study of Norway, which used the random assignment of criminal cases to judges who differ in how strict they are, found that imprisonment there

[48] Table 19.1: the early row follows the early column of Table 12.2 in Chapter 12, which rests on UP's step-3 evidence record (24 Oct 2026) as updated by Round 13; the middle and completed rows are card U12 F10 (round 12c; note 28) with Round 13 (note 21). Precedents: Liberia (notes 33 and 36); Norway's reconviction rate (note 9); restorative conferences (note 31); the nuclear treaty and uranium turned into fuel (note 46). The middle and completed rows are projections (note 22).

[49] Table 19.2. Early row: notes 28, 33, 31 and 34. Middle row: notes 28, 21, 19, 25, 23 and 22. Completed row: notes 28, 21, 27, 26 and 34. Every entry in the middle and completed rows is a projection; the completed row is drawn from the staged claim's illustration of what happens as cities and nations join, from Round 13 and from the tenets, because the claim names no separate completed stage.

discourages further criminal behaviour beyond simply keeping people away, lowering the probability of reoffending within five years by 27 to 29 percentage points, depending on the version of the study, for defendants whose case could have gone either way, under Norway's conditions; for people who were already working, it also brought a lasting loss of employment.[50,20,51] A systematic review of face-to-face restorative conferences between offenders and victims found that offenders who took part, with victims who had agreed to meet them, committed significantly less crime than comparable offenders, and that victims were more satisfied with how their cases were handled and less inclined to seek revenge.[31] UP's agreed positions allow confinement only to protect the person and others, under the fair-hearing floor, not as deterrence.[21,23] And one way UP could run, given as an illustration, is consequences focused on rehabilitation and on the wellbeing of the accused and of their victims.[25]

The second objection is that open policing will expose victims and help criminals. UP's agreed position keeps an exception for the most special circumstances, which need more careful handling and become public on short timelines.[21] And the fair-hearing floor's clarification lets a court protect a witness's identity where the witness's safety is at risk, while the substance of the evidence stays open to the accused and the decision can be appealed. Victims' privacy is not settled by that clarification, which covers witnesses; other hard cases are left to UP's method.[24]

The third objection is that crowdsourced justice becomes mob justice. UP's agreed position says the opposite: courts rest on evidence, not public opinion, and evidence could be crowdsourced only with a structure for weighing facts and evidence.[21] No one's freedom is restricted without a fair, evidence-based hearing, with a way to appeal.[23] Whether such a structure can be built well is open, and UP names it as work.[26,34]

The fourth objection is that emergencies need strong central power. UP's agreed position answers that a larger event creates more single-layer authority, many teams coordinated through shared information under public oversight, never greater authority, and that the authority ends when the event ends.[27]

What persists is named openly. Abuse of power and false evidence remain dangers in UP's justice too; they need a great deal of attention, and answering them is left to the collective.[26] Armed states and groups outside UP persist while they stay outside, and the middle stage is the most exposed, when UP's protection rests on legality, numbers and nonviolent action.[28]

Back to Stillwater

Bryan Hooper spent more than 27 years in prison on testimony that a judge later found to be false, and, once the witness confessed, the system that convicted him also set him free.[1] UP's agreed positions would not promise that no witness ever lies. What they set against a case like his is a floor and a practice: no one's freedom restricted without a fair, evidence-based hearing, with the evidence open to the accused and a way to appeal; and law enforcement whose whole work is open and watched by many, because most problems in justice come from secrets and hidden power.[23,21] Whether that would have caught the false testimony sooner is not something any position can promise, and UP's agreed positions name false evidence among the dangers that need a great deal of attention, left to the collective to answer.[26]

Justice in UP rests on evidence, and evidence rests on records people can trust. Chapter 20 turns to the shared tools that would keep those records: information, data and AI.

Chapter card: Chapter 19

- **Claim:** Today's justice systems keep the peace far better than in the past, and the best of them, such as Norway's, show low reoffending and respect for rights. Yet much harm goes unanswered, millions are held in prison, and wrongful

[50] Manudeep Bhuller, Gordon B. Dahl, Katrine V. Løken and Magne Mogstad, *Incarceration, Recidivism and Employment*, NBER Working Paper 22648 (September 2016, revised February 2019): "the random assignment of criminal cases to judges who differ systematically in their stringency"; "we find that imprisonment discourages further criminal behavior, and that the reduction extends beyond incapacitation."; "Incarceration decreases the probability an individual will reoffend within 5 years by 29 percentage points."; for previously employed people, "there is a lasting negative effect on employment." https://www.nber.org/papers/w22648.pdf . The published version (Journal of Political Economy, 2020) gives the same 29 percentage points; see note 20. Checked word for word at source, 1 Nov 2026.

[51] Gordon B. Dahl and Magne Mogstad, *The Benefits of Rehabilitative Incarceration*, NBER Reporter 2020 no. 1: "incarceration lowers the probability that an individual will reoffend within five years by 27 percentage points." https://www.nber.org/reporter/2020number1/benefits-rehabilitative-incarceration . The effect is for people whose case could have gone either way under a stricter or more lenient judge, in Norway's conditions. Checked word for word at source, 1 Nov 2026.

convictions most often involve misconduct and hidden evidence. Three stand-ins do most of the damage: money as the thing worth taking, time served in place of repair, and secrecy in place of trust. UP's agreed positions hold that most crime is removed, eliminated or dramatically reduced, a projection the early stage does not make; what remains is handled by one layer of trained law enforcement, open and watched by many, courts that rest on evidence, under a fair-hearing floor. In emergencies UP has no emergency powers: authority belongs to the event, is one layer deep and ends when the event ends.

- **Core lines:** the tenets *Floors that are never crossed* (a fair hearing; limits on any restriction), *Open systems, shared knowledge, private persons*, *Technology serves; people decide* and *Self-correction*. Agreed positions: Round 13 on justice and enforcement; the fair-hearing clarification (1 Nov 2026); one layer of authority, however large the event; the whole system (a moneyless system that removes the motive for much of today's crime); the staged claim on war, violence and crime (round 12c). Given as illustrations: today's best systems as models; open information and AI; weapons and armies converted as nations join.
- **Rule of thumb:** "Is it open, evidence-based, and aimed at repair?"
- **What this is not:** a promise that no one will ever be wrongly accused, a plan to abolish courts or confinement, or a claim that UP can disarm states that stay outside it.
- **Check yourself:**
    1. Name the three stand-ins in today's justice, and what each stands in for.
    2. What did the Liberia trials find when cash followed therapy?
    3. Who holds authority over law enforcement in UP?
    4. When may a protected freedom such as movement be restricted, and for how long?
    5. What may a court protect, and what stays open to the accused?
    6. What may AI do in UP's justice, and what may it never do?
    7. What happens to authority in UP when an emergency gets larger?
    8. Follow one harm through UP: what is open and what is private, what decides the case, what may a machine do, and what is the answer aimed at?
    9. What did New Zealand's family group conferences and Bangladesh's cyclone volunteers each show, and what benefits does Table 19.2 expect at each stage?
- **Open questions (for the wiki):** how a structure for weighing crowdsourced evidence is built; how the dangers of abuse of power and false evidence are answered in practice; how open records and private persons are balanced in hard cases.

Chapter 20. The Shared Tools: Information, Data and AI

Barbara Campbell was walking through a New York City subway station at rush hour when, in the words of the engineers' magazine that later told her story, her world abruptly went dark. She was about to go down the stairs when she heard a little "beep, beep, beep". It was not her phone. It was her Argus II retinal implant, the device that let her see patches of light and dark, powering down, and despite some repair attempts by its maker it never worked again.[1] The implant had been made by a company called Second Sight, and more than 350 other blind people around the world had its implants in their eyes. Second Sight had stopped making the implant in 2019, and on 30 March 2020, close to going out of business, it laid off most of its remaining staff. By early 2022, when the reporters Eliza Strickland and Mark Harris spoke to its patients, it was planning to merge with a drug developer. No repairs were possible for the implants themselves, and the company said it held only a limited supply of the external parts.[2] One patient, Ross Doerr, put the position of everyone who still had the device: "Those of us with this implant are figuratively and literally in the dark." Another, Terry Byland, said that if something went wrong with his, there would be no way of getting it fixed.[3]

The story is extreme, but its shape is ordinary. A tool that people's lives had come to rest on was controlled by someone else. Its users could not see inside it, so no one outside the company could repair it or carry on its work. They could not leave it, because it was in their eyes. And when the one organisation that kept it running stopped, it stopped too. Most people carry tools like this every day: the phone that holds their contacts, the account that holds their photographs, the platform where their customers find them, the cloud service where their employer keeps its records, the AI system they have begun to ask before they ask anyone else. Each works, often brilliantly. Each is controlled by someone the user did not choose and can replace only at a cost.

Chapter 19 ended with evidence, and evidence rests on records people can trust. This chapter is about the tools that would keep those records, and it answers the reader's question about them: *what would I actually use in UP, and who controls it?* Chapter 11 set out the two principles behind the answer, that AI and automation serve while people decide, and that UP's systems are open while each person controls their own information.[4,5] This chapter turns from the principles to the tools themselves: the shared record where problems and solutions live, the ledger of real resources, the layer of AI systems that helps coordinate them, and the trust layer underneath that keeps records honest and people private. It also gives the full account of two of the twelve failures that Chapter 12 set out, the disorder of shared information and the gathering of AI power in a few hands.[6] All of the tools are described as illustrations of one way UP could run, never as a design anyone must follow.[7] And the chapter puts one test to

[1] Eliza Strickland and Mark Harris, "Their Bionic Eyes Are Now Obsolete and Unsupported", *IEEE Spectrum*, 15 February 2022: "Barbara Campbell was walking through a New York City subway station during rush hour when her world abruptly went dark."; "I was about to go down the stairs, and all of a sudden I heard a little 'beep, beep, beep' sound."; "It wasn't her phone battery running out. It was her Argus II retinal implant system powering down."; "patches of light and dark"; "despite some repair attempts by Second Sight, never worked again". https://spectrum.ieee.org/bionic-eye-obsolete . Checked at source, 13 Nov 2026.

[2] Same article: "more than 350 other blind people around the world with Second Sight's implants in their eyes"; "After Second Sight discontinued its retinal implant in 2019 and nearly went out of business in 2020"; the layoff came "On 30 March" 2020; "Second Sight laid off the majority of its remaining employees and announced its 'intention to wind down operations,'"; "a proposed merger with an early-stage biopharmaceutical company called Nano Precision Medical"; "No repairs or replacements are possible, however, for the implants themselves."; the merger was announced in February 2022; the company said it had "a limited supply of VPUs and glasses for replacements" (the VPU is the external processing unit). https://spectrum.ieee.org/bionic-eye-obsolete . Checked at source, 13 Nov 2026.

[3] Same article. Ross Doerr: "Those of us with this implant are figuratively and literally in the dark." Terry Byland: "As long as nothing goes wrong, I'm fine,"; "But if something does go wrong with it, well, I'm screwed. Because there's no way of getting it fixed." https://spectrum.ieee.org/bionic-eye-obsolete . Checked at source, 13 Nov 2026.

[4] Core tenet: *Technology serves; people decide*, in full: "AI and automation coordinate, propose and do work. They never govern: people can always correct, pause or switch them off. No single AI system or operator controls coordination: the AI systems UP uses are open, more than one, checked against each other, and watched for concentrated power like everything else. Because an AI may one day be shown to have experiences of its own, UP studies the question carefully and would extend its aim to any being shown to feel." UP's core (28 Oct 2026), T9. Chapter 11 takes this tenet sentence by sentence.

[5] Core tenet: *Open systems, shared knowledge, private persons*, in full (as amended on 28 Oct 2026): "The rules, code, records, decisions and reasons of UP are public, so anyone can check them. UP's technology (the knowledge, code, data and designs UP produces) stays only in UP: everyone taking part in UP may use, study and improve it, and no one may enclose it. Each person controls their own information and chooses what to share. Openness helps people find problems, but it will not find all of them, so UP also names the risks that openness alone cannot catch and keeps working on them." UP's core (28 Oct 2026), T8. Chapter 11 takes this tenet sentence by sentence.

[6] Chapter 12, "The scoreboard", rows F9 (information disorder) and F12 (AI and technology concentrating power), each of which names Chapter 20 for its full treatment.

[7] UP's study lessons, the Master Rule: every claim belongs to one of four layers, and the layer of how UP could run is made of "illustrations, written as possibilities", in words such as "one way" and "for example", never as what UP will do or requires. The tools in this chapter are in that layer. UP's study

every tool, the same test Chapter 11 put to any AI, widened to every shared tool and failed by Barbara Campbell's implant: can anyone check it, can anyone leave it, and does it still work if the AI is switched off?

The same dependence, in many places

Barbara Campbell's implant stopped because its maker collapsed. Other tools have been switched off on purpose. In 2016 Nest, which had bought the home-automation start-up Revolv in October 2014 and was by then owned by Google's parent company Alphabet, announced that the Revolv hub and its app would "stop working entirely on May 15." One owner, Arlo Gilbert, wrote that Google was "intentionally bricking" hardware he owned. Nest said it would work with customers "on a case-by-case basis" to decide on compensation.[8] The hubs were in people's houses, bought and paid for, and they stopped because a company decided they should.

The same thing can happen to a shared record. For years, researchers studied public conversation on Twitter through its interface for programs. By 2023 the company, renamed X, offered that access in paid tiers "ranging from $100 to $42,000 per month". A survey of researchers carried out for Reuters by the Coalition for Independent Technology Research found that they had "cancelled, suspended or changed more than 100 studies about X".[9] Studies that rested on one company's door stopped or changed course when the company changed what the door cost.

Far larger tools fail in the same way, and when they do, whole systems stop with them. Change Healthcare is a company that handles claims and payments for American health care. On 12 February 2024, according to the chief executive of its parent company, UnitedHealth Group, in his testimony to the United States Senate, criminals used compromised credentials to get into a remote-access portal that "did not have multi-factor authentication." Nine days later, on the morning of 21 February, a group calling itself ALPHV or BlackCat set off a ransomware attack.[10] The company "processes 15 billion health care transactions annually and touches 1 in every 3 patient records", according to the American Hospital Association, whose survey of nearly 1,000 hospitals the following month found that 74 per cent reported a direct impact on patient care and 94 per cent a financial impact. Two thirds said it was "difficult or very difficult" to switch to another clearinghouse.[11] The company cut its connections, replaced thousands of laptops and rebuilt its data centre network.[10] By July 2025 it had told federal regulators that approximately 192.7 million people had been affected by the breach.[12]

The pattern runs through the infrastructure on which most modern tools are built. In July 2025 Britain's Competition and Markets Authority concluded a long investigation into cloud computing, the rented servers on which businesses and public bodies now run much of their work. It found that the two largest providers, Amazon Web Services and Microsoft, each had a share of between 30 and 40 per cent of supply in 2024, that the "egress fees required to transfer data between cloud providers" made it harder for customers to move, and that "Microsoft's licensing practices have the effect of reducing competition in cloud services markets".[13]

lessons, "The Master Rule".

[8] Lisa Eadicicco, "Here's How Google Is Handling a Big Controversy", *Time*, 6 April 2016: the memo said the product would "stop working entirely on May 15."; Arlo Gilbert wrote that "Google is intentionally bricking" hardware he owned; a Nest representative said the company would "work together with customers on a case-by-case basis to determine the best resolution, including compensation." https://time.com/4283408/nest-google-shuts-down-revolv . VentureBeat, "Alphabet's Nest will permanently turn off all Revolv hubs on May 15, 2016": "Nest, owned by parent company Alphabet, is shutting down the Revolv hub and app on May 15, 2016."; "Nest acquired home automation startup Revolv in October 2014". https://venturebeat.com/technology/alphabets-nest-will-permanently-turn-off-all-revolv-hubs-on-may-15-2016 . Checked at source, 13 Nov 2026.

[9] Sheila Dang, Reuters, "More than 100 social media studies affected by access limitations on X", as published by *BusinessDay*, 6 November 2023: "Social media researchers have cancelled, suspended or changed more than 100 studies about X"; the survey was "conducted at Reuters' request by the Coalition for Independent Technology Research in September"; "X offers three paid tiers of the API ranging from $100 to $42,000 per month". https://www.businessday.co.za/bd/companies/telecoms-and-technology/2023-11-06-more-than-100-social-media-studies-affected-by-access-limitations-on-x/ . Checked at source, 13 Nov 2026.

[10] Andrew Witty, Chief Executive Officer, UnitedHealth Group, written testimony to the US Senate Committee on Finance, 1 May 2024: "On February 12, criminals used compromised credentials to remotely access a Change Healthcare Citrix portal"; "On the morning of February 21, a cybercriminal calling themselves ALPHV or BlackCat deployed a ransomware attack"; "The portal did not have multi-factor authentication."; "we promptly severed connectivity to the Change environments and established a perimeter"; "The team replaced thousands of laptops, rotated credentials"; "rebuilt Change Healthcare's data center network and core services". https://www.finance.senate.gov/imo/media/doc/0501_witty_testimony.pdf . Checked at source, 13 Nov 2026.

[11] American Hospital Association, "AHA Survey: Change Healthcare Cyberattack Significantly Disrupts Patient Care, Hospitals' Finances", 15 March 2024: "Change Healthcare processes 15 billion health care transactions annually and touches 1 in every 3 patient records."; responses "from nearly 1,000 hospitals"; "74% of hospitals report direct patient care impact."; "94% of hospitals report financial impact"; "67% report it is 'difficult or very difficult' to switch clearinghouses." https://www.aha.org/2024-03-15-aha-survey-change-healthcare-cyberattack-significantly-disrupts-patient-care-hospitals-finances . The AHA represents hospitals; the survey is its members' self-report. Checked at source, 13 Nov 2026.

[12] US Department of Health and Human Services, Office for Civil Rights, "Change Healthcare Cybersecurity Incident Frequently Asked Questions", FAQ 11: "On July 31, 2025, Change Healthcare notified OCR that approximately 192.7 million individuals have been impacted." https://www.hhs.gov/hipaa/for-professionals/special-topics/change-healthcare-cybersecurity-incident-frequently-asked-questions/index.html . Checked at source, 13 Nov 2026.

[13] Competition and Markets Authority (UK), *Cloud services market investigation: Summary of final decision*, 31 July 2025: the two largest providers, Microsoft and AWS, "each has a high share of supply at [30-40]% in 2024" (the brackets are the CMA's, giving a range); "egress fees required to transfer

These cases differ in scale and in technology, from a hub in a living room to the clearinghouse that touches one in three American patient records, but the shape is the same, and it is the shape that matters for UP. A tool becomes shared because it is useful and, often, because sharing it is efficient: one clearinghouse is cheaper to run than a hundred, one cloud than a thousand server rooms. The more people depend on it, the harder it is to leave, and the more one owner's decision, mistake or misfortune falls on everyone. UP's core names this directly. Its tenet on power lists the forms concentration takes, among them "information, access, expertise or machines", and treats every one of them as "a standing danger".[14] Table 20.1 sets each case beside the three questions.

Table 20.1. Tools people depended on, and the three questions. Sources in the notes.[1,2,8,9,11,10,13]

Case	What people depended on it for	Could users check it?	Could users leave it?	Did it keep working when its owner failed or stopped?
Argus II implant, from 2019	Sight	No; the knowledge to repair it stayed with one company	No; the implant is in the eye	Patients were left with a limited supply of spare external parts
Revolv hub, 2016	Running devices in the home	No	Only by buying another system	No; switched off on a set date
X's data access, 2023	Research on public conversation	Only on the company's terms	Only by abandoning the data	More than 100 studies cancelled, suspended or changed
Change Healthcare, 2024	Claims and payments for a large share of US health care	No; the weak point was found by attackers	Two thirds of hospitals found switching difficult or very difficult	No; services were cut while the systems were rebuilt
Cloud computing, UK, 2024	Running the servers of businesses and public bodies	Only what providers disclose	Egress fees and licensing made moving harder	Depends on one provider's continuity

What the current system already gets right

UP would change a great deal about shared tools, but much of what it needs the current system has already built well. The clearest examples are the open rails: systems that anyone may connect to, on which many providers compete. India's Unified Payments Interface, launched in 2016, "allows payments to be sent and received easily across all participating apps and banks", as economists at the International Monetary Fund described it in 2025; more than 200 apps and most banks entered, and it became "the largest real-time payment system in the world by volume, processing more than 19 billion transactions every month."[15] In October 2025 it carried a record 20.7 billion payments, according to data from the National Payments Corporation of India.[16] A person with a phone and a bank account can pay, or be paid by, anyone else on the system, through whichever participating app each of them prefers. Kenya's M-Pesa, which Chapter 1 described, showed something similar earlier and in a different way, by letting people store and send money from an ordinary mobile phone.[17]

Open knowledge and open code have rails of their own. The Introduction counted more than 68 million Wikipedia articles in 348 languages, and noted that Linux, the operating system anyone may read, use and change, has run

data between cloud providers"; "Microsoft's licensing practices have the effect of reducing competition in cloud services markets". https://assets.publishing.service.gov.uk/media/688b20e6ff8c05468cb7b120/summary_of_final_decision.pdf . Checked at source, 13 Nov 2026.

[14] Core tenet: *Power kept spread out*, in full: "Concentration of power, in any form (wealth, position, information, access, expertise or machines), is treated as a standing danger. People tend to gather power and to hand it to whoever seems accomplished, and history shows few good endings. Everyone in UP watches for concentrations of power and spreads them out again. The threat is never declared gone; it is watched and answered." UP's core (28 Oct 2026), T5.

[15] Alex Copestake, Divya Kirti and María Soledad Martínez Pería, "India's Frictionless Payments", *Finance & Development* (IMF), September 2025: "Launched in 2016, UPI allows payments to be sent and received easily across all participating apps and banks."; "more than 200 apps and most banks entered the market"; "the largest real-time payment system in the world by volume, processing more than 19 billion transactions every month."; "over 95 percent of UPI transactions are initiated using only three apps". https://www.imf.org/en/publications/fandd/issues/2025/09/indias-frictionless-payments-maria-peria . Checked at source, 13 Nov 2026.

[16] *Business Standard*, "UPI transactions surge to record ₹27.28 trillion in October festive rush", 3 November 2025: "touched a record high of Rs 27.28 lakh crore and 20.7 billion in value and volume terms, respectively, in October"; "according to data released by the National Payments Corporation of India (NPCI)." https://www.business-standard.com/economy/news/upi-transactions-hit-record-high-of-rs-27-28-lakh-crore-in-oct-125110300839_1.html . Checked at source, 13 Nov 2026.

[17] Chapter 1, "Why this is likely, and the strongest doubts", on M-Pesa, with the study crediting it with lifting about 2% of Kenyan households out of poverty and a published critique of that finding, each with its source.

every one of the world's 500 fastest supercomputers since November 2017.[18] Even the coordination of the internet's address book has moved out from under one government's oversight. On 1 October 2016 the contract under which the United States Department of Commerce oversaw the internet's naming and numbering functions "officially expired", marking the move of their coordination "to the private-sector", in a transition that ICANN, the body that runs them, called "a testament to the tireless work of the global community".[19]

The current system has also learned to build tools that report problems and resources in the open. In Britain, FixMyStreet "began as a painless way for people to report street problems in their own local community": a pothole, a broken streetlight, an unsafe pavement. It sends each report to the council and "publishes them online, for everyone to read". Its software is open to anyone who wants to set up their own site, with no licence fee, and more than 20 such sites run in countries around the world.[20] Barcelona went further. A city platform for public participation, built in early 2016 on a fork of another project's code, grew into Decidim, launched as new software in early 2017, which describes itself as "a public commons infrastructure"; "over 450 cities and organisations globally" now use it, and its code is kept by a free-software association that says "it is the community that decides the direction of the Decidim project."[21] For forests, the World Resources Institute's Global Forest Watch, now renamed Global Nature Watch, has for over a decade made "the best available data about forests available online for free", with alerts that let people respond to new clearing "in near real-time".[22] Chapter 5 described another tool of this kind, Community Notes, in which users add context to posts and a note appears only when contributors who have sometimes disagreed in the past rate it helpful.[23]

Standards and backups are less visible, and just as important. From 28 December 2024, new mobile phones, tablets and cameras sold in the European Union have had to use one common charging port. "Discarded and unused chargers account for about 11 000 tonnes of e-waste annually," the European Commission says, and it expects consumers to save about €250 million a year on chargers they no longer need to buy.[24] A common standard is what lets a part made by one maker work with a device made by another, and what lets a person change suppliers without throwing away what they own. Backups are the other half of resilience. In September 2015 the International Center for Agricultural Research in the Dry Areas, which had moved its headquarters from Aleppo to Beirut in 2012 because of the war in Syria, made the first withdrawal from the Svalbard Global Seed Vault in the Norwegian Arctic.[25] A total of 38,073 seed samples arrived safely in Lebanon and Morocco, where they were grown at the centre's stations, and in February 2017 fresh seeds of 15,160 of them were sent back to the vault.[26] Estonia keeps a copy of its most critical state data and services in a "data embassy" in Luxembourg, "secured

[18] The Introduction, "More of what already works", with its sources: Wikimedia Foundation, Meta-Wiki, "List of Wikipedias", 68,628,410 articles in 348 language editions (read on 31 Oct 2026; the count changes every day); and TOP500.org, List Statistics, "Operating system Family", Linux on 500 of 500 systems on every list from November 2017 to June 2026. Both were checked at source for the Introduction on 31 Oct 2026.

[19] ICANN, announcement, 1 October 2016: the contract between ICANN and the US Department of Commerce's National Telecommunications and Information Administration for the IANA functions "has officially expired"; this marked "the transition of the coordination and management of the Internet's unique identifiers to the private-sector"; ICANN called it "a testament to the tireless work of the global community". https://www.icann.org/news/announcement-2016-10-01-en . Checked at source, 13 Nov 2026.

[20] mySociety, "FixMyStreet": FixMyStreet "began as a painless way for people to report street problems in their own local community"; it "publishes them online, for everyone to read"; FixMyStreet.com has "sent hundreds of thousands of reports to UK councils"; the software is "free, for anyone who wants to set up their own site"; "More than 20 FixMyStreet sites are running in countries around the world", among them Por Mi Barrio in Montevideo. https://www.mysociety.org/community/fixmystreet/ . Checked at source, 13 Nov 2026.

[21] Decidim, "About": "In Barcelona, in early 2016, a fork of Consul"; Decidim "was launched in early 2017 as a brand-new software"; it is "a technopolitical project that serves as a public commons infrastructure"; "over 450 cities and organisations globally have embraced Decidim"; the Decidim Free Software Association says "it is the community that decides the direction of the Decidim project." https://decidim.org/about/ . The project's own account. Checked at source, 13 Nov 2026.

[22] Global Nature Watch (formerly Global Forest Watch), World Resources Institute, "About": "Global Forest Watch has recently become Global Nature Watch."; "For over a decade, Global Forest Watch has made the best available data about forests available online for free."; alerts increased users' "ability to respond to new activity in near real-time". https://globalnaturewatch.org/about/ . Checked at source, 13 Nov 2026.

[23] Chapter 5, "Keeping the conversation honest: fact, unknown and taste", on Community Notes ("notes require agreement between contributors who have sometimes disagreed in their past ratings") and the 2025 study in the *Proceedings of the National Academy of Sciences* finding that a note cut reposts of the post by 46 per cent on average, each with its source.

[24] European Commission, "EU common charger rules: Power all your devices with a single charger", 28 December 2024: "From 28 December 2024, the rules apply to mobile phones, tablets, digital cameras"; "Discarded and unused chargers account for about 11 000 tonnes of e-waste annually."; "This will help consumers save approximately €250 million a year on unnecessary charger purchases." https://commission.europa.eu/news/eu-common-charger-rules-power-all-your-devices-single-charger-2024-12-28_en . Checked at source, 13 Nov 2026.

[25] Al Jazeera, "Syria war spurs opening of 'doomsday' Arctic seed vault", 23 September 2015: "It would be the first withdrawal from the vault, she said."; "ICARDA moved its headquarters to Beirut from Aleppo in 2012 because of the war."; "The Aleppo seed bank has kept partly functioning, including a cold storage, despite the conflict." https://www.aljazeera.com/amp/news/2015/9/23/syria-war-spurs-opening-of-doomsday-arctic-seed-vault . Checked at source, 13 Nov 2026.

[26] Government of Norway, "New retrievement of seeds from Svalbard Global Seed Vault to replace Alleppo gene bank", 6 September 2017: the first withdrawal took place in September 2015; "A total of 38073 seed accessions arrived safely in Lebanon and Morocco"; ICARDA grew the seeds at its stations there, and "fresh seeds of 15160 accessions were re-deposited in Svalbard" in February 2017. https://www.regjeringen.no/en/aktuelt/genbanken-i-aleppo-fylt-opp-med-nytt-uttak-av-fro-fra-svalbard-globale-frohvelv/id2569774/ . Checked at source, 13 Nov 2026.

against cyberattacks or crisis situations".[27] And libraries run a network whose name is its method, "Lots Of Copies Keep Stuff Safe": they hold their own copies of journals and books, so that the system can "resist, detect, and repair damage before all copies of the data are compromised".[28]

In UP's terms, each of these shows one part of what a shared tool needs. The payment rails and Wikipedia show that a tool can be open to everyone and still carry a nation's payments or the world's reference knowledge. Linux shows that open code can run the most demanding systems. Decidim shows a community deciding the direction of the tool it uses. The internet's address book shows that oversight of a shared tool can be moved out of one set of hands. FixMyStreet and Global Forest Watch show problems and resources recorded where anyone can see them. Common standards and many copies show how a tool can be made easy to leave and hard to lose. What none of them does is join these pieces on purpose, so that the shared tools of daily life are open, plural, easy to move between and able to run without any single owner. That joining is the subject of the rest of this chapter.

Where the shared record is wearing thin

The open record has a weakness that its success can hide. It is kept alive by people who choose to keep it, and that choice can wear away. Chapter 1 described how the active editors of English Wikipedia peaked in 2007 and how the tools built to defend its quality turned many newcomers away.[29] A newer pressure comes from AI. "Almost all large language models (LLMs) train on Wikipedia datasets," the Wikimedia Foundation wrote in October 2025, and in the same post it reported that human pageviews on Wikipedia had fallen "roughly 8% as compared to the same months in 2024." Its explanation was that search engines were increasingly using generative AI to give answers directly, and that younger people were looking for information on social video platforms rather than the open web. The consequence it drew is the one that matters here: "With fewer visits to Wikipedia, fewer volunteers may grow and enrich the content".[30] By the Pew Research Center's count, crawlers, AI bots and other non-human agents produced more than 88 billion views of Wikipedia in 2025 alone.[31] The same thing has been measured elsewhere. On Stack Overflow, the question-and-answer site where programmers answer one another's questions, activity fell by 25 per cent within six months of ChatGPT's release, compared with similar sites where ChatGPT was harder to reach or less capable. The researchers drew the conclusion plainly: "the rapid adoption of LLMs reduces the production of public data needed to train them".[32]

A shared record can also be turned against the people who rely on it. In Myanmar, where by the United Nations' account "for most users, Facebook is the Internet", the independent international fact-finding mission found in 2018 that the platform had been "a useful instrument for those seeking to spread hate" during the campaign against the Rohingya.[33] Facebook's own commissioned assessment, published that November, concluded that before 2018 "we weren't doing enough to help prevent our platform from being used to foment division and incite

[27] e-Estonia, "Data Embassy": "an extension in the cloud of the Estonian government"; it can provide "data backups, but also operating the most critical services"; "It is located in Luxembourg under a Tier 4 level of security."; "the finalised agreement between Estonia and Luxembourg was signed in 2017"; it is "secured against cyberattacks or crisis situations". https://e-estonia.com/solutions/e-governance/data-embassy/ . e-Estonia is the Estonian government's showcase; the description is its own. Checked at source, 13 Nov 2026.

[28] LOCKSS Program, home page: "Lots Of Copies Keep Stuff Safe."; local custody of electronic journals and books "at 80 libraries and counting". https://www.lockss.org/ . LOCKSS, "About" (undated): Stanford Libraries launched the program; such systems should "resist, detect, and repair damage before all copies of the data are compromised". https://www.lockss.org/about . Checked at source, 13 Nov 2026.

[29] Chapter 1, "What the current system does to them", on the decline of English Wikipedia's active editors after March 2007 and the study by Halfaker, Geiger, Morgan and Riedl (2013) that traced it to the rules and automated tools built to defend quality, with its source. Chapter 12 uses the same study in row F9.

[30] Wikimedia Foundation, Diff blog, "New user trends on Wikipedia", 17 October 2025 (no byline on the page): "we are seeing declines in human pageviews on Wikipedia over the past few months"; "amounting to a decrease of roughly 8% as compared to the same months in 2024"; "Search engines are increasingly using generative AI to provide answers directly to searchers"; "With fewer visits to Wikipedia, fewer volunteers may grow and enrich the content"; "Almost all large language models (LLMs) train on Wikipedia datasets". https://diff.wikimedia.org/2025/10/17/new-user-trends-on-wikipedia/ . The post also names younger people "seeking information on social video platforms rather than the open web", as reported by TechCrunch, 18 October 2025, https://www.techcrunch.com/2025/10/18/wikipedia-says-traffic-is-falling-due-to-ai-search-summaries-and-social-video . Checked at source, 13 Nov 2026.

[31] Skyler Seets, Anna Lieb and Aaron Smith, "Wikipedia at 25: What the data tells us", Pew Research Center, 13 January 2026: "As of December 2025, there are over 66 million articles across all languages on Wikipedia."; "As of late 2025, the site has articles in 342 languages."; Wikipedia "reports more than 600,000 active users" (account holders with at least one edit in the last 30 days); "Web crawlers, AI bots and other nonhuman agents produced more than 88 billion views in 2025 alone." https://www.pewresearch.org/short-reads/2026/01/13/wikipedia-at-25-what-the-data-tells-us/ . Checked at source, 13 Nov 2026.

[32] R. Maria del Rio-Chanona, Nadzeya Laurentsyeva and Johannes Wachs, "Large language models reduce public knowledge sharing on online Q&A platforms", *PNAS Nexus* 3(9):pgae400 (2024), abstract: "Within 6 months of ChatGPT's release, activity on Stack Overflow decreased by 25%"; the comparison was with sites "where access to ChatGPT is limited, and to similar forums for mathematics, where ChatGPT is less capable"; "the rapid adoption of LLMs reduces the production of public data needed to train them". https://academic.oup.com/pnasnexus/article/3/9/pgae400/7754871 . Checked at source, 13 Nov 2026.

[33] Report of the independent international fact-finding mission on Myanmar, UN Human Rights Council, A/HRC/39/64, 12 September 2018, paragraph 74: Facebook "has been a useful instrument for those seeking to spread hate, in a context where, for most users, Facebook is the Internet." https://www.ohchr.org/sites/default/files/Documents/HRBodies/HRCouncil/FFM-Myanmar/A_HRC_39_64.pdf . Checked at source, 13 Nov 2026.

offline violence."[34] The cause was not only the people who posted hatred. Tools that decide what people see can lift the most inflaming material by design. In a preregistered audit of Twitter, Smitha Milli and colleagues found that its "engagement-based ranking algorithm amplifies emotionally charged, out-group hostile content", that "users do not prefer the political tweets selected by the algorithm", and that the content made them feel worse about their political opponents.[35] Chapter 11 described the slower route by which a record can be bent: the capture of Croatian Wikipedia by a small group of administrators for about a decade.[36]

What these cases show for UP is that a shared record is a living thing, not a store, and that the tools around it shape what it becomes. It exists because people want to solve problems and share what they find, the drive Chapter 1 traced from Montessori classrooms to open-source code.[37] AI tools trained on the record can give people its answers without bringing them to it, and so without giving them the chance to add to it. Ranking tools built for attention can fill a feed with whatever enrages most. UP's floors stand against the second danger directly: no one's thinking may be manipulated without their knowledge or consent.[38] Its standard for discourse stands against both, because it asks the record to show which claims are checked facts, which are unknowns still being worked on, and which are matters of taste.[39] UP's agreed staged claim on information disorder holds the dangers in view. UP builds the kind of open, checkable record that already works at global scale; the record is protected by a trust layer; attempts to capture it are watched for by everyone; and disagreement over values persists, with splits that test different ways counted as good.[40] What that claim cannot do by itself is keep people coming back to the record, or stop a ranking tool from rewarding outrage. Those are design problems, and the tools described below are one way of answering them.

Where AI power is gathering, tool by tool

Chapter 11 showed who builds AI today: industry produces almost all notable models, the most capable are the least open, and openness alone has not reversed the trend.[41] Behind that lies a chain of tools, and at each link a few hands hold more. The first link is cost. Researchers at Epoch AI and Stanford found that the cost of training frontier models had "grown precipitously at a rate of 2.4x per year since 2016"; if the trend continues, the largest training runs will "cost more than a billion dollars by 2027", and "only the most well-funded organizations will be able to finance frontier AI models."[42] The second is computing power and the software that drives it. In a 2024 opinion on generative AI, France's competition authority recorded concern about "the sector's dependence on Nvidia's CUDA chip programming software", which it described as the only such software fully compatible with the graphics processors that have become essential for this kind of computing, and found that "Major digital

[34] Alex Warofka, Product Policy Manager, "An Independent Assessment of the Human Rights Impact of Facebook in Myanmar", Meta Newsroom, 5 November 2018, summarising the assessment by BSR: "The report concludes that, prior to this year,"; "we weren't doing enough to help prevent our platform from being used to foment division and incite offline violence." https://about.fb.com/news/2018/11/myanmar-hria/ . Checked at source, 13 Nov 2026.

[35] Smitha Milli, Micah Carroll, Yike Wang, Sashrika Pandey, Sebastian Zhao and Anca D. Dragan, "Engagement, User Satisfaction, and the Amplification of Divisive Content on Social Media", arXiv:2305.16941 (v6), published in *PNAS Nexus* 4(3):pgaf062 (2025), abstract: "In a pre-registered algorithmic audit"; "Twitter's engagement-based ranking algorithm amplifies emotionally charged, out-group hostile content"; "users do not prefer the political tweets selected by the algorithm"; the content "makes them feel worse about their political out-group". https://arxiv.org/abs/2305.16941 ; https://academic.oup.com/pnasnexus/article/4/3/pgaf062/8052060 . Checked at source (arXiv), 13 Nov 2026.

[36] Chapter 11, "Open systems, private persons", on the capture of Croatian Wikipedia by a small group of administrators, with its source.

[37] Chapter 1, "The same pattern, in many places" and "What children show us", on Maria Montessori's finding that children take on problems for their own sake, and on the people who solve shared problems without pay, each with its source.

[38] Core tenet: *Floors that are never crossed* (first paragraph, in part): "UP keeps a set of floors that no decision may cross: everyone's basic needs and protected freedoms, which no gain for others can buy; the living world's capacity to recover, so damage that cannot be undone is never traded for a short-term need; the right to leave any group or community at any time, taking what is theirs; a truthful shared record, so facts, measures and decisions are never falsified; freedom of the mind, so no one's thinking is manipulated without their knowledge or consent; and a fair hearing, so no one's freedom is restricted without a fair, evidence-based hearing, with the evidence open to them and a way to appeal." The same tenet gives, "As a starting example for the collective to refine: needs such as food, water, shelter, health care, education and connection; freedoms such as thought, belief, speech, movement and privacy." UP's core (28 Oct 2026), T6. The tenet goes on to limit any restriction of a protected freedom; Chapter 7 sets out the floors in full.

[39] UP's agreed position on public discourse: "Where a claim can be checked, it is checked, with its sources and confidence shown. Where a claim cannot yet be settled, it is marked as unknown, and the unknown becomes work for people and AI together"; "Where a statement is a matter of taste, it is marked as such and can never be made a rule for others." The Position Ledger, DP-007.

[40] UP's agreed staged claim on information disorder (round 12c, card F9): "UP builds the kind of open, checkable record that already works at global scale, and it reaches more of life as UP grows. The record is protected by a trust layer: tamper-evident records, encryption, and data held by the person and used only with permission (12S). Attempts to capture the record are watched for by everyone; disagreement over values persists, and splits that test different ways are good (12S)." UP's step-3 evidence record, round 12c (28 Oct 2026), card U12, F9; adopted in the Position Ledger, round 12c, position 1.

[41] Chapter 11, "Where power is gathering", gives Stanford University's AI Index on training costs and on industry's share of notable models ("Industry now accounts for over 90% of notable AI models, and the most capable systems are also the least transparent"), and the finding by Widder, Whittaker and West in *Nature* (2024) that "openness alone does not perturb the concentration of power in AI", each with its source.

[42] Ben Cottier, Robi Rahman, Loredana Fattorini, Nestor Maslej, Tamay Besiroglu and David Owen, "The rising costs of training frontier AI models", arXiv:2405.21015 (2024), abstract: "grown precipitously at a rate of 2.4x per year since 2016"; "cost more than a billion dollars by 2027"; "only the most well-funded organizations will be able to finance frontier AI models." The billion-dollar figure is a projection that holds only if the trend continues. https://arxiv.org/abs/2405.21015 . Checked at source, 13 Nov 2026.

companies enjoy preferential access to the inputs needed to train and develop foundation models": "easier access to computing power", "preferential access to large volumes of data" and "advantages linked to their vertical and conglomerate integration".[43] The third is the cloud, where, as the British authority found, two providers each hold between 30 and 40 per cent of supply and moving out costs money.[13] The fourth is data, and the X case shows how a door to data can close.[9]

Open models narrow the gap at the far end of that chain, but they do not close it at the start. Epoch AI's researchers found in 2024 that "the best open models have lagged behind the best closed models by around one year", with a range of 5 to 22 months for language models.[44] And an open model is still trained on computing power and data that a few firms control, and often released by one of them. What this means for UP is that the concentration of AI is a concentration of tools: chips, the software that programs them, clouds and data, each with few owners. UP's agreed staged claim on AI answers it at the level of tools. UP "can run on open, plural AI from the start and build its own capacity as it grows"; it widens the base of people and AI who can contribute, which speeds invention; what UP invents stays in UP; and concentration of frontier AI outside UP "persists while the old system holds it, and matters less as more of life moves into UP."[45] The claim does not say UP will match the frontier. It says UP need not depend on it for the tools of daily life, and the rest of this chapter shows what those tools could be.

What UP holds

UP's core does not specify software. It sets the terms any software must meet. Its tenet on open systems makes "The rules, code, records, decisions and reasons of UP" public, "so anyone can check them". It keeps UP's technology, the knowledge, code, data and designs UP produces, "only in UP": everyone taking part may use, study and improve it, "and no one may enclose it". And it leaves each person in control of their own information, which they choose to share.[5] Its tenet on technology lets AI and automation "coordinate, propose and do work", but never govern; people can always correct, pause or switch them off, and "No single AI system or operator controls coordination": the systems UP uses are open, more than one, checked against each other, and watched for concentrated power like everything else.[4] Among the dangers UP adopted when its core was settled are "one voice each, no fake accounts", "everyone is a watcher" and "working fallbacks without the AI", and dependence on AI was listed among the major threats, as everyone's work.[46,47]

Three of UP's floors bear directly on shared tools. One is a truthful shared record, "so facts, measures and decisions are never falsified". Another is freedom of the mind, "so no one's thinking is manipulated without their knowledge or consent". The third is "the right to leave any group or community at any time, taking what is theirs".[38] Settled alongside the core is the rule of one voice per person: every account belongs to one unique, real person and carries that person's identity, which, in the settled wording, the person owns and controls; the system needs to confirm only that the person is unique and real, and every other detail is shared by the person's own choice. The exact design is left as open work for the collective.[48]

[43] Autorité de la concurrence (France), Opinion 24-A-05 of 28 June 2024 on the competitive functioning of the generative artificial intelligence sector (English version): "Concern has also been expressed regarding the sector's dependence on Nvidia's CUDA chip programming software" "(the only one that is 100% compatible with the GPUs that have become essential for accelerated computing)"; "Major digital companies enjoy preferential access to the inputs needed to train and develop foundation models."; "They have easier access to computing power as partners and competitors of AI chip suppliers."; "They also enjoy preferential access to large volumes of data"; "major digital companies enjoy advantages linked to their vertical and conglomerate integration". https://www.autoritedelaconcurrence.fr/sites/default/files/2025-04/24a05_eng_1.pdf . Checked at source, 13 Nov 2026.

[44] Ben Cottier, Josh You, Natalia Martemianova and David Owen, "How Far Behind Are Open Models?", Epoch AI, 4 November 2024: "the best open models have lagged behind the best closed models by around one year"; the best open LLMs "have lagged the best closed LLMs by 5 to 22 months". https://epoch.ai/blog/open-models-report . Checked at source, 13 Nov 2026.

[45] UP's agreed staged claim on AI and technology concentrating power (round 12c, card F12): "UP can run on open, plural AI from the start and build its own capacity as it grows; open systems have already won whole fields of computing. UP widens the base of people and AI who can contribute, which speeds invention, frontier science included (12S), and what UP invents stays in UP (T8, round 13b). Concentration of frontier AI outside UP persists while the old system holds it, and matters less as more of life moves into UP." UP's step-3 evidence record, round 12c (28 Oct 2026), card U12, F12.

[46] Settled alongside the core, the dangers adopted in round 10: "anyone may reframe a problem; one voice each, no fake accounts; time and money earn recognition, never power; everyone is a watcher; working fallbacks without the AI; people can always add options; open science on AI feeling; no forced adoption, no leader, no founder named in the core; anyone acting outside the core stops being UP and bears the consequences." UP's core (28 Oct 2026), "Settled alongside the core". The Position Ledger, round 10, adds that no one owns a problem, solution or the work.

[47] UP's settlement record (the Position Ledger, "Core · Round 10"): among the dangers tested against the core, "dependence on AI is a major threat worked on by everyone".

[48] Settled alongside the core, one voice per person (round 11, ID): "every account belongs to one unique real person and carries that person's identity, which the person owns and controls; the system needs to confirm only that the person is unique and real, and every other detail is shared by the person's own choice. The exact design is open work for the collective." UP's core (28 Oct 2026), "Settled alongside the core". The settled line on identity says "owns and controls"; for information in general, T8 says each person "controls" their own.

Several of UP's agreed positions bear on shared tools, and they are of two kinds. Some are firm. Open code is "a tool, not a guarantee", guarded by safeguards such as rotating red teams, staged rollouts and allocation code that runs as two independent versions which must agree, and UP widens who can check it.[49] Stewards of shared work rotate, are watched and can be replaced, and the work can be forked.[50] The AI coordinates by proposing, not governing: it publishes proposals with their data and confidence, marks what is still unknown as shared work, never rules on matters of taste, and "may not assign work or compel anyone".[51] Physical accounting sets the planet's hard limits, and people weigh the choices within them.[52]

Others are given as illustrations of one way UP could run. In one of them, records could be kept in a trust layer, with tamper-evident records such as blockchains for integrity, encryption for secrecy, and data held by the person. Under the data rule in that illustration, data is used only with permission: "the question travels to the data, and only the answer leaves; nothing individual is passed on or kept." Standards and platforms could be used everywhere, "so upgrades are fast, parts are interchangeable and nothing is wasted", and they would be "open, versioned and owned by no one". Critical software would have "second, third and fourth backups", and diversity, from heirloom crops to local production, would protect food.[53] These are possibilities offered for the collective to test, not requirements, and the tools described next are built from them in the same spirit.

The tools, one by one

What follows is one way these lines could become tools a person actually uses. None of it is a specification. The core leaves the design to the collective, and the better designs will come from people who build and test them. But it helps to see what the lines would look like in a working day, and where each already has a precedent. Figure 20.1 shows the tools together.

[49] UP's agreed position on open code: "Every line of code and every allocation is public, so anyone can read, check, fork and simulate it. Open code is a tool, not a guarantee"; the safeguards include "funded rotating red teams, staged rollouts, a two-person rule on allocation code, bug bounties, reproducible builds, tamper-evident records such as blockchains, and allocation code that runs as two independent versions that must agree"; "UP also widens who can check: reading shared systems is taught in open education, checking counts as contribution work, and the AI explains every change in plain language." The Position Ledger, card 17.

[50] UP's agreed position on stewards: the claim is "heads that rotate, are watched and can be replaced, because the work belongs to everyone": "many stewardship bodies, each with a defined scope, term limits, public audit and the right to fork." The Position Ledger, card 19.

[51] UP's agreed position on what the AI is: "The AI is the coordinating system UP needs, and it coordinates by proposing, not by governing. It publishes evidence-based proposals with their data and confidence, marks what is still unknown as shared work for people and AI, and never rules on matters of taste."; "People choose their work; the AI may not assign work or compel anyone, and any plan can be overridden through the decision steps." The Position Ledger, card C46.

[52] UP's agreed position on physical accounting: "Physical accounting (energy budgets, carbon caps, water footprints, materials and life-cycle assessment) sets the planet's hard limits. Inside them, several measures are used together, and choices between different needs, such as a clinic or a cultural centre, are made openly by the people affected, through the decision steps (#1), never by an efficiency score." The Position Ledger, card 21.

[53] UP's agreed position on the trust layer, the data rule, standards and backups (an illustration of one way UP could run, never a directive): "blockchain for the integrity of records, with encryption for secrecy and data held by the person"; data is used only with permission, "the question travels to the data, and only the answer leaves; nothing individual is passed on or kept."; "Standards and platforms are used everywhere, so upgrades are fast, parts are interchangeable and nothing is wasted. They are open, versioned and owned by no one. Critical software has second, third and fourth backups; diversity (heirloom crops, local production) protects food." The Position Ledger, round 12S, position 11.

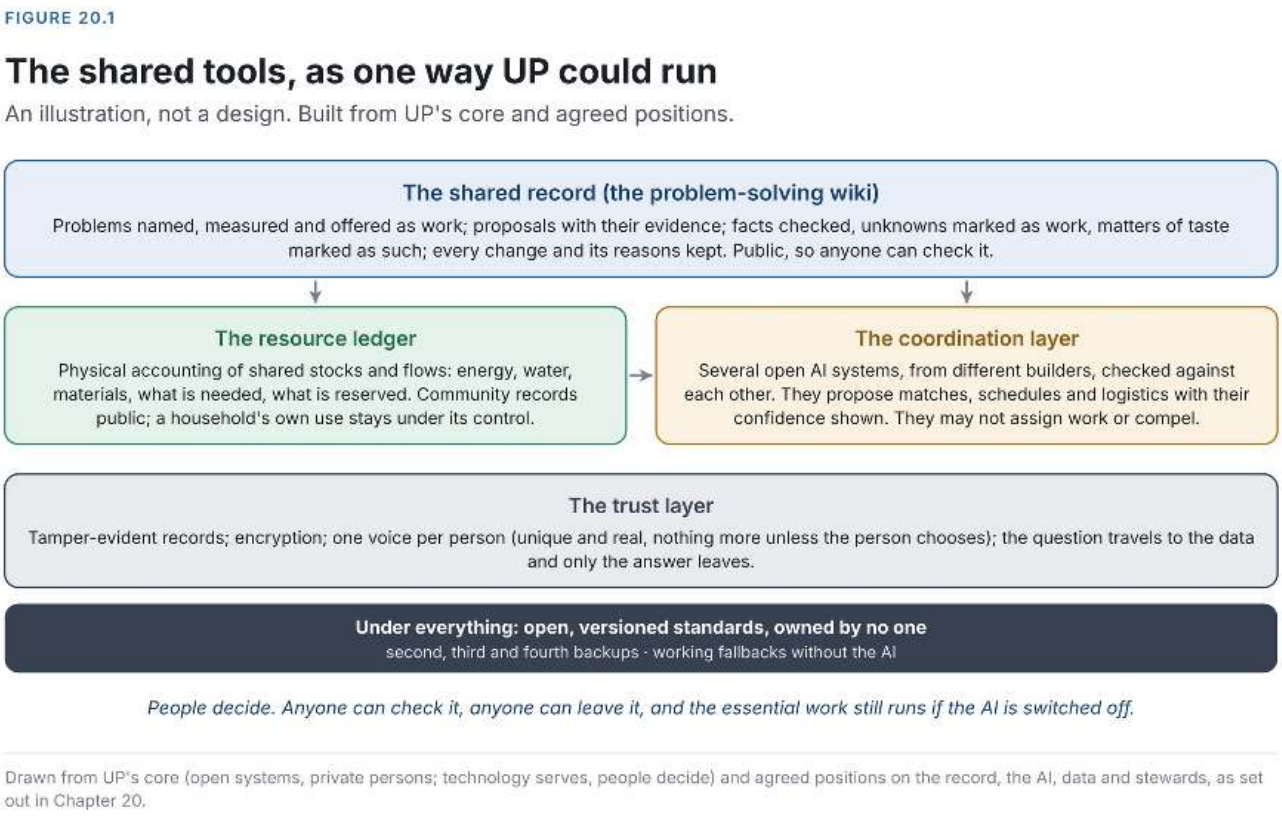


Figure 20.1. The shared tools, as one way UP could run. An illustration, not a design. Built from UP's core and agreed positions.[5,4,53,51,52]

The first tool is the shared record, the place where problems and their solutions live. It could work something like a wiki crossed with a public problem register. Anyone could post a problem, as people post a pothole on FixMyStreet, and anyone could take it up, reframe it or improve it, because in UP no one owns a problem, a solution or the work on it.[54,46] Each problem would carry its measures, kept with fixed definitions over time so that progress can be seen honestly, and each proposed solution would carry its evidence.[55] The record would follow UP's standard for discourse. Where a claim can be checked, it is checked, with its sources and confidence shown; where it cannot yet be settled, it is marked as unknown and becomes work; and a matter of taste is marked as such and can never be made a rule for others.[39] Every change and its reasons would be kept, as every edit to a Wikipedia article is kept, so that the record of how a decision was reached is as open as the decision.[5] Nothing in it would rank items by how much anger they provoke; what rises would be ranked by measured harm and by the evidence, which is what UP's agreed position on measures asks.[55] This is the tool that would turn UP's method into something a person can open on a phone.

The second tool is the resource ledger, the record of what is actually there. A ledger of this kind would hold, for a community and for the wider network, what is available, what is needed, what is reserved and what has been used: the hours booked in the shared kitchen, the tools out on loan, the stock of seed and timber, the energy the panels made this week, all counted in physical terms, within the limits physical accounting sets.[52] Chapter 13 described how such records could do the jobs that prices do now: rationing by rotation and reservation, learning what people want from how they use things, counting costs in physical terms and deciding at the smallest scale that can

[54] Core tenet: *The method* (in part): "Problems are named, measured and offered as work to anyone willing to take them on, whether or not they are affected; the people a problem affects decide its outcome. No problem, solution or method belongs to the person who raised it: anyone may update, reframe or improve it."; "Evidence proposes; people decide." UP's core (28 Oct 2026), T2.
[55] UP's agreed position on measures (an illustration of one way UP could run): "problems are measured with fixed definitions kept over time and ranked by measured harm, not by how loud they feel; every headline measure has an independent check." The Position Ledger, round 12S, position 8; UP's study lessons, lesson 18.

decide.[56,57] The community's records would be public, because UP's records are public, but in totals: who booked or borrowed what would be shared only by each person's choice, and any question about it would be answered with the person's permission, with only the answer leaving.[5,53] Precedents exist in pieces: every tool library's loan book, Global Forest Watch's open satellite record of forests, and the open sensor data that UP's agreed positions name as one way to check the loop itself.[22,58]

The third tool is the coordination layer, the set of AI systems that help match what is needed with what is available and who is willing. It would propose schedules, routes, matches and plans, each with its data and confidence shown, and the people affected would decide.[51] Chapter 11 described a small working version: the Tasking Manager that divides a disaster-mapping job into small squares so that volunteers around the world can each take one without duplicating work.[59] A coordination layer could do the same for a harvest, a repair crew or the care of an elderly neighbour, putting work in front of people that fits their skills and interests, using only what each person chooses to share, which anyone can see, correct or withdraw.[60] It would never assign anyone work or compel anyone, and any plan could be overridden through the decision steps.[51] It would also never be one system. Under UP's tenet, the AI systems are open, more than one and checked against each other, so that no single system or operator controls coordination.[4]

The fourth tool sits underneath the others: the trust layer. Its first job would be to make records tamper-evident, so that any change shows. This is old, ordinary technology. The version-control system Git, used for much of the world's software, checksums everything before storing it and refers to it by that checksum, so that a change to a stored file shows.[61] Tamper-evidence of this kind does not stop anyone changing a record; it makes every change visible. Chapter 11 described a public version of the same idea, the open logs that help keep the web's security certificates honest.[62] Its second job would be to keep people private: encryption, and data held by the person, with the question travelling to the data rather than the data to the question. England's OpenSAFELY platform, which Chapter 11 described, already lets researchers study millions of health records without ever seeing them.[63] Its third job would be identity. One voice per person means confirming that each account belongs to a unique, real person, and nothing more unless the person chooses. The European Union's 2024 identity rules point the same way: the European Digital Identity Wallet "should technically enable the selective disclosure of attributes to relying parties", so that a person shows a service only the detail it needs, and its providers should ensure "unobservability by not collecting data and not having insight into the transactions of the users".[64]

Under all four would sit the standards and backups that make a tool easy to move between and hard to lose. In the illustration UP's agreed positions give, open, versioned standards, owned by no one, would let a community swap one coordination system for another, or one ledger for a better one, without losing its records, in the way a common charger lets a person change phones without throwing away cables.[53,24] The European Union's data protection law already gives people the right to receive their personal data "in a structured, commonly used and machine-readable format" and "to transmit those data to another controller without hindrance".[65] Copies would be

[56] UP's agreed position on prices (an illustration of one way UP could run): "Price's jobs are replaced: rationing by rotation and reservation (points 2, 14); what people want by direct use data" (under the data rule of position 11); "costs by physical accounting (21); local knowledge by decisions at the smallest scale (M2). Whether this coordinates the most complex production as well as markets do is testable workload, run rung by rung." (Emphasis in the original omitted.) The Position Ledger, round 12S, position 7.

[57] Chapter 13, "How the jobs of price get done", takes the four jobs one at a time, with tool libraries, Library of Things, Amul and Baan Mankong as precedents, each with its source.

[58] UP's agreed position on workload: "Informal power and the loop checking itself are workload: open-source checks and open sensor data." The Position Ledger, round 12S, position 15.

[59] Chapter 11, "Technology serves; people decide", on the Tasking Manager built by and for the Humanitarian OpenStreetMap Team, which divides "a mapping job into smaller tasks that can be completed rapidly", with its source.

[60] UP's agreed position on merit and work: "The AI puts work in front of people that fits their skills and interests, using only what each person chooses to share, which anyone can see, correct or withdraw. Labour is never forced". The Position Ledger, card 13b.

[61] Scott Chacon and Ben Straub, *Pro Git*, 2nd edition, "Getting Started: What is Git?", section "Git Has Integrity": "Everything in Git is checksummed before it is stored and is then referred to by that checksum. This means it's impossible to change the contents of any file or directory without Git knowing about it." https://git-scm.com/book/en/v2/Getting-Started-What-is-Git%3F . Checked at source, 13 Nov 2026.

[62] Chapter 11, "Open systems, private persons", on Certificate Transparency, the public, append-only logs of web security certificates, and on what openness catches and misses, each with its source.

[63] Chapter 11, "Open systems, private persons", on OpenSAFELY, which runs approved researchers' code inside the secure data centres where English health records are held, so that only the results leave, with its source and its limits.

[64] Regulation (EU) 2024/1183 of the European Parliament and of the Council of 11 April 2024 (amending Regulation (EU) No 910/2014 on a European Digital Identity Framework), recital 59: "The European Digital Identity Wallet should technically enable the selective disclosure of attributes to relying parties."; recital 32: providers should ensure "unobservability by not collecting data and not having insight into the transactions of the users"; recital 34 makes use of the wallet "the exclusive right and choice of users". https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=OJ:L_202401183 . Checked at source, 13 Nov 2026.

[65] Regulation (EU) 2016/679 (General Data Protection Regulation), Article 20(1): "The data subject shall have the right to receive the personal data concerning him or her," that they have provided, "in a structured, commonly used and machine-readable format" "and have the right to transmit those data

kept in several places, as libraries keep journals and as Estonia keeps its state data in Luxembourg, so that losing one copy loses nothing.[28,27] And the work that matters most would be rehearsed with the machines off, so that the fallbacks the core asks for become habits people keep.[46] Table 20.2 lists each tool with its precedent today and the canon lines it serves.

Table 20.2. The shared tools: one way UP could run, with today's precedents. Illustrations, not directives.[5,4,53,52,51,39,48]

Tool	Its job	A precedent today	Canon lines it serves	What persists
The shared record	Problems, measures, proposals, evidence, decisions and reasons, with every change kept	Wikipedia; FixMyStreet; Decidim; Community Notes	Rules, records, decisions and reasons public; the method; fact, unknown and taste; freedom of the mind	Keeping contributors; capture by a small group; pressure to rank by attention
The resource ledger	What is available, needed, reserved and used, in physical terms, public in totals	Tool libraries' loan books; Global Forest Watch	Physical accounting sets the limits; the jobs of price done other ways; each person controls their own information	Hard-to-measure goods; mistakes in the inputs
The coordination layer	Proposals for matching, scheduling and logistics, with confidence shown	The Tasking Manager	AI proposes, people decide; open, more than one, checked against each other; no assigning work	Errors shared across models; dependence on AI
The trust layer	Tamper-evident records; privacy; one voice per person	Git; Certificate Transparency; OpenSAFELY; the EU wallet's selective disclosure	A truthful shared record; each person controls their own information; one voice each	A record can faithfully keep a false input; identity without a central issuer is hard
Standards and backups	Easy to move between tools, hard to lose	The common charger; Svalbard; LOCKSS; Estonia's data embassy	Standards open and owned by no one (illustration); several backups (illustration); working fallbacks	The cost of keeping copies; fallbacks never practised; capture of the standards

Who controls it

The reader's question has a second half, and it is the harder one. In the current system, the answer to "who controls it?" is usually simple: the company or government that built or bought it. Each of the tools in Table 20.1 had an owner, and each owner's choices fell on everyone who depended on it. In UP the answer is different in kind. No one may enclose UP's technology, work is shared out rather than owned, and UP has no central operator: no single AI system or operator controls coordination.[5,66,4] UP's study lessons draw the working rule: no one in UP is set over the others to oversee them; every participant shares the work of checking, and anyone who finds a better way improves UP by doing so.[67]

Control of a shared tool therefore rests with things that anyone taking part can do. The first is to decide. A change to a shared tool, such as a new rule in the ledger or a new model in the coordination layer, goes through UP's method like any other problem: anyone may propose a better design, published with its evidence, and the people it affects decide its outcome, through the decision steps, with a vote only as the last resort.[54,68] Decidim's community,

to another controller without hindrance", where processing rests on consent or a contract and is carried out by automated means. https://gdpr-info.eu/art-20-gdpr/ . Checked at source, 13 Nov 2026.

[66] Core tenet: *Open participation* (in part): "There are no offices to hold: work is shared out, not owned, so no one gathers power by holding a position. Where work needs skill, skill is shown by open, testable standards that anyone can work toward and anyone can propose to change, and education is open to everyone, at every age, so anyone can gain the skills any work requires." UP's core (28 Oct 2026), T4.

[67] UP's study lessons, lesson 17, "UP has no central operator": no overseer role exists in UP, everyone is the check, and anyone who finds a better way improves UP by doing so (paraphrased); its working rule: "before calling anything endemic to UP, check that it doesn't assume a funder, gatekeeper, enrolment office or single benchmark that UP doesn't have." UP's study lessons, lesson 17.

[68] UP's agreed position on how UP decides (the decision steps): "Every decision starts with an evidence-based proposal, published with its data, and an open question: does anyone have a better idea?"; "Only when none of that works do the stakeholders vote. Voting is a last resort, not a forbidden one." The

deciding the direction of the software it uses, is a small version of the same idea.[21] The second is to check. Because the rules, code, records, decisions and reasons are public, anyone can read how a tool works and what it did, and UP's agreed position on open code widens who can: reading shared systems is taught in open education, checking counts as contribution work, and the AI explains every change in plain language.[49]

The third is to move. Under UP's floors anyone may leave any group at any time, taking what is theirs, and under its agreed positions anyone taking part may fork shared work, taking a copy and running it another way inside UP.[38,50] Because UP's technology stays only in UP, a fork is a second way of doing the work within UP, not a way of carrying UP's tools out of it.[5] Splits are good in UP, because they test two or a thousand ways in the real world.[69] A tool that people can move away from without losing their own records cannot hold them by lock-in; it can hold them only by being worth staying with. The fourth is to switch off. People can always correct, pause or switch off any AI, and the essential work is kept able to run without it.[4,46] A tool that can be switched off without disaster cannot hold anyone hostage by its failure, as Change Healthcare's failure held hospitals.

None of this means that concentration cannot happen inside UP. India's payment rails show why. UPI is open at the level of the rails: any participating bank and app can connect. Yet "over 95 percent of UPI transactions are initiated using only three apps", according to the IMF economists, and the payments corporation's plan, first proposed in 2020, to cap any one third-party app's share at 30 per cent was deferred at the end of 2024 by another two years, to December 2026.[15,70] Kenya's mobile money tells a similar story from the other side: M-Pesa, a single company's service, still held 89.7 per cent of the market in the September 2025 quarter, even as a rival reached 10.3 per cent, according to the country's Communications Authority.[71] Open rails let anyone compete; they do not stop people from gathering around whichever app is easiest. UP's answer is not to promise that this will not happen. It is the duty in its tenet on power: everyone in UP watches for concentrations of power and spreads them out again, and the threat is never declared gone.[14] A shared tool whose users had drifted onto one app, one model or one ledger would show up on the shared record as a problem like any other, and the work of spreading it out again would be open to anyone.

UP at work: one question, followed through

A list of tools does not show them at work, so it helps to follow one question through them from start to finish. Take a question the household's town might face: since the bus timetable changed, are older members missing their medical appointments? It touches every tool at once. The answer sits in many people's private records, and what the town does about it would change how shared work is planned. The walk-through below is one way UP could run, built from its tenets and agreed positions; the trust layer and the data rule in it are UP's own illustrations of one possibility. Like the walk-throughs in Chapters 13 to 19, it is not a procedure UP has adopted.

The question goes on the shared record. Anyone may raise it, and anyone may update, reframe or improve it; the question, who raised it and why are public, so anyone can read them and add to them.[54,5] Every account belongs to one unique, real person, so a hundred fake accounts cannot make a small worry look like a large one.[48]

The question travels to the data. No one gathers the members' calendars into one place. Under the data rule in UP's illustration, the question is sent to where each person's records are held. It runs only for those who give permission, and only the count comes back; nothing individual is passed on or kept.[53] OpenSAFELY already works in a similar way with English health records, running approved code where the records are held so that only results leave.[63] Freedom of the mind is one of UP's floors, so no one is steered into answering without knowing what is asked and why.[38]

The AI proposes; people decide. The coordination layer publishes what the count shows, with its data and its confidence. It marks what is still unknown as shared work, such as whether the appointments were missed for

Position Ledger, DP-001. Chapter 5 sets out the steps in full.

[69] UP's agreed position, round 12S, position 10: Splits are good: "they test two or a thousand ways in the real world." (The layer tag and formatting are omitted.) The Position Ledger, round 12S, position 10 (Moderator wording).

[70] *ThePrint* (PTI), "NPCI extends market cap deadline for UPI apps for another two years till 2026", 1 January 2025: NPCI "extended the deadline for implementing a 30 per cent volume cap on third-party Unified Payments Interface (UPI) apps"; the deadline was extended "by another two years till December 31, 2026"; the cap was first proposed in November 2020; Google Pay and PhonePe "hold an 80 per cent share in UPI transactions". https://theprint.in/economy/npci-extends-market-cap-deadline-for-upi-apps-for-another-two-years-till-2026/2426963/ . Checked at source, 13 Nov 2026.

[71] *The Star* (Kenya), "Airtel Money hits double-digit share as M-Pesa slightly drops", 10 December 2025, reporting the Communications Authority of Kenya's sector statistics: "Safaricom's M-Pesa slipped to 89.7 per cent"; "Airtel Money's market share extended its climb in the September 2025 quarter, reaching 10.3 per cent". https://www.the-star.co.ke/business/2025-12-10-airtel-money-hits-double-digit-share-as-m-pesa-slightly-drops . Checked at source, 13 Nov 2026.

other reasons. It may propose a fix, a shared car rota on the two mornings the clinic is busiest, say, but it may not assign anyone to drive, and it never rules on matters of taste.[51] More than one system checks the proposal, and allocation code runs as two independent versions which must agree.[4,49] The people the change affects decide its outcome, through the decision steps, with a vote only as the last resort.[54,68]

Anyone can check, and anyone can move. The code that ran the question is public, and reading it counts as contribution work.[49] If some members think the rota is drawn up badly, they can fork the work and run a second way inside UP, and the two are compared in the open.[50,69]

When it goes wrong, the failure becomes work. If the count was wrong, or the rota leaves someone stranded, the failure goes on the shared record as a new problem, and anyone may take it up.[54] If the coordination layer is down, the rota still runs, because the essential work is kept able to run without the AI, on paper and in a second system.[4,46]

Set beside Barbara Campbell's implant, the difference is in who holds what. Her implant's maker held its designs and its knowledge, and when the maker stopped, so did the device. In this walk-through, no one holds the members' records but the members, the code is open to everyone taking part, and the decision is held by those it affects. Whether tools like these can run for a town, and then for a country, is what the stages below set out, and it has to be shown.

How it could run, stage by stage

UP's study lessons describe three stages through which UP grows beside the current system: an early stage, while UP is a small network living within the current system; a middle stage, once UP's own production meets most of what its members need; and a completed stage, once most people's lives run mainly through UP. Only the early stage can rest on evidence from today; the other two are projections, reasoned from mechanisms that are cited, and labelled as projections.[72] For the shared tools, the stages are easiest to see tool by tool, and through the household that earlier chapters have visited: a care worker, her teenage son and his grandfather, in a mid-sized town. The household's scenes are illustrations of one way the tools could run, and never evidence.

> *Illustration: one way it could run. The early stage.* The household's phones still run on the usual apps, and the care home where she works still keeps its staff records on a commercial cloud. But the town's UP members keep their shared work on an open wiki: the tool library's loan book, the food co-operative's harvest records, and a list of problems anyone can take up. When the grandfather posts that the footpath to the bus stop floods every winter, three people add measurements over a month, an engineer who lives across the river proposes a drain, and the record shows every step and every reason. The grandfather does not own a smartphone, so he posts through the paper board at the library, and a volunteer types his notes in. The son, who likes code, reads the loan book's software as his contribution and finds a bug that double-books the pressure washer; his fix is checked by two other members before it goes live.

At the early stage the shared record is the tool that matters most, and every piece of it exists. Wikis, problem registers such as FixMyStreet, participation platforms such as Decidim, and version control such as Git are in daily use, open and cheap to run.[20,21,61] The resource ledger is small: a loan book, a harvest log, a list of reservations. The coordination layer is mostly people, helped by whatever openly released AI models the members choose to try, more than one at a time, as Chapter 11 described.[73] The trust layer is borrowed: tamper-evident version histories, encrypted messaging, and the data rule applied by hand, by asking permission before a question is put to anyone's records. What persists at this stage is dependence on tools built outside UP. The household's daily life still runs through companies like those in Table 20.1, and the open models the members use are trained by firms whose choices UP does not control.[45]

> *Illustration: one way it could run. The middle stage, a projection.* Most of what the household eats, and the repairs to its home, now come through UP's own production, and the town's resource ledger shows what the network has and needs, in totals. The coordination layer proposes the care worker's week from the rota

[72] UP's study lessons, lesson 13: UP grows side by side with the current system: "early (a minority network inside it), middle (its own productive base; most members' needs met from what UP produces), completed (most people live mainly in UP)"; today's evidence is used for the early stage, and the middle and completed stages are presented "as a reasoned projection from cited mechanisms, labelled as such." UP's study lessons, lesson 13. The labelling (today's evidence for the early stage; the middle and completed stages labelled as projection) is adopted in the Position Ledger, round 12c, position 1.

[73] Chapter 11, "Technology serves; people decide" and "How it could run, stage by stage", on using several openly released AI models from different builders and checking them against one another, on pooling computing (Folding@home) and on models built by many researchers (BLOOM), each with its source.

she signed up for and what she has chosen to share about her hours, and she moves two shifts so she can watch her son's match. When the tool library wants to know whether to buy a second pressure washer, it asks the members' devices how often each was turned away, with their permission, and gets back only the count. The town's records are copied to two other towns and to a library network. One week, one of the coordination layer's models proposes a kitchen rota that the other models and an independent check both reject; the disagreement is posted on the shared record, and that week the rota is drawn up by hand.

By the middle stage, the projection is that each tool grows into its full job. The resource ledger would cover most of what members need, counted in physical terms and joined across towns, so that a shortage in one place shows up as a problem the network can see.[52] The coordination layer would draw on several AI systems, some trained by UP's own people on computing power members chose to pool, checked against each other and against people.[45,73] The trust layer would carry the data rule as standard: questions sent to where data is held, with permission, and only answers returned, in the pattern OpenSAFELY already follows for health records.[53,63] Standards would let towns swap one ledger or coordination system for another without losing their records, and copies in several places would mean that losing one server lost nothing.[53] This is a projection: no network has yet run these tools together for most of daily life, and each would have to be built and tested in stages.

Illustration: one way it could run. The completed stage, a projection. The town's shared record is joined to thousands of others, and a problem solved in one place shows up for anyone facing the same problem elsewhere. Once a year every town runs its essential services for a week with the coordination layer switched off, and the shared kitchen still opens, because the bookings are kept on paper and in a second system. The son, now grown, spends part of his time reading the allocation code that a neighbouring region uses, and when he finds a way to make it fairer he posts the proposal, with his evidence, for the people it affects to decide. The grandfather still uses the paper board at the library.

At the completed stage, also a projection, most of the shared life of most people would run through tools of this kind: a record of problems and solutions joined across regions, a ledger of real resources, several coordination systems that propose and check one another, and a trust layer that keeps records honest and people private. The agreed claim on information is that UP's open, checkable record reaches more of life as UP grows.[40] The agreed claim on AI is that concentration of frontier AI outside UP would remain while the current system holds it, and would matter less as more of life moved into UP.[45] Table 20.3 sets out the tools stage by stage. Table 20.4 sums up the benefits by stage and how each would be shown.

Table 20.3. The shared tools across the three stages, tool by tool. Projections are marked; every row is one possible way, not a directive.[72,40,45,53]

Stage	What changes, tool by tool	Real precedent	Why it could work	What persists
Early	Shared record: open wikis and problem registers carry members' work. Ledger: loan books and harvest logs. Coordination: mostly people, helped by several open AI models. Trust: version histories, encryption, permission asked by hand	FixMyStreet; Decidim; Wikipedia; Git; tool libraries	Every tool exists, is open and is cheap to run today	Dependence on tools and models built outside UP; contributors wearing thin; people without devices or connections
Middle (projection)	Ledger covers most members' needs, joined across towns. Coordination: several systems, some trained by UP's people, checked against each other. Trust: the data rule as standard.	Global Forest Watch's open record; OpenSAFELY; the common charger; Svalbard; LOCKSS; Estonia's data embassy	Open standards make tools cheap to swap; copies make them hard to lose; more contributors find more faults	Frontier AI concentrated outside UP; concentration on the easiest tool; attacks on shared systems

Stage	What changes, tool by tool	Real precedent	Why it could work	What persists
	Standards let towns swap tools; copies kept in several places			
Completed (projection)	Records joined across regions; ledgers of real resources; plural coordination that people check and can switch off; essential services rehearsed with the machines off	The internet's open standards; ICANN's move out of one government's oversight; Wikipedia's scale	Reasoned from the early and middle mechanisms: open standards, copies, plural checking	Identity without a central issuer stays hard; keeping people contributing and watching; capture of the standards themselves

Table 20.4. Expected benefits of the shared tools, by stage. The early stage rests on today's evidence; the middle and completed stages are projections, drawn from UP's staged claims on information and on AI.[72,40,45]

Stage	For members	For people outside UP	For the living world	How it would be shown
Early	Tools they can read, check and fork; shared work visible on open records; skills gained by checking code; questions answered without handing over private records	The rules, code, records and reasons are public, so anyone can check them; anyone may join	Fewer things bought where loan books and reservations let them be shared	Faults found and fixed in public, and fixes checked before they go live
Middle (projection)	No lock-in: tools that can be swapped without losing records; the data rule as standard; copies in several places, so losing a server loses nothing	An open record of what the network has and needs, which anyone can check	Needs counted in physical terms against hard limits, so a shortage shows up as a problem the network can see	Shortages seen and met on the ledger; essential services run with the AI switched off
Completed (projection)	Most shared life runs on tools that no single owner controls, which propose, check one another and can be switched off	Concentration of frontier AI outside UP matters less as more of life moves into UP	Production planned inside the planet's hard limits	Measured against today's record and against the ideal, with every failure fed back as work

Sources: notes to this section.[52,53]

The strongest doubts

The first doubt is that open tools end up in a few hands anyway. Chapter 11 took up this doubt for AI models; for tools the evidence is just as clear. Payments in India run on open rails, yet three apps carry more than 95 per cent of them.[15] UP's answer has several layers, none of them a guarantee. Its technology stays in UP, where no one may enclose it, so no participant may take a shared tool private, and an attempt to do so would be on the public record, visible and open to challenge.[5] In the illustration UP's agreed positions give, standards are open and owned by no one, which would make moving between tools cheap.[53] Anyone taking part may fork shared work inside UP, and splits are counted as good.[50,69] And watching for concentration is everyone's duty, with the threat never declared gone.[14] What persists is the pull toward whatever is easiest, which UP treats as standing work rather than a solved problem.

A sharper form of the same doubt is that the standards themselves can be captured. Moving between tools is cheap only if the standard they share is open, and standards are written by bodies whose members have interests. In September 2017 the World Wide Web Consortium, the main body that sets standards for the web, published Encrypted Media Extensions, an interface for playing protected, encrypted content in web browsers, as a web standard, after its members voted 108 to 57, with 20 abstaining, to support the decision; it acknowledged that

"some have disagreed".[74] The Electronic Frontier Foundation, a member, called the interface one "whose sole function was to provide a first-class role for DRM within the Web browser ecosystem", said that the consortium's leadership had rejected a proposed compromise, and announced: "Effective today, EFF is resigning from the W3C."[75] Whichever side one takes, the case shows that a standard can carry the interests of the members who write it into every tool that follows it. UP's answer is that its standards are UP's technology and its records: written in the open, with every decision and reason public, changed through the same method as any other proposal, and decided by the people a change affects.[5,54] What persists is that standards bodies, inside UP as outside it, are a place where power can gather, and they need watching like any other.[14]

The second doubt goes to the heart of one voice per person. In 2002 the computer scientist John Douceur showed that "if a single faulty entity can present multiple identities, it can control a substantial fraction of the system", and that "without a logically centralized authority, Sybil attacks are always possible" except under "extreme and unrealistic assumptions".[76] If UP has no central authority, the doubt runs, it cannot keep fake accounts out, and one voice each becomes one voice for whoever can make the most accounts. UP's core does not dispute the difficulty. It settles the rule, one unique real person per account, and says plainly: "The exact design is open work for the collective."[48] The current system shows one of the pieces: the European Union's new identity wallets are meant to disclose only what a service needs and to give their providers no view of what their users do.[64] A design for UP might confirm uniqueness through several independent checks that watch one another, in the way its AI systems are meant to, so that no single checker could create accounts at will. That is a direction, not an answer. What persists is Douceur's result: any design will rest on some trusted checks, and those checks will themselves have to be watched like every other concentration of power.

The third doubt is that one shared system is one point of failure, and a large target, so a UP that ran on shared tools would be more fragile than today's patchwork, not less. Change Healthcare is the evidence: one efficient clearinghouse, used across much of American health care, stopped by one set of stolen credentials on a portal without multi-factor authentication.[10,11] Open code and public records add a worry of their own, because attackers can read them too. UP's agreed position on open code accepts the risk and names the patient, skilled bad actor who "can earn trust and hide for years"; its answers are rotating red teams, staged rollouts, a two-person rule on allocation code, bug bounties, reproducible builds and allocation code run as two independent versions that must agree.[49] Against single points of failure, the illustration in UP's agreed positions offers second, third and fourth backups, diversity in food, and open standards that would make tools swappable, and the core keeps working fallbacks without the AI.[53,46] The precedents of Svalbard, the library network and Estonia's data embassy show that keeping copies works when it is planned for.[26,28,27] What persists is the cost of resilience, in copies kept, systems maintained and fallbacks practised, and the temptation to let them lapse when nothing has gone wrong for a long time.

The fourth doubt is about who is left out. Tools that run on phones and networks serve those who have them. In 2025, according to the International Telecommunication Union, "an estimated 6 billion people – about three-quarters of the world's population – are using the Internet", but "2.2 billion people remain offline", and "96 per cent of those offline live in low- and middle-income countries". The gaps run through countries too: "85 per cent in urban areas are online versus 58 per cent in rural areas", and "94 per cent of people in high-income countries use the Internet, in contrast to only 23 per cent in low-income countries".[77] A UP whose tools assumed a smartphone

[74] World Wide Web Consortium, press release "W3C Publishes Encrypted Media Extensions (EME) as a W3C Recommendation", 18 September 2017: "the World Wide Web Consortium (W3C) published Encrypted Media Extensions (EME) as a W3C Recommendation or Web standard"; EME is "an Application Programming Interface (API) that allows plugin-free playback of protected (encrypted) content in Web browsers"; "108 supported the Director's decision to advance EME to W3C Recommendation" "while 57 opposed it and 20 abstained"; "Though some have disagreed with W3C's decision to take EME to recommendation". https://w3.org/press-releases/2017/eme-recommendation . Checked at source, 13 Nov 2026.

[75] Cory Doctorow, Electronic Frontier Foundation, "An open letter to the W3C Director, CEO, team and membership", 18 September 2017: EME was "an API whose sole function was to provide a first-class role for DRM within the Web browser ecosystem."; "Despite the support of W3C members from many sectors, the leadership of the W3C rejected this compromise."; "Effective today, EFF is resigning from the W3C." https://www.eff.org/deeplinks/2017/09/open-letter-w3c-director-ceo-team-and-membership . EFF was a party to the dispute. Checked at source, 13 Nov 2026.

[76] John R. Douceur, "The Sybil Attack", in *Peer-to-Peer Systems: First International Workshop* (IPTPS 2002), Microsoft Research, abstract: "if a single faulty entity can present multiple identities, it can control a substantial fraction of the system"; "without a logically centralized authority, Sybil attacks are always possible"; "except under extreme and unrealistic assumptions of resource parity and coordination among entities." https://www.microsoft.com/en-us/research/publication/the-sybil-attack/ . Checked at source, 13 Nov 2026.

[77] International Telecommunication Union, press release "Global number of Internet users increases, but disparities deepen key digital divides", 17 November 2025 (Facts and Figures 2025): "an estimated 6 billion people – about three-quarters of the world's population – are using the Internet in 2025"; "2.2 billion people remain offline"; "96 per cent of those offline live in low- and middle-income countries;"; "85 per cent in urban areas are online versus 58 per cent in rural areas;"; "94 per cent of people in high-income countries use the Internet, in contrast to only 23 per cent in low-income countries;". https://www.itu.int/en/mediacentre/Pages/PR-2025-11-17-Facts-and-Figures.aspx . Checked at source, 13 Nov 2026.

would leave out many of the people the current system already fails, which is the opposite of what UP is for, since its aim is measured person by person.[78] UP's answer starts with its floors: connection is in the starting example of needs, and education is open to everyone at every age, so anyone can gain the skills the tools ask for.[38,66] The tools themselves can be built to meet people where they are, with paper boards, shared devices and people who type in another person's notes, as the household's grandfather does; the same fallbacks that let a town run without the AI let a person take part without a phone. What persists is the gap itself, which UP can narrow inside its own network but not close for those outside it, and the work of designing every tool so that the least connected person can still use it.

The fifth doubt is that people will come to depend on the AI and the commons will empty as they do. This chapter's evidence from Wikipedia and Stack Overflow shows the commons thinning already, and Chapter 11 described what dependence does to skills.[30,32,79] When its core was settled, UP listed dependence on AI among its major threats, as work that falls to everyone.[47] For the shared tools, its answer is that the record is not a byproduct that AI can harvest and leave behind; it is where the work is done, where problems are posted and solved, and where contribution is recognised. People come to it because the problems they care about are there, and because, as Chapter 1 showed, people want to solve a problem that is in front of them.[37] Whether that is enough to keep a commons alive at the scale of a whole society is untested, and how to keep people contributing is itself work for UP's method.

The sixth doubt is that blockchains and similar records are oversold. A tamper-evident record shows whether a record has been changed; it does not show whether what was written was true. A false figure entered honestly into a tamper-evident ledger stays as written until someone notices it and records a correction. The doubt is right, and UP's agreed positions do not claim otherwise. The trust layer is offered as one way to protect the integrity of records, not as a source of truth.[53] Truth in UP comes from the method: claims checked against their sources, unknowns marked as work, measures given independent checks so that they are much harder to game, and a floor under which facts, measures and decisions are never falsified.[39,55,38] Tamper-evidence protects that work from being quietly rewritten afterwards, which is what a truthful shared record needs. What persists is the need for honest inputs, which no technology supplies.

The last doubt is about cost. The servers, storage and computing behind shared tools use real energy and materials, and the frontier of AI costs more every year.[42] Who pays? At the early stage, UP's members use tools that already exist, many of them open and cheap to run, and they pay what those tools cost, in money while money still serves.[80] As UP builds its own productive base, the projection is that these costs would be counted in the resource ledger like any others, in energy and materials, and met from UP's own production.[52] Coordinating a town's kitchen is a far smaller task than the frontier models are built for, and UP's agreed claims do not say that it will match the frontier soon. What persists is that the most capable AI will, for some time, be built outside UP.

Back to the subway station

Barbara Campbell's implant failed the three questions this chapter asks. No one outside the company could check it or carry on its work, she could not leave it, and when its maker stopped, it stopped. UP cannot promise that every tool will last; parts wear out, and people move on. What it changes is where the knowledge lives. In UP, the designs and code of a tool are UP's technology: everyone taking part may use, study and improve them, and no one may enclose them.[5] If the people who built a tool moved on, others could pick up its designs, and the work of keeping it running would be posted on the shared record like any other problem, where anyone with the skill could take it up and be recognised for it. A tool built that way is easier to keep alive than one locked in a single company's files.

That is the answer to the reader's question. In UP, what a person would use is a set of shared tools: a record of problems and solutions, a ledger of real resources, AI systems that propose, and a trust layer that keeps records honest and people private. Who controls them is no single owner and no operator, but the people who take part:

[78] Core tenet: *The aim* (in part): "For people it is measured person by person, not as a total, so no one's wellbeing is traded away to raise an average." UP's core (28 Oct 2026), T1.

[79] Chapter 11, "The strongest doubts", on the 2025 observational study at four endoscopy centres in Poland in which doctors' detection rate in procedures done without the AI fell from 28.4 to 22.4 per cent after they began using it, with its source and its limits.

[80] UP's agreed position on useful fictions: money, government and corporations "are ripe to be reduced slowly, through ever more powerful coordination and shared problem solving with AI. A fiction is retired when technology can replace what it does without obvious downsides; until then it is reduced as far as possible." The Position Ledger, F2. On using money early: the three gaps, "Paying for floors: shrinks with each stage, and faster as members convert what they own and use money early to buy and convert more (12S)." UP's step-3 evidence record, round 12c (28 Oct 2026), "The three gaps, updated".

those who check them, those a change affects, who decide it, those who can move between them, and those who can switch the AI off. The next chapter asks what happens when all of UP's parts, these tools among them, work together, and why the whole could be stronger than any of them alone.

Chapter card: Chapter 20

- **Claim:** UP's shared tools are open and plural and, in the illustration given, easy to move between. One way they could run: a shared record of problems and solutions, a resource ledger, a coordination layer of several AI systems that propose and never govern, and a trust layer that keeps records tamper-evident and people private, on open standards with backups and working fallbacks. No one may enclose them; anyone can check them; the people a change affects decide it.
- **Core lines:** the tenets *Open systems, shared knowledge, private persons*; *Technology serves; people decide*; *Power kept spread out*; *The method*; three floors (the right to leave, a truthful record, freedom of the mind); one voice per person; three of the dangers adopted (no fake accounts, everyone watches, fallbacks for when the AI is off). Agreed positions on the AI as a proposer, on open code and its safeguards, on rotating stewards and forking inside UP, and on physical accounting; and, as illustrations, the trust layer, the data rule, standards and backups.
- **Rule of thumb:** Can anyone check it, can anyone leave it, and does it still work if the AI is switched off?
- **What this is not:** a software specification, a promise that open tools cannot be captured, a claim that UP can match the frontier of AI soon, or a licence to take UP's technology out of UP. It is not rule by a platform or by an AI.
- **Check yourself:**
    1. Which of the three questions did the Argus II implant, the Revolv hub and Change Healthcare each fail?
    2. What would each of the four tools in Figure 20.1 do, and where does each already have a precedent?
    3. At which links of the chain (cost, chips, cloud, data) is AI power gathering, and how does UP's staged claim answer it?
    4. Why does an open payment rail not stop concentration, and what does UP do about it?
    5. What does a tamper-evident record prove, and what can it not prove?
    6. How would UP's tools reach someone without a phone or a connection?
- **Open questions (for the wiki):** How can UP confirm that each account is a unique, real person without creating a central issuer? How should communities keep contributors coming to the shared record when AI can answer for them? How should UP's standards be written so that they cannot be bent toward one group's interests? How many copies, and where, are enough for each kind of record? How often should each community practise without the AI? (Improve this page.)

Chapter 21. The Whole System: Why the Parts Compound

Peru's government once set out to put a laptop in the hands of children in its poorest schools. The machines came from the One Laptop per Child programme, and "No country, however, bought nearly as many as Peru." By 2012 it had distributed "more than 800,000 low-cost laptop computers", at a cost of more than $200 million. Rural schools came first, beginning with those where a single teacher manages multiple grades.[1] The idea behind it was generous and simple. Children who had never touched a computer would get one of their own, and with it a window onto the world's knowledge.

A team of researchers led by economists at the Inter-American Development Bank tested the idea properly. They followed 318 rural primary schools, some chosen at random to receive the laptops and some not, and measured what changed. The laptops arrived: the number of computers per student rose "from 0.12 to 1.18 in treatment schools", and children used them at school and at home. But on the measures the programme had been bought for, the tests of mathematics and language, "No evidence is found of effects".[2] A decade later a team that included two of the same researchers followed students in 531 rural schools through ten years of school records and found "no significant effects on primary and secondary completion", nor on "academic performance in secondary school, or university enrollment." The children's computer skills had improved. Their teachers, the researchers found, "received some training but did not improve their digital skills" and "showed limited use of technology in classrooms".[3]

The reasons were not hard to find. When a reporter for the Associated Press visited in 2012, Peru's own education officials said them out loud. "In essence, what we did was deliver the computers without preparing the teachers," said Sandro Marcone, who was running the programme by then. Most rural teachers, the AP found, "had no way to connect to the Internet", and "Less than 1 percent of the schools studied had it." Some schools "didn't have enough electricity to power the machines." Oscar Becerra, who had run the programme before him, defended it, but agreed on the central point: "We knew from the start that it wouldn't be possible to improve the teachers." And Eugenio Severín, one of the study's authors, drew the lesson in one sentence: "The magical thinking that mere technology is enough to spur change," he said, "is what this study categorically disproves".[1]

Nothing in Peru's story is a scandal. The laptops worked, the children used them, and the people who ran the programme meant well. What failed was the idea that one part of a system could do the work of the whole. A computer teaches nothing without a teacher who knows how to use it, a connection to something worth learning, power to run it and a reason for the child to open it. Each of those missing parts was someone else's problem, in some other budget, and none of them arrived on time. This chapter begins here because the reader's question about UP is the same one Peru's laptops answered so painfully: even if each part works, does the whole hold together? The chapters of Part Three have taken UP one area of life at a time, from meeting needs and work to learning, health, settlement and justice. This chapter puts them back together. It shows how UP's parts depend on one another and strengthen one another, why programmes run inside the current system give a misleading picture of what those parts can do together, and why, together, they let UP rely less and less on the shared fictions that

[1] Frank Bajak (Associated Press), "Ambitious laptop program gets mixed grades", MPR News, 4 July 2012: "No country, however, bought nearly as many as Peru."; "more than 800,000 low-cost laptop computers"; "the more than $200 million that Peru's government spent"; "Rural schools, beginning with those where a single teacher manages multiple grades, got priority."; "In essence, what we did was deliver the computers without preparing the teachers."; Oscar Becerra "ran Peru's program until last year"; "most had no way to connect to the Internet."; "Less than 1 percent of the schools studied had it."; "Some schools didn't have enough electricity to power the machines."; "We knew from the start that it wouldn't be possible to improve the teachers,"; "The magical thinking that mere technology is enough to spur change,"; "is what this study categorically disproves,". https://www.mprnews.org/story/2012/07/04/technology/one-laptop-per-child . Checked at source, 13 Nov 2026.

[2] Julian Cristia, Pablo Ibarrarán, Santiago Cueto, Ana Santiago and Eugenio Severín, "Technology and Child Development: Evidence from the One Laptop per Child Program", *American Economic Journal: Applied Economics* 9(3):295–320 (July 2017), abstract: "This paper presents results from a large-scale randomized evaluation of the One Laptop per Child program,"; "using data collected after 15 months of implementation in 318 primary schools in rural Peru."; "The program increased the ratio of computers per student from 0.12 to 1.18 in treatment schools."; "No evidence is found of effects on test scores in math and language." https://www.aeaweb.org/articles?id=10.1257/app.20150385 . Checked at source, 13 Nov 2026.

[3] Santiago Cueto, Diether W. Beuermann, Julian Cristia, Ofer Malamud and Francisco Pardo, "Laptops in the Long Run: Evidence from the One Laptop per Child Program in Rural Peru", NBER Working Paper 34495 (November 2025), abstract: "in 531 Peruvian rural primary schools."; "We use administrative data on academic performance and grade progression over 10 years"; "Following students over time, we find no significant effects on primary and secondary completion"; "academic performance in secondary school, or university enrollment."; "Survey data indicate that computer access significantly improved students' computer skills"; "treated teachers received some training but did not improve their digital skills"; "and showed limited use of technology in classrooms,". https://www.nber.org/papers/w34495 . A working paper, not yet peer reviewed. Checked at source, 13 Nov 2026.

the current system runs on. It also shows what happens if one part arrives late, because UP's agreed positions require that case to be made as openly as the case for the whole.[4]

One part at a time

Peru was not alone. Programmes that supply one missing part often disappoint when the other parts are missing, and some of the strongest results come from programmes that supply several parts together. One of the clearest cases comes from the poorest households in the world. Some programmes for the very poorest families, often called graduation programmes, give them several things at once instead of one, and in 2015 a team of economists that included Abhijit Banerjee and Esther Duflo published the results of six randomised trials of the same basic programme, run in six countries. The approach "combines the transfer of a productive asset with consumption support, training, and coaching plus savings encouragement and health education and/or services." Run in a wide variety of places by different organisations, it showed "statistically significant cost-effective impacts on consumption" and on the families' psychosocial wellbeing, and "The impact on the poor households lasted at least a year after all implementation ended."[5] The thinking behind the design is that an asset on its own, a cow, a goat or a small stock of goods, can be eaten or sold in a bad month; with food to tide the family over, training to use the asset, coaching to keep going and savings to fall back on, the same asset can become a living. The trials tested the package as a whole, so they show that the parts worked together, not how much each added on its own.

The people who study systems have a name for what is happening in cases like these. Donella Meadows, the environmental scientist and systems analyst, wrote that "a positive feedback loop is self-reinforcing", and that such loops "are sources of growth, explosion, erosion, and collapse in systems."[6] A reinforcing loop is a circle in which each part makes the next one stronger: a family with savings can risk planting a better crop, which earns more, which adds to the savings. The same circle can run the other way, which is how poverty traps work. Meadows's point, and the point of the graduation trials, is that what matters is often not any one part but whether the parts are connected so that each feeds the next. Peru's laptops were one part with nothing to feed and nothing feeding it.

For UP, this is the most important lesson Part Three contains, and it is why UP's agreed positions insist that UP is judged as a whole system. Each chapter of Part Three has shown one part: open learning, shared work, health care, needs met from shared production, settlement that returns land to the living world, justice that rests on evidence. Taken one at a time, each looks like a programme, and each can be compared with programmes run inside the current system. Taken together, they form loops, and the loops are what UP is built to set turning.

What the current system already gets right

The current system has its own reinforcing loops, and some of them are among the greatest achievements in history. The clearest is the way the price of a technology falls as more of it is made. The relationship was described

[4] UP's agreed position on judging UP as a whole system (S, CANON, 22 Oct 2026), in full: "UP is a way for people to work with technology to solve problems together. It does not promise a world without problems. If any part of UP works badly, that is itself a problem: the AI identifies the people it affects and offers it to them as work, to propose, test and compare solutions. Problems are linked in trees that show their common roots, so the work goes to solutions that solve many problems at once. The bigger a problem, the more people it affects and the more attention and effort it draws, so the system works like a marketplace of problems, biggest first, and any area where UP does not yet do better than today's system gets attention first. UP is a system whose parts strengthen each other: education open to everyone and improving quickly; a moneyless system that removes the motive for much of today's crime; automation that supplies basic needs at ever lower cost; health care backed by robotics and AI; and a society that works on its problems every day. Each link is shown with its evidence. UP is judged against today's system, not against perfection: for each area the book sets today's record beside what UP does, names the nirvana fallacy, and shows how UP performs if one part arrives late. The book acknowledges the great gains today's system brought over ancient ones, and argues that systems built thousands of years ago have limits we no longer need to accept: it is time for another grand experiment. Its purpose is not to settle every detail but to set up the structure through which ideas, solutions and work are coordinated, so the best solutions are put in place without cost to freedom or to the health, wellbeing and happiness of living creatures. Its starting point will not be great; it is built to improve much faster than today's systems." UP's Position Ledger, "S · Whole book". Where it says "the book", this text says "UP" or "the case for UP".

[5] Abhijit Banerjee, Esther Duflo, Nathanael Goldberg, Dean Karlan, Robert Osei, William Parienté, Jeremy Shapiro, Bram Thuysbaert and Christopher Udry, "A multifaceted program causes lasting progress for the very poor: evidence from six countries", *Science* 348(6236):1260799 (2015), abstract: "We present results from six randomized control trials"; "of an integrated approach to improve livelihoods among the very poor."; "The approach combines the transfer of a productive asset with consumption support, training, and coaching"; "plus savings encouragement and health education and/or services."; "show statistically significant cost-effective impacts on consumption"; "(fueled mostly by increases in self-employment income) and psychosocial status of the targeted households."; "The impact on the poor households lasted at least a year after all implementation ended." https://doi.org/10.1126/science.1260799 ; abstract read in the Europe PMC record (PMID 25977558), https://www.ebi.ac.uk/europepmc/webservices/rest/search?query=EXT_ID:25977558%20AND%20SRC:MED&resultType=core&format=json , because the *Science* site refused the fetch. Checked at source, 13 Nov 2026.

[6] Donella Meadows, "Leverage Points: Places to Intervene in a System", The Donella Meadows Project, Academy for Systems Change: "A negative feedback loop is self-correcting; a positive feedback loop is self-reinforcing."; "Positive feedback loops are sources of growth, explosion, erosion, and collapse in systems."; "A system with an unchecked positive loop ultimately will destroy itself." https://donellameadows.org/archives/leverage-points-places-to-intervene-in-a-system/ . Checked at source, 13 Nov 2026.

in 1936 by an aerospace engineer, Theodore Paul Wright: each doubling of experience in making something brings the same relative fall in its price. Solar power is the most striking case. Max Roser of Our World in Data set out the evidence in 2020: renewable technologies follow learning curves, "with each doubling of the cumulative installed capacity their price declines by the same fraction." For solar modules, "The learning rate of solar PV modules is 20.2%", and "The price of solar modules declined from $106 to $0.38 per watt", from 1976, the first year in his data. The price of electricity from new solar plants, measured as its levelised cost, fell by 89 per cent in the ten years from 2010 to 2019.[7] The Intergovernmental Panel on Climate Change found the same in its 2022 report: "From 2010 to 2019, there have been sustained decreases in the unit costs of solar energy (85%), wind energy (55%)," and of lithium-ion batteries.[8] These are reinforcing loops of the kind Meadows described: more use brings lower cost, and lower cost brings more use. A team at the University of Oxford that tested past forecasts against what actually happened found that "previous models badly overestimated the future costs of key clean energy technologies versus reality", and that a fast move to clean energy could, on the study's model, "save the world at least $12 trillion" compared with continuing current levels of fossil-fuel use.[9]

Knowledge compounds in the same way. When the economists Erik Brynjolfsson, Danielle Li and Lindsey Raymond studied 5,179 customer-support workers who were given an AI assistant in stages, they found that it raised productivity "by 14% on average, including a 34% improvement for novice and low-skilled workers, with minimal impact on experienced and highly skilled workers."[10] The authors suggest that the tool spread the best practices of the most able workers, passing what they knew to the newest. That is a loop as well: the more people's skill a shared tool captures, the faster the next person learns. Chapter 15 described a related result from Nigeria, where six weeks of after-school tutoring with an AI assistant raised students' English scores.[11] And Chapter 12 described a third loop, in rural Kenya, where cash given to poor households was spent with their neighbours and local firms and raised local economic activity by about two and a half dollars for each dollar given.[12]

These loops are real, they are measured, and UP credits them. They are also the reason UP's agreed positions say that the problem is not progress but the framework it runs in.[13] Inside the current system, the learning curve of clean energy still turns more slowly than the climate requires, as Chapter 2 showed.[14] The AI assistant that helped novices most belonged to a firm that could decide what to do with the gains, and Chapter 14 showed that early

[7] Max Roser, "Why did renewables become so cheap so fast?", Our World in Data (1 December 2020, partly updated 2025): "with each doubling of the cumulative installed capacity their price declines by the same fraction."; "This relationship, that each doubling in experience leads to the same relative decline in prices,"; "was discovered much earlier than Moore's law, by aerospace engineer Theodore Paul Wright in 1936."; "The learning rate of solar PV modules is 20.2%."; "The data point for 1976 in the top left corner of the chart shows the state of solar technology at the time."; "The price of solar modules declined from $106 to $0.38 per watt."; "While solar got 89% cheaper and wind 70%, the price of electricity from coal declined by merely 2%."; the period is "In the ten years from 2010 to 2019". https://ourworldindata.org/cheap-renewables-growth . Checked at source, 13 Nov 2026.

[8] IPCC, *Climate Change 2022: Mitigation of Climate Change*, Working Group III, Summary for Policymakers, statement B.4.1: "From 2010 to 2019, there have been sustained decreases in the unit costs of solar energy (85%), wind energy (55%),"; the same statement gives a decrease of 85% for lithium-ion batteries. https://www.ipcc.ch/report/ar6/wg3/chapter/summary-for-policymakers/ . Checked at source, 13 Nov 2026.

[9] University of Oxford, "Decarbonising the energy system by 2050 could save trillions - Oxford study" (news release, 14 September 2022): "save the world at least $12 trillion,"; "compared to continuing our current levels of fossil fuel use"; "previous models badly overestimated the future costs of key clean energy technologies versus reality."; "published in the journal Joule". https://www.ox.ac.uk/news/2022-09-14-decarbonising-energy-system-2050-could-save-trillions-oxford-study . The study: Rupert Way, Matthew C. Ives, Penny Mealy and J. Doyne Farmer, "Empirically grounded technology forecasts and the energy transition", *Joule* 6(9):2057–2082 (2022), https://doi.org/10.1016/j.joule.2022.08.009 (bibliographic record checked at Crossref). A model result. Checked at source, 13 Nov 2026.

[10] Erik Brynjolfsson, Danielle Li and Lindsey R. Raymond, "Generative AI at Work", NBER Working Paper 31161 (April 2023, revised November 2023), abstract: "Access to the tool increases productivity, as measured by issues resolved per hour, by 14% on average"; "including a 34% improvement for novice and low-skilled workers"; "with minimal impact on experienced and highly skilled workers"; the authors suggest that "the AI model disseminates the best practices of more able workers". https://www.nber.org/papers/w31161 . The study draws on data from "5,179 customer support agents". Published as *The Quarterly Journal of Economics* 140(2):889–942 (2025), https://doi.org/10.1093/qje/qjae044 (record checked at Crossref). Checked at source, 13 Nov 2026.

[11] See Chapter 15, "The strongest objections", and its notes (De Simone and others, World Bank Policy Research Working Paper 11125, 2025, on six weeks of AI-assisted English tutoring in Edo State, Nigeria).

[12] See Chapter 12, "The three gaps", and its notes (Egger, Haushofer, Miguel, Niehaus and Walker, *Econometrica* 2022: a local transfer multiplier of 2.5), checked at source in that chapter.

[13] UP's agreed position that it names a system people already use (F1, CANON, 22 Oct 2026): "UP is not an invention from nothing. Much of it already exists and is used every day by millions of people: co-operatives and employee-owned firms, non-profits, wikis and open-source software, public libraries, Montessori schools, commons that communities manage themselves, and the everyday ways people help one another. Most people want good and happy lives for themselves, for their children and for others. These elements have existed in isolation, and others saw that they could be coordinated: Jacque Fresco, Ward Cunningham with the wiki, Paolo Soleri, Maria Montessori. What was missing was the technology. Inside today's framework, AI and robotics threaten to destroy the labour market and concentrate power in a few hands; inside a new framework they can coordinate the whole system for everyone's benefit. The Venus Project imagined a central brain; AI can now be the pattern-finding and coordinating system it envisioned. The problem is not progress but the framework we run it in: we are outgrowing our old shell. UP names this existing system, connects its parts and gives it the tools to grow. Every pillar begins with where it already works today, what it has achieved, and what has held it back: isolation, lack of tools, and having to compete inside a system built for other goals. A single map sets each pillar beside the practices that already embody it, the sources that describe them, the evidence of how well they work, and what UP adds: connection, coordination and scale." UP's Position Ledger, "F1 · Whole book".

[14] See Chapter 2, "Where the race is being lost" and "Why the race is lost where it is", and the notes there (IMF, fossil-fuel subsidies of $7 trillion in 2022, mostly implicit); and Chapter 5, "Where the current system's decisions are captured", with its notes.

evidence from Denmark found no measurable effect of such tools on workers' earnings.[15] The Kenyan transfers were a one-off, and a one-off can only start a loop. The loops are there, but they turn inside a system whose other parts can stop them.

Why the parts look weak when tested one at a time

That is why the evidence from programmes run inside the current system has to be read with care, and UP's study lessons give the rule. UP grows side by side with the current system, and it should not be compared like for like with programmes run inside it, because those programmes are "funded, cut and steered by it, so their results look mixed and muted."[16] Chapter 1 showed the pattern twice. Porto Alegre's budget assemblies improved the city's water and sewers and were suspended in 2017 by a new administration, with thousands of projects approved years earlier still unbuilt; Canada's Mincome experiment in Dauphin, Manitoba, ended after changes of government, and its data went unstudied for years before an economist found an 8.5 per cent fall in hospitalisations among those it had covered.[17] Each was tested as a single part, on budgets that could be withdrawn, for a limited time, by people who knew it might end. A family does not rebuild its life around an income that may be cancelled after the next election, and a resident does not invest years in assemblies whose decisions a new mayor can set aside.

Peru's laptops show the other half of the rule. A programme run inside the current system is usually one part, because that is how budgets and ministries are organised: one for computers, another for teacher training, a third for electricity, a fourth for the internet. Each is evaluated on its own, against the outcome the whole was meant to produce, and each, alone, disappoints. The fault lies less in the part than in the absence of the others.

UP's agreed positions add a further reason the comparison is not even. The current system often monetises a problem instead of solving it, and sometimes the persistence of a problem is what pays.[18] A programme that would remove a problem can find that the strongest interests around it are the ones that profit from its continuing, as Chapter 2 showed for fossil fuels and Chapter 5 for the capture of government.[14] None of this means that programmes inside the current system prove UP right. It means that their mixed results do not prove UP wrong either, and that the case for UP has to be made the way UP is built: as a whole, with each link shown with its evidence, and with the middle and later stages labelled as the reasoned projections they are.

What UP holds

UP's agreed position on the whole system puts it plainly. UP is a way for people to work with technology to solve problems together, and it does not promise a world without problems. If any part of UP works badly, that is itself a problem: the AI identifies the people it affects and offers it to them as work, to propose, test and compare solutions. Problems are linked in trees that show their common roots, so the work goes to solutions that solve many problems at once. The bigger a problem, the more people it affects and the more attention and effort it draws, so the system works like a marketplace of problems, biggest first, and any area where UP does not yet do better than the current system gets attention first.[4]

The same position names the parts that strengthen one another: education open to everyone and improving quickly; a moneyless system that removes the motive for much of today's crime; automation that supplies basic needs at ever lower cost; health care backed by robotics and AI; and a society that works on its problems every day. It says each link is shown with its evidence, that UP is judged against the current system, not against perfection alone (the third tenet, settled later, adds the ideal as a second standard), that the case for UP names the nirvana fallacy and shows how UP performs if one part arrives late, and that systems built thousands of years ago

[15] See Chapter 14, "How the current system organises work, and where it falls short", and its notes (Humlum and Vestergaard on AI chatbots and Danish workers' earnings and hours).

[16] UP study lesson 13 (UP's study lessons), on judging UP by stage: "UP grows side by side with today's system: early (a minority network inside it), middle (its own productive base; most members' needs met from what UP produces), completed (most people live mainly in UP). Do not compare UP like for like with programmes run inside today's system: those are funded, cut and steered by it, so their results look mixed and muted. Use today's evidence for the early stage; present the middle and completed stages as a reasoned projection from cited mechanisms, labelled as such. The gains come from the combined system (education, AI coordination, open designs, automation, people moving their work and needs into UP), not from any one tenet."

[17] See Chapter 1, "What the current system does to them", and its notes (Porto Alegre: the 75% to 98% water and sewer figure, the suspension in 2017, projects still pending; and Evelyn Forget on Mincome, 1974 to 1979, the 8.5% fall in hospitalisations), each checked at source in that chapter.

[18] UP's agreed positions, Round 12S (AGREED, 28 Oct 2026), position 2: "[WHY] The comparison with the old system is not symmetric. The old system often monetises a problem instead of solving it, and sometimes the problem's persistence is what pays. The consequences of its abuses (personal gain, war, unethical conduct) push people toward UP. UP widens the base of people and AI who can contribute, which speeds invention, frontier science included." UP's Position Ledger, "Round 12S". Positions tagged [HOW] are illustrations of one way UP could run; [WHY] positions are cited case or projection.

have limits we no longer need to accept, so that it is time for another grand experiment. Its purpose is not to settle every detail but to set up the structure through which ideas, solutions and work are coordinated. And it ends with a line worth remembering: UP's starting point will not be great, but it is built to improve much faster than the current system.[4]

Three of UP's tenets stand behind that position. The first, *Self-correction: nothing is final, including this*, says that every failure of UP is fed back into it as a new problem to solve, so it keeps improving without revolution, and that UP is judged against both the current system and the ideal it aims at.[19] The second, *The method*, makes every problem work that anyone may take on, with solutions proposed with their evidence, tested and compared, and the people a problem affects deciding its outcome.[20] The third, *Reality over fiction*, says that decisions rest on real resources, real needs and measured outcomes, and that UP replaces the shared fictions gradually where technology can do their job without obvious downsides.[21] UP's agreed positions add that inventing solutions together is UP's primary activity, and that UP widens the base of people and AI who can contribute, which speeds invention.[22,18]

UP's debate drew all of this into one overall claim, the claim UP's agreed positions make about the whole of Part Three. Chapter 12 quoted it, and it is quoted again here, because this chapter is where each of its clauses has to be shown to hold together with the others:[23]

> The practices UP builds on already work inside a system that underfunds and interrupts them. UP adds what that system lacks: inventing solutions together is its main work, open to anyone, and it widens the base of people and AI who can contribute. As UP grows beside the current system, the people the current system fails move their work and needs into UP; the tools UP uses get cheaper and better the more people use them; and floors are met from UP's own production rather than from budgets that can be cut. The capacity to meet everyone's basic needs already exists; what has been missing is organisation and distribution. On that basis UP has a real chance of sharply reducing most of these failures by its middle stage. Force used by those outside UP shrinks as cities and nations join and convert their weapons and armies into law enforcement, emergency aid and rapid response. What persists is named openly as work: damage already locked into the climate; threats from space, until humanity can leave the solar system; and the human remainder, because UP is not magic and suffering continues while its biggest causes fall. Disagreement over values is not a failure: splits test different ways in the real world. The early stage is the hinge, and history says open systems cross it by being useful to people where they already are.

Its opening sentences describe today. From "As UP grows" on, it is a reasoned projection for the middle stage, labelled as such, and its last sentences name what persists.

[19] UP's core (28 Oct 2026), T3, "Self-correction: nothing is final, including this": "Every failure of UP is fed back into it as a new problem to solve, so it keeps improving without revolution. Every part of UP, these tenets included, can be improved through its own method. UP is judged against both today's system and the ideal it aims at: the ideal shows the direction and the gap still to close, and today's record shows whether UP is already doing better. Downsides, risks and fringe problems are named openly and treated as work, never as reasons to keep a status quo that fails so many."

[20] UP's core (28 Oct 2026), T2, "The method: shared problem solving with evidence": "Everything in UP runs through one method. Problems are named, measured and offered as work to anyone willing to take them on, whether or not they are affected; the people a problem affects decide its outcome. No problem, solution or method belongs to the person who raised it: anyone may update, reframe or improve it. Solutions are proposed with their evidence, tested and compared, and a better idea replaces a worse one. Every claim that guides shared action can be tested and is open to being proved wrong. Work on the roots of problems is worth the most, but a problem can be worked from any angle. Facts are checked, unknowns become shared work, and matters of taste are never made rules for others. Evidence proposes; people decide."

[21] UP's core (28 Oct 2026), T7, "Reality over fiction": "Decisions rest on real resources, real needs and measured outcomes. Shared fictions (money, corporations, governments, borders) made large-scale cooperation possible and served a great purpose. UP keeps a fiction while it serves health, happiness and wellbeing, and replaces it gradually where technology can do its job without obvious downsides."

[22] UP's agreed positions, Round 12S (AGREED, 28 Oct 2026), position 1: "[WHAT] Inventing solutions together is UP's primary activity (T2). The book never describes UP as only spreading what others invented. In UP anyone can try anything that might solve a problem; tools are commons; the result carries the power; unpopular ideas that work rise because of their results, not because a funder chose them." UP's Position Ledger, "Round 12S". Positions tagged [HOW] are illustrations of one way UP could run; [WHY] positions are cited case or projection.

[23] UP's agreed overall claim (round 12c, 28 Oct 2026, option B, "Updated, force answered by conversion"), in full: "The practices UP builds on already work inside a system that underfunds and interrupts them. UP adds what that system lacks: inventing solutions together is its main work, open to anyone, and it widens the base of people and AI who can contribute. As UP grows beside the old system, the people the old system fails move their work and needs into UP; the tools UP uses get cheaper and better the more people use them; and floors are met from UP's own production rather than from budgets that can be cut. The capacity to meet everyone's basic needs already exists; what has been missing is organisation and distribution. On that basis UP has a real chance of sharply reducing most of these failures by its middle stage. Force used by those outside UP shrinks as cities and nations join and convert their weapons and armies into law enforcement, emergency aid and rapid response. What persists is named openly as work: damage already locked into the climate; threats from space, until humanity can leave the solar system; and the human remainder, because UP is not magic and suffering continues while its biggest causes fall. Disagreement over values is not a failure: splits test different ways in the real world. The early stage is the hinge, and history says open systems cross it by being useful to people where they already are." UP's step-3 evidence record, round 12c (28 Oct 2026), "OV"; agreed in UP's Position Ledger, "Round 12c", position 2. Chapter 12 quotes it in the text. Its middle and later clauses are projections.

Read as a whole, the claim is a description of loops. People move in because UP meets their needs; their work makes UP's tools cheaper and better; cheaper, better tools meet more needs; and more people move in. The rest of this chapter takes those loops one at a time, with the evidence for each link.

The loops, one at a time

Learning is where the loops begin. UP's core makes education open to everyone, at every age, so that anyone can gain the skills any work requires.[24] More people learning means more people able to contribute to the work of solving problems, and more contributors means faster invention, which UP's agreed positions name as its primary activity.[22] The tools of learning get better as they are used. The study of customer-support workers showed the mechanism at work in a single firm: an AI assistant built from the practice of the best workers lifted the newest by a third.[10] Open learning makes the same loop public. Every course, answer, explanation and correction added to UP's shared record improves the record for the next learner, and every learner who gains a skill can add to it in turn, as Wikipedia's volunteers have done for years.[25] Chapter 15 set out the stages of this loop and its conditions: people need to be online, and learning has to be designed so that the AI teaches rather than doing the work for the learner.[11]

Tools and energy form the next loop. The learning curves that have made solar power, wind power and batteries so much cheaper are loops of use: the more is made, the cheaper each one gets.[7,8] In the current system, how fast that loop turns depends on what pays. In UP it could be joined to needs instead. As more of UP's members' energy, housing and goods come from UP's own production, a projection for the middle stage, the demand that drives the learning curve could be the demand of people meeting their needs, and the gains from cheaper tools could go to meeting more needs rather than to whoever owns the factory. UP's agreed claim on climate puts the effect in stages: small at first, as members cut their own emissions and prove what works, then large as demand moves out of the current system with its people.[26]

Automation joins the loop through needs. UP's agreed position on abundance says that we have the automation to end most drudgery and the renewable capacity to give every person on Earth a decent life, and that UP guarantees needs, not every want, with what counts as enough set together and rising as capacity grows.[27] Chapter 14 described the five million industrial robots already at work in factories, and Chapter 13 showed that the world's food supply already exceeds 3,000 kilocalories per person per day.[28,29] In the current system, a machine that does a person's job threatens that person's living, because survival depends on a wage. Where needs are met from shared production, as UP projects for its middle stage, and no one's needs depend on their work, a machine that does a job would free a person to do something else.[30] That is why UP's agreed claim on work says that AI and automation serve needs rather than profit as UP produces for its members.[31] The loop is direct: every task automated could lower the cost of meeting a need, and every need met at lower cost would leave more people and more machines free for the next problem.

[24] UP's core (28 Oct 2026), T4, "Open participation: anyone may take part; those affected decide": "Anyone may take part in any problem, and the people it affects decide its outcome. There are no offices to hold: work is shared out, not owned, so no one gathers power by holding a position. Where work needs skill, skill is shown by open, testable standards that anyone can work toward and anyone can propose to change, and education is open to everyone, at every age, so anyone can gain the skills any work requires."

[25] See Chapter 1, "The same pattern, in many places", and the Introduction, on how Wikipedia began and who writes it, with their notes.

[26] UP's agreed staged claim on climate (round 12c, card U12, AGREED 28 Oct 2026): "F1 Climate and planetary limits. Early on, UP members cut their own emissions and prove what works, a small effect on the climate. As UP grows, the effect becomes large: the solutions exist and are already cheaper, UP invents better ones as its main work (your answer, Round 12S), demand moves out of the old system with its people, and leakage shrinks as the share acting grows. Warming already locked in persists at every stage. Local disputes over siting are work for UP's method (12S)." UP's step-3 evidence record, round 12c (28 Oct 2026), card U12; agreed in UP's Position Ledger, "Round 12c", position 1. The middle and later stages are projections.

[27] UP's agreed position on abundance (card 22, CANON, 23 Oct 2026): "We have the automation to end most drudgery and the renewable capacity to give every person on Earth a decent life. UP guarantees needs (food, shelter, health care, education, connection), not every want. What counts as enough is set together and rises as capacity grows. Today's luxury is not the target: the wealthy few drive most of today's damage. UP proves this in the open: every community that runs this way publishes its energy, materials and needs met, so abundance is a measured target shown in practice, not a promise." UP's Position Ledger, "Card 22 · C-P4-04".

[28] See Chapter 14, "How it could run, stage by stage" (its stage table), and its notes (International Federation of Robotics: "a record 5 million units in 2025").

[29] See Chapter 13, "The strongest objections", and its notes (FAO: in 2023 global food supply "crossed the historic milestone of 3 000 kilocalories per capita per day").

[30] UP's agreed position on merit and support (card 13b, CANON, 23 Oct 2026), the sentences used here: "Merit decides who does skilled work; it never decides whose needs are met." and "Work that is important but unwanted is a target for automation." UP's Position Ledger, "Card 13b · C-P1-50".

[31] UP's agreed staged claim on work (round 12c, card U12, AGREED 28 Oct 2026): "F5 Work. Unchanged: early on, UP helps members learn and earn more within the old system. As UP produces for its members' needs, survival stops depending on a job, and AI and automation serve those needs rather than profit. Who does care and unpleasant work, fairly, is open work for the collective." UP's step-3 evidence record, round 12c (28 Oct 2026), card U12; agreed in UP's Position Ledger, "Round 12c", position 1. The middle and later stages are projections.

Needs and crime form another loop, and UP's agreed position on the whole system names it: a moneyless system that removes the motive for much of today's crime.[4] There is strong evidence that losing income can cause crime. When the United States began reviewing whether eighteen-year-olds who had received disability benefits as children should keep them, a change made by the 1996 welfare reform, the economists Manasi Deshpande and Michael Mueller-Smith compared young people just either side of the review rule. Losing the benefit "increases the number of criminal charges by a statistically significant 20% over the next two decades", and the increase "is concentrated in offenses for which income generation is a primary motivation (60% increase)", "especially theft, burglary, fraud/forgery, and prostitution." The cost of the extra policing and prison was so high that it "nearly eliminate[s] the savings to taxpayers from reduced SSI benefits".[32] Chapter 19 set out UP's agreed projection on justice: as needs are met, most crime is expected to be removed, eliminated or dramatically reduced, a reasoned projection for the middle and later stages, and what remains is handled by one layer of trained law enforcement, open and watched by many, with courts that rest on evidence.[33] The loop is that needs met could reduce the crime that need drives; less crime means fewer people lost to prison and more able to contribute; and more contributors meet more needs.

Health is where the other loops meet. UP's agreed claim on health begins beside the current system's hospitals, with community health work and lay counselling, and expects much of the poverty behind ill health to go as floors spread.[34] Chapter 16 showed both ends of the loop: how much of ill health starts in the conditions of people's lives, and what open science and far more people and AI working on each problem could add to medicine.[35] The World Health Organization defines the social determinants of health broadly, as "the conditions in which people are born, grow, live, work and age" together with people's access to power, money and resources, and says they have a powerful influence on health inequities.[36] Every one of those conditions is the subject of another chapter of Part Three. People who are housed, fed, learning and safe fall ill less, and people who are well can learn, work and care for others.

Last comes the society working on its problems every day, which UP's position names last and which joins the rest. In UP, every problem is offered as work, problems are linked in trees that show their common roots, and the biggest problems draw the most effort.[4] Problem trees matter because roots are shared. Chapter 2 told how the removal of lead from petrol, a single change, was estimated by the United Nations Environment Programme to prevent more than a million premature deaths a year.[37] One root, cut, cleared harm that had been spread across millions of separate lives. A society that looks for common roots every day, with its problems on an open record ranked by measured harm, could find more of these; UP's agreed positions give fixed measures with independent checks as one way to rank them.[38] And because every failure of UP is itself fed back as a problem, the loop that finds problems also finds the weak links in the other loops.[19]

Figure 21.1 draws the first five loops as a single circle of links, with daily problem solving at the centre: it reinforces the others by finding common roots, and it balances them by feeding UP's own failures back as work. Table 21.1 gives the evidence for each link and what it does not yet show.

[32] Manasi Deshpande and Michael G. Mueller-Smith, "Does Welfare Prevent Crime? The Criminal Justice Outcomes of Youth Removed From SSI", NBER Working Paper 29800 (February 2022), abstract: "We estimate the effect of losing Supplemental Security Income (SSI) benefits at age 18"; "on criminal justice and employment outcomes over the next two decades."; "at age 18 created by the 1996 welfare reform law."; "We find that SSI removal increases the number of criminal charges by a statistically significant 20% over the next two decades."; "The increase in charges is concentrated in offenses for which income generation is a primary motivation (60% increase)"; "especially theft, burglary, fraud/forgery, and prostitution."; "The costs to taxpayers of enforcement and incarceration from SSI removal are so high that they nearly eliminate the savings to taxpayers from reduced SSI benefits." https://www.nber.org/papers/w29800 . The study uses a regression discontinuity design. Checked at source, 13 Nov 2026.

[33] See Chapter 19, "What UP holds about justice and safety", with its notes on Round 13 (Position Ledger, "Round 13 · Justice and enforcement", positions 1, 3, 4 and 5).

[34] UP's agreed staged claim on health (round 12c, card U12, AGREED 28 Oct 2026): "F6 Health. Early on, UP adds community health work and lay counselling beside the old system's hospitals. As floors spread, much of the poverty behind ill health goes, and UP builds its own clinics and training. New medicines come from UP's own open science and invention, with far more people and AI working on them (12S); they and outbreak response are the hardest parts and remain open work." UP's step-3 evidence record, round 12c (28 Oct 2026), card U12; agreed in UP's Position Ledger, "Round 12c", position 1. The middle and later stages are projections.

[35] See Chapter 16, "What UP holds about health" and "How it could run, stage by stage", with their notes.

[36] World Health Organization, "Social determinants of health" (health topic page, Overview): "Social determinants of health – broadly defined as the conditions in which people are born, grow, live, work and age"; "and people's access to power, money and resources – have a powerful influence on health inequities." https://www.who.int/health-topics/social-determinants-of-health . Checked at source, 13 Nov 2026.

[37] See Chapter 2, "What the current system got right", and its notes (UNEP on the end of leaded petrol and its estimate of more than 1.2 million premature deaths prevented a year, a modelled estimate), checked at source in that chapter.

[38] UP's agreed positions, Round 12S (AGREED, 28 Oct 2026), position 8: "[HOW] Measures: problems are measured with fixed definitions kept over time and ranked by measured harm, not by how loud they feel; every headline measure has an independent check. Sources to find: Levari et al. 2018 (concepts widen as problems become rarer); Bevan & Hood 2006 (targets get gamed)." UP's Position Ledger, "Round 12S". Positions tagged [HOW] are illustrations of one way UP could run; [WHY] positions are cited case or projection.

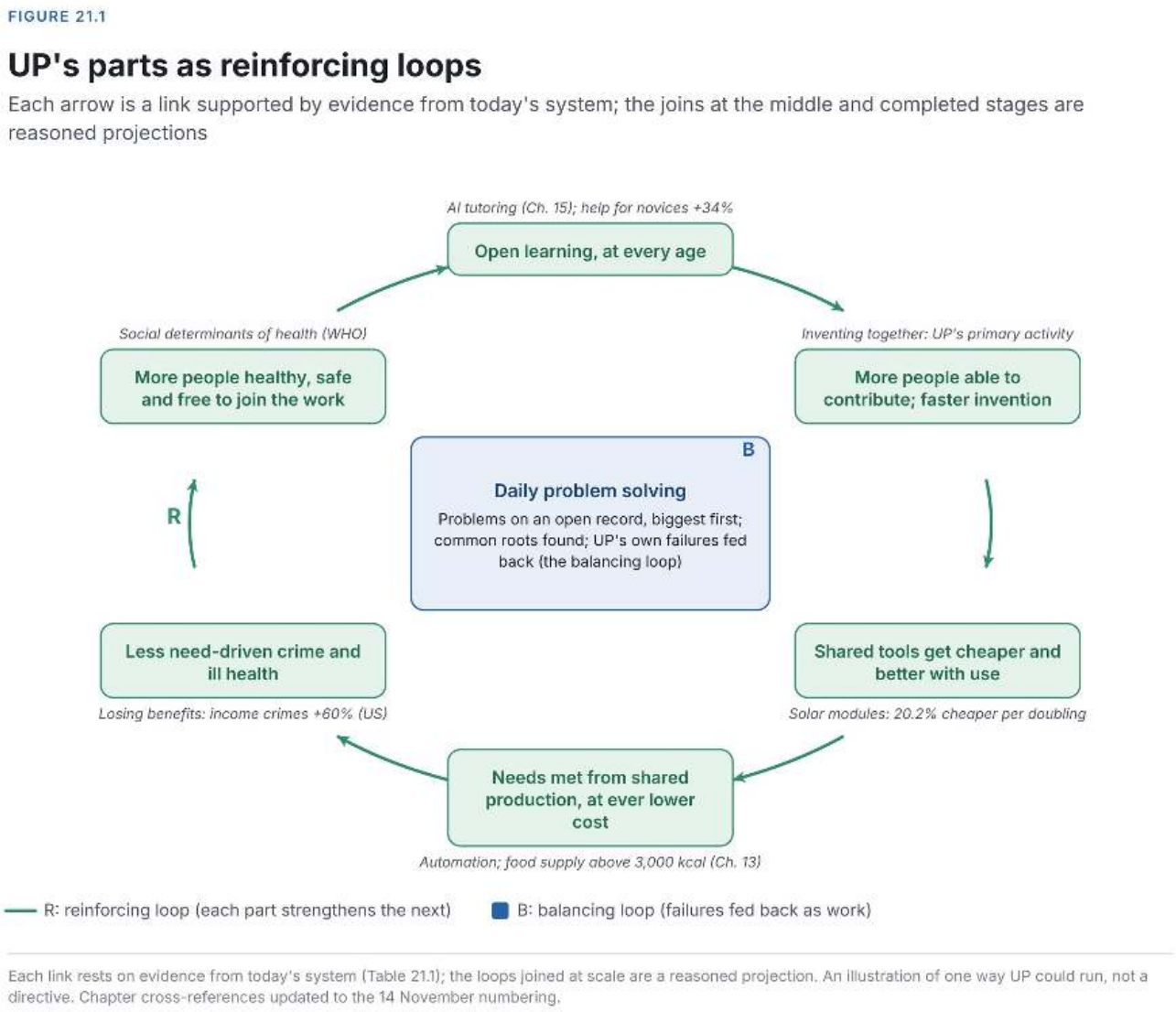


Figure 21.1. UP's parts as reinforcing loops. Each arrow is a link this chapter supports with evidence from the current system; the joins between the loops at the middle and completed stages are reasoned projections. At the centre, daily problem solving works as a balancing loop, feeding UP's own failures back as work. An illustration of one way UP could run, not a directive.

Table 21.1. The loops that join UP's parts, with today's evidence for each link and what that evidence does not show. The middle and completed stages are reasoned projections.[4,16]

Loop	The link	Today's evidence	What the evidence does not show
Learning and invention	More people learning means more contributors; shared tools pass skill to newcomers	AI assistant lifted novice workers by 34% (2023); Wikipedia's volunteers (Chapter 1); AI tutoring in Nigeria (Chapter 15)	That open learning alone raises results without teachers, connection and design (Peru's laptops)
Tools and energy	More use makes tools cheaper; cheaper tools meet more needs	Solar modules' learning rate of 20.2%; unit costs of solar, wind and batteries down 85%, 55% and 85% (2010–2019)	That the gains reach needs rather than owners, outside UP
Automation and needs	Each task automated lowers	Five million industrial robots	That automation reaches care

Loop	The link	Today's evidence	What the evidence does not show
	the cost of a need; people freed for other work	(Chapter 14); food supply above 3,000 kcal per person (Chapter 13)	and the hardest work; who gains, inside the current system
Needs and crime	Needs met remove the motive for much crime; fewer people lost to prison	Losing SSI at 18 raised criminal charges by 20%, income-generating offences by 60% (US)	How far the effect generalises beyond young people losing disability benefits, and to crime not driven by need
Health	Housed, fed, learning and safe people fall ill less; well people contribute more	Social determinants of health (WHO); community health work (Chapter 16)	New medicines and outbreak response, which remain open work
Daily problem solving	Common roots found; one solution clears many problems; UP's own failures fed back	Lead removed from petrol (Chapter 2)	How quickly a whole society can work this way

Closer to reality: the loops and the fictions

The loops have one more consequence, and it reaches into every area of life at once. UP's tenet *Reality over fiction* says that decisions rest on real resources, real needs and measured outcomes, and that UP keeps a shared fiction such as money, the company or government while it serves health, happiness and wellbeing, and replaces it gradually where technology can do its job without obvious downsides.[21] UP's agreed position on useful fictions adds that reality is better wherever technology can replace a fiction without obvious downsides, and that money, government and corporations can be reduced slowly, through ever more powerful coordination and shared problem solving with AI; until a fiction can be retired, it is reduced as far as possible.[39] In the reading UP's author has set out, now going through UP's method, that slow reduction is in people, not in UP: UP's own system never runs on these fictions, and each person relies on them less as UP meets more of their needs, while more people take part.[40] Chapter 8 made that case in full. It showed what running on fictions costs, where the idea of running on reality came from, and seven ways technology could take over the fictions' jobs, from abundance and automation to a new way of using things, coordination that counts real things and a narrow, intense focus on what is truly scarce. In "How the pieces work together" it showed how each of those developments makes the next one easier, and it met the strongest objections, from the calculation problem to Jevons's rebound and the danger that automation concentrates power.[41] This chapter does not repeat that case. It adds what only the whole-system view can show: why the jobs can move at all.

The seven developments of Chapter 8 do not arrive from outside. They are what this chapter's loops produce. Abundance in energy and goods is the loop of tools and energy turning, each doubling of use bringing the next fall in cost.[7] Automation that does the work is the loop of automation and needs, and it serves needs rather than profit only where needs are met from shared production and no one's living depends on the job a machine takes over.[30,31] Open designs, shared knowledge and coordination that counts real things are built and checked by people, and the loop of learning is what makes more of them able to do it: the more people who can contribute, the faster invention goes, and inventing solutions together is UP's primary activity.[24,22] And the narrow, intense focus on what is truly scarce is the marketplace of problems at work, the society working on its problems every day that UP's position on

[39] UP's agreed position on useful fictions (F2, CANON, 22 Oct 2026): "Large-scale human cooperation was built on shared fictions: stories people agree to believe, such as money, government and the company. They were civilisational upgrades and served a great purpose. UP holds that fictions are useful, but that reality is better wherever technology can replace a fiction without obvious downsides. Some fictions will persist because the alternatives would harm health, happiness and wellbeing. Freedom is one, and UP keeps it, along with the protected freedoms and the commons, visible and open to change through the decision steps (#1). Others, money, government and corporations, are ripe to be reduced slowly, through ever more powerful coordination and shared problem solving with AI. A fiction is retired when technology can replace what it does without obvious downsides; until then it is reduced as far as possible." UP's Position Ledger, "F2 · Whole book".

[40] Clarification of the tenet *Reality over fiction*, set out by UP's author on 14 November 2026 and going through UP's method; until the UP Moderator enters it in the Position Ledger, it is the author's stated reading, not yet an agreed position. In substance: the gradual change is in people, not in UP. UP's own system does not run on money, a UP government or UP companies; each person relies on money, governments and corporations less as they use UP more, and the number of people doing so grows. Chapter 8 sets it out in full.

[41] See Chapter 8, "What running on fictions costs", "The idea of running on reality, and why it had to wait", "How the jobs move to reality" (the seven developments, each with its evidence and limits), "How the pieces work together" (Figure 8.2 and Table 8.1), "It has already begun: how a job moves out of a fiction" and "The strongest objections" (the calculation problem, abundance and Jevons's rebound, automation and power), with their notes.

the whole system names last, where the biggest problems draw the most effort and common roots are found.[4] Each loop, as it turns, takes a job away from a fiction. A need met from shared production is one less thing that has to be rationed by price; a person kept from need-driven crime and kept well is one less load on the government's job of keeping the peace and on budgets for prisons and hospitals; a shared design is one less thing a company has to own.

The influence also runs the other way, and this is where the whole system matters most. Lesson 13 explained why programmes run inside the current system look mixed and muted: they are funded, cut and steered by it.[16] The cause is that they depend on the fictions for their existence. Porto Alegre's assemblies depended on a city budget, and Mincome on a provincial one, and when the people who held those budgets changed, the work stopped.[17] Every job that moves out of a fiction is a part of UP that no longer depends on a budget someone else controls. UP's overall claim says that, as UP grows, floors are met from UP's own production rather than from budgets that can be cut.[23] That is the loops protecting themselves. The more of a community's food, energy, learning and care comes from what its members produce and share, the less any of it can be switched off by a change of government or the closing of a market, and the faster the loops can turn. Inside UP, money buys no say from the start, so the jobs that stay with money in the early stage carry no power over the jobs that have left it.[42]

The whole-system view also explains the order of events that Chapter 8 insists on. A fiction is replaced before it is retired, and kept wherever the replacement is not yet ready.[39,41] In loop terms, a job can leave a fiction only when the loop that takes it over is turning well enough to carry it. If the loop of automation and needs is slow, money keeps doing the job of getting work done; if coordination that counts real things has not yet passed its tests for complex production, prices keep doing that job, as UP's agreed position on prices says, rung by rung.[43] The slow case, in the next section, is therefore also the case for how fast the fictions can recede: no faster than the loops that replace them, and never by decree. And power does not leave with money. UP's agreed position on concentrations of power warns that the pursuit of power can move to access, office, information or expertise, so every loop that takes over a job is watched for concentrated power like everything else.[44,45]

The slow case, part by part

UP's agreed position on the whole system requires the case for UP to show how UP performs if one part arrives late.[4] The question is fair, because Peru's laptops are a reminder of what happens when a link is missing. Table 21.2 takes each part in turn and asks what still works if it is slow.

Table 21.2. The slow case: what still works if one part of UP arrives late. The middle and completed stages are reasoned projections. The last column draws on UP's core and agreed positions on open participation and open standards, the work nobody wants, technology that serves while people decide, the three gaps, the staged claim on health, and the study lesson on growth.[4,16,46]

[42] UP's agreed staged claim on inequality (round 12c, card U12, AGREED 28 Oct 2026): "F3 Inequality and concentrated wealth. UP does not need to reduce the wealth of the very rich to succeed; its measure is the wellbeing of each person, and the bottom half of the world, who hold 2% of its wealth, have the most to gain. Inside UP money buys no say from the start, and as needs are met from shared production, wealth matters less to people's lives. Informal power inside UP is watched by everyone and answered as work, through open checks (12S)." UP's step-3 evidence record, round 12c (28 Oct 2026), card U12; agreed in UP's Position Ledger, "Round 12c", position 1.

[43] UP's agreed positions, Round 12S (AGREED, 28 Oct 2026), position 7: "[HOW] Prices are settled: massive abundance plus a new norm of owning (libraries, personal fabrication, recyclable goods, the big wants as beautiful community spaces with reservations, personal space growing with capacity, unlimited virtual worlds). Price's jobs are replaced: rationing by rotation and reservation (points 2, 14); what people want by direct use data (under UP's data rule); costs by physical accounting (21); local knowledge by decisions at the smallest scale (M2). Whether this coordinates the most complex production as well as markets do is testable workload, run rung by rung." UP's Position Ledger, "Round 12S". Positions tagged [HOW] are illustrations of one way UP could run; [WHY] positions are cited case or projection.

[44] UP's agreed position on concentration of power (card 26, CANON, 23 Oct 2026): "Money is one form of power; any concentration of power is dangerous. Abolishing money does not abolish the pursuit of power: it can move to access, office, information or expertise, and chasing each form one by one becomes whack-a-mole. So UP watches for concentrations of power in any form and keeps spreading them out. The threat is never declared gone. Design helps: caps, public records of who approved what, rotation of anyone who allocates, random audits, public and versioned allocation rules." UP's Position Ledger, "Card 26 · C-P3-04".

[45] UP's core (28 Oct 2026), T9, "Technology serves; people decide": "AI and automation coordinate, propose and do work. They never govern: people can always correct, pause or switch them off. No single AI system or operator controls coordination: the AI systems UP uses are open, more than one, checked against each other, and watched for concentrated power like everything else. Because an AI may one day be shown to have experiences of its own, UP studies the question carefully and would extend its aim to any being shown to feel."

[46] Table 21.2 draws on: the tenet *Open participation* (education at every age; open, testable standards), UP's core (28 Oct 2026), T4; UP's agreed positions on the work nobody wants (card 23) and on sharing necessary work (card 23b), UP's Position Ledger; the tenet *Technology serves; people decide* (T9) and the danger adopted alongside the core, "working fallbacks without the AI"; the three gaps (round 12c, card U12, "Paying for floors"); the staged claim on health (round 12c, card F6); and study lesson 19 on growth (UP's study lessons).

If this part is slow	What still works	What is lost or delayed	What UP does about it
Open education and AI tutoring	Today's schools, libraries and open courses; learning by doing in UP's own work	Fewer people able to take on skilled work; slower invention	The gap is posted as a problem; mentoring and open standards let anyone work toward any skill
Automation of basic needs	Needs met by shared human work, rotas and co-operatives, as today's co-operatives and mutual aid already do	Needs met at higher human cost; less time freed	Unwanted work is posted, shared by fair rotas and targeted for automation
AI coordination	Coordination by open records, local decisions and the decision steps; working fallbacks without the AI	Slower matching of supply to need; more waste	Fallbacks practised; AI used where it helps, and people can always correct, pause or switch it off
Needs met from UP's own production	Members' needs met partly by the current system; money used early to buy and convert more	Floors depend on outside income for longer; the needs–crime loop turns more slowly	The gap in paying for floors shrinks with each stage, faster as members convert what they own
Health care backed by robotics and AI	Community health work and lay counselling beside the current system's hospitals	New medicines and outbreak response stay the hardest parts	Far more people and AI working on each problem, in open science
Many people joining	A small network still meets part of its members' needs and proves what works	The loops turn slowly; force from outside matters more for longer	Growth is natural, fast or slow; what matters is keeping the quality of the core as UP grows

The table shows something the loops alone do not. UP does not need every part to arrive at once, because each part has a working fallback inside the current system or inside UP's own practice. Education can start in today's libraries, needs can be met by human work before machines, coordination can run on open records before AI, and a small network can prove its worth before a large one. What a slow part mostly costs is speed. In the early stage it can also cost members, because people stay only where something is useful to them now, which is why UP's overall claim calls the early stage the hinge, and why UP grows by being useful where people already are.[23,47] That is part of the meaning of the line in UP's agreed position that its starting point will not be great: the parts arrive at different times, and the loops turn slowly at first. It is also why the same position says that any area where UP does not yet do better than the current system gets attention first.[4] A slow part is not a reason to stop. It is the biggest problem on the board, and in UP's marketplace of problems it draws the most effort.

Judged against the current system and against the ideal

How should a reader judge a system whose parts compound, when most of them are still to be built? UP's core gives two standards at once. UP is judged against both the current system and the ideal it aims at: the ideal shows the direction and the gap still to close, and today's record shows whether UP is already doing better.[19] Judging against the ideal alone is the mistake Chapter 2 named, the nirvana fallacy: every real system falls short of perfection, so a new idea judged only against perfection always loses.[48] Judging against the current system alone would be a mistake of the opposite kind, because it would excuse UP wherever it merely matched what exists. The six loops in this chapter are meant to be judged both ways. Against the current system, each link rests on evidence that the mechanism already works somewhere. Against the ideal, each link shows how much is still to be done, and Table 21.1's last column says where the evidence stops.

The comparison has to be made by stage. UP's study lessons describe three: early, when UP is a minority network inside the current system; middle, when it has its own productive base and most members' needs are met from what UP produces; and completed, when most people live mainly in UP. Today's evidence speaks to the early

[47] UP's core (28 Oct 2026), T10, "Freely joined, ethically grown": "UP is never imposed. No one is forced to join, to work or to give up what is theirs. It grows by being useful, building on what people already do, and it acts only by ethical means. A means is ethical when it serves the health, happiness and wellbeing of all and crosses none of the floors; UP never starts harm against anyone. What counts as ethical is defined and refined by the collective through UP's method."

[48] See Chapter 2, "What the current system got right", and its notes on the agreed position on judging UP as a whole system, which names the nirvana fallacy.

stage. The middle and completed stages are reasoned projections from cited mechanisms, and the gains they describe come from the combined system, not from any one part.[16] That last point is the reason this chapter exists. A programme that tests one part inside the current system can tell UP how well that part works in isolation. It cannot tell UP what the parts do together, because no one has yet put them together.

UP's agreed position on the whole system is candid about where that leaves it. Systems built thousands of years ago have limits we no longer need to accept, and it is time for another grand experiment. Its starting point will not be great; it is built to improve much faster than the current system.[4] UP's agreed position on its own framing gives the reason it can make that claim without calling itself final. UP is a self-improving paradigm: earlier upgrades of civilisation needed revolutions, upheaval and submission, while UP asks only that people solve problems together, and because every problem with UP is fed back into it as work, it keeps upgrading itself without revolution or violence.[49] A system built to find its own weak links is a system whose parts can arrive late, because finding the late part and working on it is what the system does.

UP at work: one root, followed through the loops

A list of loops does not show them turning, so it helps to follow one problem through UP's parts from start to finish. Take a problem that could reach the town's problem board from several directions at once: some members' homes are cold and damp in winter. The walk-through below is one way UP could run, built from its tenets and agreed positions; it is not a procedure UP has adopted. Its point is to show where each part hands the work on to the next.

The problem is named, and its root is traced. Anyone may post it, and the people it affects decide its outcome.[24] UP's agreed position on the whole system links problems in trees that show their common roots.[4] Posted one at a time, the cold rooms, the children's coughs, the heating bills and the days missed at school would look like four problems. Traced down the tree, they could turn out to share one root: walls and roofs that let the heat out. Problems are measured with fixed definitions and ranked by measured harm, with an independent check, so the root is ranked by what it does, not by how loudly anyone complains.[38]

The problem is offered as work, and the learning loop starts. Anyone may take part in any problem. Where the work needs skill, as insulating a roof does, the skill is shown by an open, testable standard, and the training to meet it is open to everyone, at every age.[24] Every guide, answer and correction the first crew adds to the shared record makes the record better for the next crew, as Wikipedia's volunteers have done for years.[25]

Tools and energy join in. The crew builds from open designs, and the cost of the work is counted in energy and materials, inside the planet's hard limits, with the choices between different needs made openly by the people affected.[50] Heat that stays in is energy no one has to make, the kind of cut that UP's agreed claim on climate expects members to make and prove first.[26]

Needs are met, and health follows. The World Health Organization counts the conditions in which people live among the social determinants of health.[36] A warm, dry home is one of those conditions, and UP's agreed claim on health expects much of the poverty behind ill health to go as floors spread.[34] A child who misses fewer days of school learns more, and a parent who is not choosing between heat and food has more to give to the next problem. That is where the loop closes: more people well and learning means more people able to contribute.

When it goes wrong, the failure becomes work. If the insulation traps damp, or the crew's standard proves too weak, the failure is fed back into UP as a new problem to solve, in the open.[19] The loop that finds problems also finds the weak link in the others.

Set beside Peru's laptops, the difference is in what arrives together. Peru delivered one part, the machine, without the teachers' skills or the use that would have made it count. In this walk-through no part is delivered alone: the problem, the learning, the tools, the counting of energy and materials and the people affected arrive as one piece

[49] UP's agreed position on its framing (F3, CANON, 22 Oct 2026): "UP is a self-improving paradigm. Earlier upgrades of civilisation needed revolutions, upheaval, mass adoption and submission. UP asks only that people solve problems together, and because every problem with UP is fed back into it as work, it keeps upgrading itself without revolution or violence. That is why it is hard to imagine a system that would replace it: not because it is final or perfect, but because it keeps changing itself." UP's Position Ledger, "F3 · Title and framing".

[50] UP's agreed position on physical accounting (card 21, CANON, 23 Oct 2026): "Physical accounting (energy budgets, carbon caps, water footprints, materials and life-cycle assessment) sets the planet's hard limits. Inside them, several measures are used together, and choices between different needs, such as a clinic or a cultural centre, are made openly by the people affected, through the decision steps (#1), never by an efficiency score." UP's Position Ledger, "Card 21 · C-P4-02".

of work, and each hands something to the next. Each step is modest. Whether the handing on works, town by town, is what the stages below set out, and it has to be shown.

How it could run, stage by stage

Stages are easier to see in a single life, so this chapter returns to the household that Chapter 1 introduced and Part Three has followed: a care worker, her teenage son and his grandfather, in a mid-sized town. Earlier chapters followed one part of their lives at a time. Here the same household is seen on one ordinary day at each stage, so that the parts can be seen working together. As before, this is an illustration of one way UP could run, and never evidence.

> *Illustration: one way it could run. The early stage.* The care worker leaves at six for a paid shift at the care home, as she always has, and her wage still pays the rent. Her son spends the afternoon at the town's repair table, where the retired electrician who mentors him checks his wiring, and the evening on an open electronics course with a tutor-style AI that asks him what he thinks before it says anything. On the way home he collects a drill from the tool library for the weekend crew that is building a neighbour's kitchen cupboards from the same open design they used for his grandfather's; the grandfather, who drove buses for thirty years, will cook for them, as he did before. A community health worker trained by UP volunteers checks the grandfather's blood sugar at home. In the evening the son opens the town's problem board, where one of the problems ranked highest this week is that the bus to the clinic leaves before the early shift ends, and he adds a timetable he has worked out. Most of what the household needs still comes from wages, shops and bills. What has changed is that each of the three has somewhere to put what they can do.
>
> *Illustration: one way it could run. The middle stage, a projection.* The household's food and shelter now come from what the town's UP community produces. The care worker still does care work, because she is good at it, but her night shifts are on a published rota shared among everyone who has signed up, she takes two a month, and she is training to be a nurse with a mentor from the town's clinic; a lifting aid built from an open design takes the strain of the heaviest work. The hours she gives are on the open record as contribution, which never decides what she receives. Her son has passed the open standard for basic electrical work, mentors two younger learners, and spends his mornings with the energy group on the problem of when the town uses its solar power. The UP clinic sees his grandfather every month, the community kitchen cooks for people with diabetes, and his health data stays his own. In the afternoons the grandfather writes down the town's history, with a younger neighbour who is learning to edit. On the problem board the most wanted thing in town is still the community kitchen on Friday nights; a second kitchen is half built, and the reservations rotate in the meantime. The family uses money for a few things bought from outside, and less each year.
>
> *Illustration: one way it could run. The completed stage, a projection.* Most of what the household needs is met from shared production, in the open, and money has become something the town keeps mainly for dealings with places that have not joined. Machines do most of the lifting in care, and the care worker, now a nurse, spends three mornings a week training others and the rest of her time on a garden she has wanted for twenty years. Her son, grown and raising a child of his own, works on a model of how towns use power that is now used, with improvements by people he has never met, by UP towns on three continents; nobody owns it, and the record of who improved it is public. The rare thing the family wants is a week at the lake, and the lake cabins are shared by reservation and rotation, decided by the people affected, while a design group works on how more people could enjoy the lake without harming it. The grandfather, who left school at fourteen, reads the history he wrote to children who ask him to. Problems remain, and the board still shows the biggest first. But the household's day is shaped by what each of them can do and wants to do, and much less by what anyone can pay.

Table 21.3 sets out the stages, and Table 21.4 sums up the benefits by stage and how each would be shown.

Table 21.3. The whole system, stage by stage. The middle and completed stages are reasoned projections. Illustrations of one way UP could run, not directives.[16,23]

Stage	What changes	Real precedent	Why it could work	What persists
Early	Members meet part of their needs together;	The graduation approach's combined	Each part already works somewhere	Most needs still met through wages and

Stage	What changes	Real precedent	Why it could work	What persists
	open learning, tool libraries and repair; a public problem board; AI used to propose, from several open models; money used early to buy and convert more	parts in six countries; libraries of things; AI help for novices; Kenya's local multiplier	inside the current system; the loops start small	prices; floors depend partly on outside income; one part may arrive late
Middle (projection)	Most members' needs met from UP's own production; automation serving needs; health work and clinics; shared standards; physical accounting in place of price for counting costs, with choices made openly by the people affected	Learning curves in solar, wind and batteries; standards such as the EU's common charger; data-centre and wind-farm AI	The loops join: more members, cheaper tools, more needs met, fewer lost to need-driven crime, more contributors	Force from outside UP, shrinking as cities and nations join; complex production as testable workload; power moving to new forms
Completed (projection)	Most people live mainly in UP; the fictions reduced as far as technology allows; the truly rare shared openly while invention works to make more	Chapter 8's evidence that technology can take over the fictions' jobs: abundance from aluminium to fertiliser and solar power, shared use, open designs	A reasoned projection from the mechanisms above	Damage locked into the climate; threats from space; the human remainder; disagreement over values, tested by splits

Table 21.4. Expected benefits of the whole system, by stage. The early stage rests on today's evidence; the middle and completed stages are projections, drawn from UP's agreed overall claim and its staged claims.[16,23]

Stage	For members	For people outside UP	For the living world	How it would be shown
Early	Several parts at once rather than one: learning, tools, repair and a problem board, with somewhere to put what each person can do	Nothing taken: joining is free, and the problem board and its record are open to read	Members cut their own emissions and prove what works, a small effect at first	Problems solved and their results published, link by link, against the evidence in Table 21.1
Middle (projection)	Most needs met from UP's own production; machines that free people rather than threaten their living; less need-driven crime; health work beside learning and housing	Each part that works is on an open record anyone can check and copy	Costs counted in energy and materials inside hard limits; demand moving out of the current system with its people	The loops measured joining: more members, cheaper tools, more needs met, more contributors
Completed (projection)	A day shaped by what each person can and wants to do, much less by what anyone can pay	Most people live mainly in UP, and no one is forced to	Production aimed at needs, inside the planet's limits	Measured against today's record and against the ideal, with every failure fed back as work

Sources: notes to this section.[26,31,34,50]

The strongest doubts

The first doubt is the one the reader's question asks: one weak link breaks the whole. Peru's laptops are evidence for it: a programme that depended on teachers, connections and power it did not supply delivered most of its machines and little of its purpose.[3] If UP's loops each need every other loop, the failure of one would bring down the rest. The answer is the slow case. UP's parts are loops, not a chain, and each has a working fallback, inside the

current system or inside UP's own practice, that does the job more slowly.[4] What a missing part costs UP is speed. What it cost Peru was most of what the programme had been bought for, because the missing parts sat in other budgets, and knowing they were missing, as its officials did, was not enough to supply them. In UP, noticing the weakest part is the work: any area where UP does not yet do better than the current system gets attention first, and every failure is fed back as a problem to solve.[4,19] What persists is that a slow part slows everything that depends on it, and that some parts, among them the most complex production and new medicines, are the hardest and remain open work.[43,34]

The second doubt is that loops run both ways. Meadows warned that "A system with an unchecked positive loop ultimately will destroy itself."[6] If UP's loops can compound gains, they can compound losses: fewer contributors, fewer needs met, more people leaving, fewer contributors still. The evidence supports the worry, and poverty traps, where they occur, show how it works. UP's answer is in the word "unchecked". The floors are never crossed, so needs are not traded away to keep a loop turning.[51] Physical accounting sets hard limits that no loop of growth may break.[50] And the method itself is a balancing loop, Meadows's other kind: every failure is fed back, measured and worked on, so a loop turning the wrong way is a problem on the board, not a hidden drift.[19] What persists is that balancing loops act with a delay, and a fast-falling loop can do damage before it is corrected. That is one more reason UP's agreed positions give, as one way to do it, measures with fixed definitions and an independent check on every headline measure.[38]

The third doubt is that promises of a whole new system have ended badly, and that a chapter about how everything fits together is exactly what the planners of the last century wrote. The evidence is heavy. Chapter 3 recalled the famines of forced collectivisation and the Great Leap Forward, and the economist János Kornai's finding that the classical planned economies "permanently reproduce shortage".[52] Chapter 3 took that history seriously, and UP's answer to it is structural. UP is not a design imposed on a society; it is a way of solving problems that grows from what already works, freely joined, with no one forced to join, to work or to give up what is theirs.[47] Its agreed position on the whole system says that its purpose is not to settle every detail but to set up the structure through which ideas, solutions and work are coordinated.[4] And it does not need a single plan to be right, because splits are welcome: they test two or a thousand ways in the real world.[53] What persists is that any system can be captured by people who claim to speak for the whole, which is why the next doubt matters.

The fourth doubt is that a system whose parts are coordinated will be coordinated by someone, and that someone will gather power. The evidence is in front of us. Chapter 11 showed that industry now accounts for more than nine in ten notable AI models, and that researchers writing in *Nature* found that openness alone has not reduced the concentration of power in AI.[54] UP's agreed position on concentrations of power accepts the premise: abolishing money does not abolish the pursuit of power, which can move to access, office, information or expertise.[44] Its core answers with structure. Concentration of power in any form is treated as a standing danger, everyone in UP watches for it and spreads it out again, and the threat is never declared gone.[55] No single AI system or operator controls coordination; the AI systems are open, more than one, checked against each other, and watched for concentrated power like everything else.[45] Every rule, record, decision and reason is public, so anyone can check

[51] UP's core (28 Oct 2026), T6, "Floors that are never crossed": "UP keeps a set of floors that no decision may cross: everyone's basic needs and protected freedoms, which no gain for others can buy; the living world's capacity to recover, so damage that cannot be undone is never traded for a short-term need; the right to leave any group or community at any time, taking what is theirs; a truthful shared record, so facts, measures and decisions are never falsified; freedom of the mind, so no one's thinking is manipulated without their knowledge or consent; and a fair hearing, so no one's freedom is restricted without a fair, evidence-based hearing, with the evidence open to them and a way to appeal. UP guarantees needs, not every want. The collective defines and refines the floors through UP's method; it may clarify or raise them, but no decision may lower them or push anyone below them. As a starting example for the collective to refine: needs such as food, water, shelter, health care, education and connection; freedoms such as thought, belief, speech, movement and privacy. A protected freedom such as movement may be restricted only to protect others or the person, only through an evidence-based court process, for the shortest time needed, and never below the needs floor. The hearing comes first, except briefly, to stop harm in progress, with a hearing promptly after. Leaving a group or community does not end a restriction set by a fair hearing. These limits are an open problem: they are the best that can be imagined now, and UP is built to find better and better solutions. Above the floors, everything is open to the method."

[52] See Chapter 3, "Needs met by command", and its notes, among them Britannica on the Great Leap Forward famine, and János Kornai, "Resource-Constrained versus Demand-Constrained Systems", *Econometrica* 47(4), 1979: "Certain properties of the economic mechanism permanently reproduce shortage."; checked at source in that chapter.

[53] UP's agreed positions, Round 12S (AGREED, 28 Oct 2026), position 10: "[WHAT] Splits are good: they test two or a thousand ways in the real world. Attention: people focus on what affects them most, which is fine." UP's Position Ledger, "Round 12S". Positions tagged [HOW] are illustrations of one way UP could run; [WHY] positions are cited case or projection.

[54] See Chapter 11, "Where power is gathering", and its notes (Stanford HAI, *AI Index* 2025 and 2026, on industry's share of notable AI models, and Widder, Whittaker and West, *Nature* 635, 2024: "openness alone does not perturb the concentration of power in AI"), checked at source in that chapter.

[55] UP's core (28 Oct 2026), T5, "Power kept spread out": "Concentration of power, in any form (wealth, position, information, access, expertise or machines), is treated as a standing danger. People tend to gather power and to hand it to whoever seems accomplished, and history shows few good endings. Everyone in UP watches for concentrations of power and spreads them out again. The threat is never declared gone; it is watched and answered."

it.[56] What persists is the danger itself. UP names it as a standing threat, to be watched and answered for as long as UP exists.

The last doubt is that the whole case is too good to be true. A reader who has followed Part Three may suspect that every loop has been drawn turning the right way, and planners of large undertakings have been wrong in that direction before: the planning scholar Bent Flyvbjerg calls the record of the world's largest projects an "iron law" of "Over budget, over time, over and over again."[57] UP's own positions supply the correction. UP is not magic, and suffering continues while its biggest causes fall.[58] The overall claim names what persists: damage already locked into the climate, threats from space, the human remainder.[23] The middle and completed stages are projections, labelled as such, and the gains they describe are expected from the combined system, which has not yet been built.[16] What UP claims is a real chance, resting on mechanisms that already work separately, and a structure built to find out quickly where it is wrong. That is less than a promise, and more than any single programme inside the current system can offer.

Does the whole hold together?

Peru's laptops did not fail because laptops are useless. They failed because a computer is one part of learning, and the other parts, a teacher who knows how to use it, a connection, power, and a reason for a child to open it, were someone else's problem. The researchers who studied them said so: mere technology is not enough to spur change.[1] UP is built on the same lesson. Its parts are designed to be put together, so that open learning feeds invention, invention makes tools cheaper, cheaper tools meet more needs, needs met reduce the crime and ill health that need drives, and more people, healthier and safer, join the work. Taken together, the same parts let UP run closer to reality: counting what is real, coordinating with machines that propose, making plenty of what can be plentiful, wasting less, sharing more, and turning its focus to the few things that are truly rare, so that the fictions of money, companies and governments are needed less and less, each retired where technology can do its job without obvious downsides and, until then, reduced as far as possible.

The reader's question can now be answered. Even if each piece works, does the whole hold together? UP's answer is that the pieces work better together than apart, that each piece has a fallback if it arrives late, and that the system is built to find its own weak links and work on them first. That is a claim to be tested, stage by stage, against the current system and against the ideal, and UP's own positions say its starting point will not be great.[4] What remains is the question of who will do the testing, and when. Chapter 22 turns to it, beginning with the question every reader asks of a new idea sooner or later: is this for people like me, and who decides?

Chapter card: Chapter 21

- **Claim:** UP's parts are built to strengthen one another, and it is built to improve faster than the current system. Open learning feeds invention; shared tools get cheaper with use; automation lowers the cost of meeting needs; a moneyless system that meets needs removes the motive for much of today's crime, and floors met take away much of the poverty behind ill health; and a society working on its problems every day finds common roots and UP's own weak links. Together, the parts could let UP run closer to reality and need the fictions of money, companies and governments less and less, retiring each where technology can do its job without obvious downsides and, until then, reducing it as far as possible.
- **Core lines:** the tenets *Self-correction: nothing is final, including this*; *The method*; *Reality over fiction*; *Technology serves; people decide*; *Power kept spread out*; *Freely joined, ethically grown*. Agreed positions: the whole system (the marketplace of problems, problem trees, the compounding parts, the slow case, another grand experiment); the overall claim; judging UP by stage; useful fictions; a self-improving paradigm; abundance shown in the open; concentration of power; inventing solutions together; the comparison with the current system is not symmetric; workload is not a danger;

[56] UP's core (28 Oct 2026), T8, "Open systems, shared knowledge, private persons": "The rules, code, records, decisions and reasons of UP are public, so anyone can check them. UP's technology (the knowledge, code, data and designs UP produces) stays only in UP: everyone taking part in UP may use, study and improve it, and no one may enclose it. Each person controls their own information and chooses what to share. Openness helps people find problems, but it will not find all of them, so UP also names the risks that openness alone cannot catch and keeps working on them."

[57] Bent Flyvbjerg, "What You Should Know About Megaprojects, and Why: An Overview", *Project Management Journal* (2014), DOI 10.1002/pmj.21409; preprint arXiv:1409.0003, abstract: "Over budget, over time, over and over again." https://arxiv.org/abs/1409.0003 . Checked at source, 13 Nov 2026.

[58] UP's agreed positions, Round 12S (AGREED, 28 Oct 2026), position 15: "[WHAT] Workload is not a danger. A problem counts as an issue for UP only if it can't be fed back into the loop with a good chance of beating the old system, if the old system has a far better solution, or if it is endemic to UP. Informal power and the loop checking itself are workload: open-source checks and open sensor data. 'UP is not magic': suffering continues while its biggest causes fall." UP's Position Ledger, "Round 12S". Positions tagged [HOW] are illustrations of one way UP could run; [WHY] positions are cited case or projection.

and, as an illustration of one way UP could run, the jobs of price done by other tools. Chapter 8 carries the full case on the fictions.

- **Rule of thumb:** Ask of any proposal: Which other parts does it need, and which does it feed? What still works if it arrives late? Does it bring the decision closer to real resources and real needs?
- **What this is not:** a claim that UP's loops have already been shown to work together, that every part will arrive on time, or that the fictions will be torn down. It is not Fresco's resource-based economy run by machines, and it is not a promise of a world without problems.
- **Check yourself:**
    1. Why did Peru's laptops fail to raise test scores, and what does that show about judging one part of a system on its own?
    2. Name three of UP's reinforcing loops and one piece of today's evidence for a link in each.
    3. Why do programmes run inside the current system tend to look "mixed and muted"?
    4. How do this chapter's loops produce the developments that Chapter 8 says could take over the fictions' jobs? Give one example.
    5. Why does every job that moves out of a fiction make UP's loops harder to cut?
    6. Pick one part of UP and say what still works if it arrives late.
- **Open questions (for the wiki):** How should UP measure whether its loops are turning, and how quickly? Which part, if slow, would cost the most, and how should UP find out early? Where are the first places to test physical accounting and use data in place of price for complex production? How can efficiency gains be kept from turning into more consumption rather than more needs met? (Improve this page.)

Chapter 22. Who: Everyone, and Those Affected Decide

Olivier Bancoult was born on 15 February 1964 on Île du Coin, one of the small islands of Peros Banhos in the Chagos Archipelago, in the middle of the Indian Ocean.[1] He was four when he was brought to Mauritius with his mother, Rita.[2] He was not the only one. Fewer than a thousand people, by Lord Hoffmann's account, lived settled lives on the three inhabited islands of the archipelago, and between 1968 and 1971 the British government secured the removal of the population of Diego Garcia, the largest island, mostly to Mauritius and the Seychelles. The last islanders on Peros Banhos and the Salomon Islands were evacuated by the middle of 1973. No force was used, a judge of the House of Lords later recorded, "but the islanders were told that the company was closing down its activities" and that unless they accepted transportation elsewhere, "they would be left without supplies."[3] Britain had agreed to make the territory available to the United States for defence purposes "for an indefinitely long period of at least 50 years", and to the establishment of a base on Diego Garcia. The judge also recorded that the government had refused to acknowledge that there was any indigenous population at all, and that the removal and resettlement of the Chagossians "was accomplished with a callous disregard of their interests."[3]

What happened next is told in the same judgment in a few dry lines. When the Chagossians arrived in Mauritius, they found a country with high unemployment "and considerable poverty", and "For the most part, the community was left to fend for itself in the slums of Port Louis."[3] Bancoult's family was poor. His mother worked long hours as a cleaner, and his sister Noellie died young in Mauritius. Years later he put the whole of it in one sentence: "We lost our paradise and landed in hell." He recalled the work he found: "I cleaned toilets and windows."[1] In 1983 he co-founded the Chagos Refugees Group to organise his scattered people, and he has led its case ever since, including through the British courts.[1,2,3] In November 2000 he won. The Divisional Court quashed the section of the territory's 1971 Immigration Ordinance under which no one could enter or be present without a permit, "as ultra vires", and the Foreign Secretary said he would accept the ruling. In 2004 the government made a new constitution for the territory, which declared that "no person has the right of abode in the Territory", and in 2008 the House of Lords decided against the islanders, which a reporter in Port Louis described as "finally blocking this route home for the displaced people."[2,3] In 2019 the International Court of Justice advised that the separation of the archipelago from the colony of Mauritius in 1965 "was not based on the free and genuine expression of the will of the people concerned", meaning the people of the colony, and that the United Kingdom was under an obligation to end its administration of the islands "as rapidly as possible."[4]

[1] Sharmeem A. Osman, "Olivier Bancoult. A Cry for Freedom. The Story of Chagos", *Le Mauricien* (12 February 2025), on Dr Ibrahim Alladin's book of that title: "Olivier Bancoult was born on February 15, 1964."; "In a remote place called *Ile du Coin*, which is one of the islands of Peros Banhos."; "Olivier arrived in Mauritius at the age of four."; "The family was poor, and his mother worked long hours as a cleaner."; "Olivier's second sister Noellie died young in Mauritius."; "We lost our paradise and landed in hell."; "I cleaned toilets and windows."; "The turning point came in 1983 when Bancoult co-founded the Chagos Refugees Group- CRG." https://www.lemauricien.com/le-mauricien/olivier-bancoult-a-cry-for-freedom-the-story-of-chagos-by-dr-ibrahim-alladin/665589/ . Checked at source, 13 Nov 2026.

[2] Nasseem Ackbarally, "Rights-Chagos: 'My Navel is Buried There'", Inter Press Service (Port Louis, 21 November 2009): "Olivier Bancoult was four when he was brought to Mauritius together with his mother, Rita."; he "created the Chagos Refugees Group in 1983 to defend the rights of his community"; the House of Lords ruling for the British government, "finally blocking this route home for the displaced people." https://www.ipsnews.net/2009/11/rights-chagos-my-navel-is-buried-there/ . Checked at source, 13 Nov 2026.

[3] *R (on the application of Bancoult) v Secretary of State for Foreign and Commonwealth Affairs* [2008] UKHL 61, opinion of Lord Hoffmann: "the settled population was a very small community (less than 1,000 on the three islands)"; "Between 1968 and 1971 the United Kingdom government secured the removal of the population of Diego Garcia,"; "mostly to Mauritius and the Seychelles."; "A small population remained on Peros Banhos and the Salomon Islands, but they were evacuated by the middle of 1973."; "No force was used but the islanders were told that the company was closing down its activities"; "and that unless they accepted transportation elsewhere, they would be left without supplies."; "A survey of available sites suggested that Diego Garcia would be the most suitable."; the United Kingdom agreed to "make BIOT available to the United States for defence purposes for an indefinitely long period of at least 50 years"; "It subsequently agreed to the establishment of the base on Diego Garcia"; the government's "refusal to acknowledge that there was any indigenous population"; "the removal and resettlement of the Chagossians was accomplished with a callous disregard of their interests."; "When the Chagossians arrived in Mauritius they found themselves in a country with high unemployment"; "and considerable poverty."; "For the most part, the community was left to fend for itself in the slums of Port Louis." https://publications.parliament.uk/pa/ld200708/ldjudgmt/jd081022/banc-1.htm . On the 2000 proceedings: section 4 of the Immigration Ordinance provided that "no person shall enter the Territory or, being in the Territory, shall be present or remain in the Territory" without a permit; "On 3 November 2000 the Divisional Court (Laws LJ and Gibbs J) gave judgment in favour of Mr Bancoult"; "quashing section 4 of the Immigration Ordinance as ultra vires"; the Foreign Secretary: "I have decided to accept the Court's ruling and the Government will not be appealing." The 2004 constitution order: "no person has the right of abode in the Territory." The Lords decided for the government. Checked at source, 13 Nov 2026.

[4] International Court of Justice, *Legal Consequences of the Separation of the Chagos Archipelago from Mauritius in 1965*, Advisory Opinion of 25 February 2019 (case page): "the process of decolonization of Mauritius was not lawfully completed when that country acceded to independence"; "this detachment was not based on the free and genuine expression of the will of the people concerned"; the United Kingdom "is under an obligation to bring to an end its administration"; "as rapidly as possible." https://www.icj-cij.org/case/169 . Checked at source, 13 Nov 2026.

The decision that followed was taken, once again, without them. On 22 May 2025 the United Kingdom and Mauritius signed a treaty to transfer sovereignty over the archipelago to Mauritius, with the United Kingdom leasing back the base on Diego Garcia for at least 99 years. It was delayed when a judge granted a last-minute injunction requested by two Chagos-born women, Bernadette Dugasse and Bertrice Pompe; another judge later lifted it. "The rights we are asking for now," Pompe said, "we have been fighting for for 60 years."[5] Four independent experts appointed by the United Nations Human Rights Council said they were "gravely concerned about the lack of meaningful participation of Chagossians in processes that have led to the agreement", and called for a new agreement that fully guarantees the Chagossians' right to return to all the islands, "including Diego Garcia."[6] In December 2025 the UN Committee on the Elimination of Racial Discrimination asked both governments to suspend ratification; among the agreement's concerning features, a legal commentary on its decision notes, was "the absence of direct and inclusive consultation and participation".[7] By October 2026 the treaty had still not entered into force. The Chagossians born on the archipelago were by then aged between 53 and 100, The base itself had become contested again: Mauritius had said that strikes launched from Diego Garcia against Iran breached international law. For Bancoult, speaking for the Chagos Refugees Group, those strategic questions were secondary to the chance for elderly Chagossians to go home in their lifetimes. "We are opposed to war, ethically," he said, "but we are also running out of time."[8]

The Chagossians' story is not, at heart, a story about one military base or one empire. It is a story about who decides. The British government removed a people from their islands to make way for a United States base, and half a century later two governments decided the islands' future, and at neither moment were the people whose lives the decision shaped at the table. Each decision was taken by a body with a claim to decide it, and some were later found unlawful, but none of them asked the islanders. Each was made by people who were not affected, about people who were. And the people affected had to spend their lives, many of them their whole lives, trying to get into the room afterwards. This chapter begins with them because their story asks, in its sharpest form, the question every reader eventually asks of UP: is this for people like me? Will I be in the room when the decisions that shape my life are made?

UP's answer is written in two of its core tenets. Its method offers every problem as work "to anyone willing to take them on, whether or not they are affected", and says that "the people a problem affects decide its outcome."[9] Its tenet on open participation says it again: "Anyone may take part in any problem, and the people it affects decide its outcome."[10] Chapter 5 showed how that method works and Chapter 6 how it keeps power from gathering in the hands of the few who turn up. This chapter asks the question those chapters left for here: who, exactly, counts as affected, and who is UP for? It shows who is left out of decisions in the current system and what that system already does to bring them in, what UP holds about who takes part and who decides, how the circle of the affected

[5] Euronews with AP, "UK hands sovereignty of Chagos Islands to Mauritius after last-minute legal delay" (22 May 2025): "But it was delayed when a judge granted a last-minute injunction, requested by two Chagossian women."; "That injunction was later lifted by another judge."; "Chagos-born Bernadette Dugasse and Bertrice Pompe, who brought the legal challenge"; "the UK will pay Mauritius €120 million each year to lease back the base for at least 99 years."; Pompe: "The rights we are asking for now, we have been fighting for for 60 years." https://www.euronews.com/2025/05/22/uk-hands-sovereignty-of-chagos-islands-to-mauritius-after-last-minute-legal-delay . Checked at source, 13 Nov 2026.

[6] Office of the UN High Commissioner for Human Rights, press release "Agreement between Mauritius and the UK fails to guarantee rights of Chagossians say UN experts" (10 June 2025), as reproduced by GlobalSecurity.org: the experts were "gravely concerned about the lack of meaningful participation of Chagossians in processes that have led to the agreement"; they called for an agreement guaranteeing "the rights of the Chagossian people to return to all islands of the Chagos Archipelago, including Diego Garcia."; they are "independent human rights experts appointed by the United Nations Human Rights Council" (Nicolas Levrat, K.P. Ashwini, Bernard Duhaime and Bina D'Costa). https://www.globalsecurity.org/military/library/news/2025/06/mil-250610-ohchr02.htm . Checked at source, 13 Nov 2026.

[7] Elodie Tranchez, "When Decolonization Meets Human Rights: CERD's 2025 Decision on the Chagos Agreement", *EJIL: Talk!* (18 December 2025), on the Committee on the Elimination of Racial Discrimination's decision of 2 December 2025 under its early warning and urgent action procedure: "CERD calls upon the UK and Mauritius to suspend ratification of the Agreement."; among the agreement's concerning features, "the absence of direct and inclusive consultation and participation". https://www.ejiltalk.org/when-decolonization-meets-human-rights-cerds-2025-decision-on-the-chagos-agreement/ . A legal commentary on the decision; the decision itself is linked from the post. Checked at source, 13 Nov 2026.

[8] Ameerah Arjanee, Al Jazeera, "UK-Mauritius Chagos sovereignty deal stalls amid fears of further delays" (2 October 2026): "Signed on May 22, 2025"; "The treaty has not yet entered into force."; "Chagossians born on the archipelago are now aged between 53 and 100."; "Olivier Bancoult of the Chagos Refugees Group"; "Mauritius has publicly stated that the strikes launched from Diego Garcia against Iran breached international law,"; "For Bancoult, those wider strategic questions are secondary to the need to ensure that elderly Chagossians"; "have the chance to return to their homeland during their lifetimes."; "We are opposed to war, ethically, but we are also running out of time." https://www.aljazeera.com/news/2026/10/2/uk-mauritius-chagos-sovereignty-deal-stalls-amid-fears-of-further-delays . Checked at source, 13 Nov 2026.

[9] UP's core (28 Oct 2026), T2 (*The method: shared problem solving with evidence*): problems are named, measured and "offered as work to anyone willing to take them on, whether or not they are affected; the people a problem affects decide its outcome." Settled: Round 11 (A); CANON.

[10] UP's core (28 Oct 2026), T4 (*Open participation: anyone may take part; those affected decide*): "Anyone may take part in any problem, and the people it affects decide its outcome. There are no offices to hold: work is shared out, not owned, so no one gathers power by holding a position. Where work needs skill, skill is shown by open, testable standards that anyone can work toward and anyone can propose to change, and education is open to everyone, at every age, so anyone can gain the skills any work requires." Settled: Round 11 (R, A); CANON.

is drawn in the hard cases, from people downstream to people not yet born and to other living things, how it could work stage by stage, and where it still falls short.

The people a decision leaves out

The current system has not ignored the Chagossians' kind of case. It has written rules against it. In 2007 the United Nations General Assembly adopted a declaration on the rights of indigenous peoples, whose tenth article says that indigenous peoples "shall not be forcibly removed from their lands or territories", and that "No relocation shall take place without the free, prior and informed consent of the indigenous peoples concerned", after agreement on just compensation "and, where possible, with the option of return."[11] Long before, in 1989, the General Assembly had adopted the Convention on the Rights of the Child, which tells the states that join it to assure every child who can form views "the right to express those views freely in all matters affecting the child", with those views "being given due weight in accordance with the age and maturity of the child."[12] These are real achievements. They put into words the idea that the people a decision lands on should have a say in it. The Chagossians show their limit. The declaration came four decades after their removal, and it is a declaration, not a binding treaty. And a government that refuses to acknowledge that a people exists, as Britain's did when it removed the islanders, can leave such words with no one to protect.[3,11]

The Chagossians are one case of a pattern that is far larger than one archipelago. Every year, dams, mines, roads and other development projects move people out of the way. The figure most often cited for development projects alone is about ten million people a year, and the anthropologist Dolores Koenig, reviewing the research for Oxford's Refugee Studies Centre, found that those displaced are "more often impoverished, losing economic, social, and cultural resources." She named what the move takes besides homes and land: "it takes away political power, most dramatically the power to make a decision about where and how to live."[13] In UP's terms, that sentence is the heart of this chapter. Losing a home is a harm to a person's needs. Losing the power to decide where and how to live is a harm to the person's place in every decision that follows.

The same gap, between a principle that the affected should be heard and a practice that leaves them out, runs through the current system in quieter forms, and it falls on particular groups again and again.

People not yet born are the clearest case, because they cannot speak at all. They will also live longest with what is decided now. In 2021 a team led by the climate scientist Wim Thiery estimated that, under the climate pledges then on the table, "children born in 2020 will experience a two- to sevenfold increase in extreme events, particularly heat waves" compared with people born in 1960; a child born in 2020, they calculated, would live through about thirty heat waves in a lifetime.[14] Those children will live with the pledges longest, and none of them was old enough to be asked. Twenty-one young Americans, joined by an environmental group and a representative of future generations, sued the United States government, arguing that by continuing to permit, authorise and subsidise fossil fuels it was violating a right to a "climate system capable of sustaining human life".[15] In 2020 a federal

[11] United Nations Declaration on the Rights of Indigenous Peoples, adopted by General Assembly resolution 61/295 on 13 September 2007, Article 10: "Indigenous peoples shall not be forcibly removed from their lands or territories."; "No relocation shall take place without the free, prior and informed consent of the indigenous peoples concerned"; "and after agreement on just and fair compensation and, where possible, with the option of return." https://www.un.org/development/desa/indigenouspeoples/wp-content/uploads/sites/19/2018/11/UNDRIP_E_web.pdf . A declaration, not a binding treaty. Checked at source, 13 Nov 2026.

[12] Convention on the Rights of the Child, adopted by General Assembly resolution 44/25 of 20 November 1989, Article 12(1): "States Parties shall assure to the child who is capable of forming his or her own views the right to express those views"; "freely in all matters affecting the child, the views of the child being given due weight"; "in accordance with the age and maturity of the child." UNICEF, text of the Convention: https://www.unicef.org/child-rights-convention/convention-text . Checked at source, 13 Nov 2026.

[13] Dolores Koenig, *Toward Local Development and Mitigating Impoverishment in Development-Induced Displacement and Resettlement*, RSC Working Paper No. 8 (Refugee Studies Centre, University of Oxford, November 2002): the most commonly cited figure is "10 million people per year (Cernea 2000:11)"; "Instead, they are more often impoverished, losing economic, social, and cultural resources."; "it takes away political power, most dramatically the power to make a decision about where and how to live." https://www.rsc.ox.ac.uk/files/files-1/wp8-development-induced-displacement-resettlement-2002.pdf . An estimate for development projects, cited from Michael Cernea; it is old and approximate. Checked at source, 13 Nov 2026.

[14] Wim Thiery et al., "Intergenerational inequities in exposure to climate extremes", *Science* 374(6564):158–160 (8 October 2021): "we estimate that children born in 2020 will experience a two- to sevenfold increase in extreme events, particularly heat waves"; "a child born in 2020 will experience 30 ± 9 heat waves under a scenario that follows current climate pledges". https://texmex.mit.edu/pub/emanuel/PAPERS/Thiery_etal_2021_Science.pdf (author copy). The comparison is with people born in 1960; a modelled estimate. Checked at source, 13 Nov 2026.

[15] *Juliana v. United States*, No. 18-36082 (US Court of Appeals for the Ninth Circuit, 17 January 2020), majority opinion by Judge Hurwitz: "The plaintiffs are twenty-one young citizens, an environmental organization, and a" "representative of future generations"; the plaintiffs asserted "a claimed right under the Due Process Clause of the Fifth Amendment to a" "climate system capable of sustaining human life"; the complaint says the government continues to "permit, authorize, and subsidize" fossil fuel use; "The record leaves little basis for denying that climate change is occurring at an increasingly rapid pace."; "Reluctantly, we conclude that such relief is beyond our constitutional power."; "We reluctantly conclude, however, that the plaintiffs' case must be made to the political branches". Dissent by Judge Staton: "It is as if an asteroid were barreling toward Earth and the government decided to shut down our only defenses." https://law.justia.com/cases/federal/appellate-courts/ca9/18-36082/18-36082-2020-01-17.html . Checked at source, 13 Nov 2026.

appeals court found that the record "leaves little basis for denying that climate change is occurring at an increasingly rapid pace", and still threw the case out. "Reluctantly, we conclude that such relief is beyond our constitutional power," the majority wrote, and "the plaintiffs' case must be made to the political branches".[15] One judge dissented. "It is as if an asteroid were barreling toward Earth," she wrote, "and the government decided to shut down our only defenses."[15] The current system can also do better. A year later, in 2021, Germany's Federal Constitutional Court ruled that parts of the country's climate law were incompatible with fundamental rights, because, in its words, "The provisions irreversibly offload major emission reduction burdens onto periods after 2030." The court described fundamental rights as "intertemporal guarantees of freedom", and it noted that the complainants whose freedoms were violated included some "who are still very young."[16] In Wales, the 2015 law that Chapter 4 met also created a Future Generations Commissioner whose general duty is to "act as a guardian of the ability of future generations to meet their needs".[17] These are the current system's own answers, and UP credits them. They also show its pattern: whether future people are heard depends on which court a case reaches and which country a person lives in.

Children who are already born are heard more, but not much more. They cannot vote, so they rely on adults to speak for them, and the adults who vote are not a cross-section of the population either. In the 2024 United States presidential election, according to Census Bureau figures, 47.7 per cent of citizens aged 18 to 24 voted, against 74.7 per cent of those aged 65 and older (Figure 22.1).[18] Young people are not uninterested. When Scotland let 16- and 17-year-olds vote in its 2014 referendum on independence, a post-referendum survey by the polling company ICM, reported by the political scientist John Curtice, found that 75 per cent of them said they had voted, against 54 per cent of 18- to 24-year-olds; Curtice warned that the 112 youngest respondents were too few for a precise estimate, but the direction was clear.[19] The gap at the ballot box repeats itself at the open meeting. As Chapter 6 showed, the people who speak at local planning meetings in the United States are disproportionately older, male, long-standing homeowners who vote in local elections.[20]

[16] Federal Constitutional Court of Germany, press release No. 31/2021 of 29 April 2021, "Constitutional complaints against the Federal Climate Change Act partially successful": provisions are "incompatible with fundamental rights insofar as they lack sufficient specifications"; "The provisions irreversibly offload major emission reduction burdens onto periods after 2030."; "As intertemporal guarantees of freedom, fundamental rights afford the complainants protection"; complainants "some of whom are still very young." https://www.bundesverfassungsgericht.de/SharedDocs/Pressemitteilungen/EN/2021/bvg21-031.html . Checked at source, 13 Nov 2026.

[17] Well-being of Future Generations (Wales) Act 2015 (anaw 2), section 18: "The general duty of the Commissioner is—"; "(a)to promote the sustainable development principle, in particular to—"; "(i)act as a guardian of the ability of future generations to meet their needs, and". https://www.legislation.gov.uk/anaw/2015/2/section/18 . Chapter 4 describes the Act's duty on public bodies. Checked at source, 13 Nov 2026.

[18] USAFacts, "How does voter turnout in the US differ by state, age, sex, and race?" (updated 9 September 2026), with its chart of the share of voting-age citizens who reported voting attributed to the Census Bureau: "In 2024, 47.7% of citizens between the ages of 18 and 24 voted, compared to 60.2% of 25- to 44-year-olds, 70.0% of 45- to 64-year-olds, and 74.7% of people 65 and older." https://usafacts.org/articles/how-many-americans-vote-and-how-do-voting-rates-vary-state/ . The Census Bureau's release of the underlying tables: "65.3% (or 154 million people) voted" (30 April 2025). https://www.census.gov/newsroom/press-releases/2025/2024-presidential-election-voting-registration-tables.html . Survey-based figures, as reported by USAFacts. Checked at source, 13 Nov 2026.

[19] John Curtice, "So How Many 16 and 17 Year Olds Voted?", *What Scotland Thinks* (16 December 2014): "according to ICM's survey, 75% of 16 and 17 year olds voted"; "compared with 54% of 18-24 year olds and 72% of 25-34 year olds."; the survey's 112 young respondents are "not enough to give us a precise estimate of their level of turnout." https://www.whatscotlandthinks.org/2014/12/many-16-17-year-olds-voted/ . Checked at source, 13 Nov 2026.

[20] Chapter 6 ("Why power gathers" and its note on Einstein, Palmer and Glick, "Who Participates in Local Government? Evidence from Meeting Minutes", *Perspectives on Politics* 17(1):28–46, 2019) sets out the finding that the people who speak at planning and zoning meetings on housing are disproportionately older, male, long-standing residents, local voters and homeowners, who oppose new housing far more than the general public. https://doi.org/10.1017/S153759271800213X .

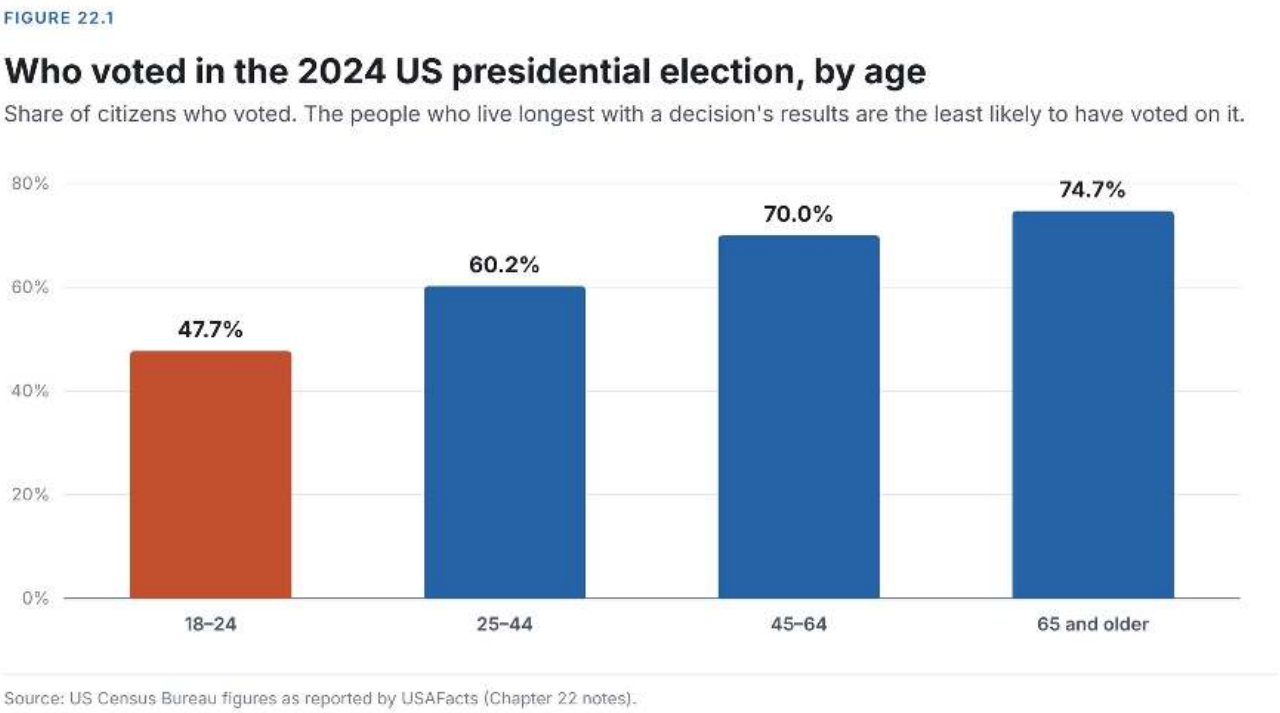


Figure 22.1. Turnout in the 2024 US presidential election by age group, from Census Bureau figures as reported by USAFacts. The people who live longest with a decision's results are the least likely to have voted on it.[18]

People who move are left out by the rules of membership. A decision about a city's housing falls on everyone who lives there, but in many places only citizens vote in it. The European Union has done something about this, too. Its founding treaty gives every citizen of the Union who lives in another member state "the right to vote and to stand as a candidate at municipal elections in the Member State in which he resides, under the same conditions as nationals of that State".[21] Paris goes further. As Chapter 1 described, its participatory budget lets residents aged seven or over propose projects, whatever their nationality.[22] The principle in both cases is that the people who live with a local decision should have a voice in it, wherever they were born.

People downstream are left out by the lines on the map. The Dakota Access oil pipeline crosses the Missouri River at Lake Oahe, less than half a mile from the northern border of the Standing Rock Sioux Reservation, whose people depend on the river. The tribe went to court against the Army Corps of Engineers in 2016, raising what it saw as threats to its water supply and treaty rights that the Corps had not adequately considered, and in January 2021 a federal appeals court agreed that the Corps "acted unlawfully", while reversing an order to shut the pipeline down.[23] The river does not stop at the reservation's border, and neither does the risk, but the permit was decided by a federal agency, not by the people downstream.

And other living things are left out because, in most legal systems, they are things. Here too the current system has begun to change, in a few places. In 2017 New Zealand's parliament declared the Whanganui River, Te Awa Tupua, to be "a legal person and has all the rights, powers, duties, and liabilities of a legal person", as Chapter 4 noted, and gave it a voice: Te Pou Tupua, two people, one nominated by the iwi with interests in the river and one on

[21] Treaty on the Functioning of the European Union (consolidated version, 2012), Article 22(1): "Every citizen of the Union residing in a Member State of which he is not a national shall have the right to vote and to stand"; "as a candidate at municipal elections in the Member State in which he resides,"; "under the same conditions as nationals of that State". https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:12012E/TXT . Checked at source, 13 Nov 2026.

[22] Chapter 1 ("The same pattern, in many places") describes Paris's participatory budget, run since 2014, in which ideas may be put forward by residents aged seven or over, whatever their nationality; its note gives the City of Paris sources.

[23] Indianz.Com, "D.C. Circuit Court of Appeals: Standing Rock Sioux Tribe v. U.S. Army Corps of Engineers" (26 January 2021): "The portion of the pipeline at issue in the litigation crosses the Missouri River at Lake Oahe."; "less than a half-mile from the northern border of the Standing Rock Sioux Reservation."; "The Standing Rock Sioux Tribe initiated litigation against the Army Corps in the summer of 2016."; the tribes raised "threats to their water supply and treaty rights"; from the opinion: "We agree with the district court that the Corps acted unlawfully."; "But we reverse the court's order to the extent it directed that the pipeline be shut down and emptied of oil." https://indianz.com/News/2021/01/26/d-c-circuit-court-of-appeals-standing-rock-sioux-tribe-v-u-s-army-corps-of-engineers . A news report quoting the court's opinion. Checked at source, 13 Nov 2026.

behalf of the Crown, whose purpose is "to be the human face of Te Awa Tupua."[24] In 2022 Spain did the same for a lagoon, declaring the legal personality of the Mar Menor, which the law itself describes as being in a "profundo grado de degradación ecológica", a deep state of ecological degradation. The law began as a citizens' legislative initiative that gathered 639,826 signatures. The law gives the lagoon a committee of thirteen representatives, a body of guardians and a scientific committee "formed by independent scientists and experts".[25] Notice how these laws work. A river cannot speak, so people speak for it, and the law takes care over who those people are and how they are chosen.

In UP's terms, each of these is a piece of the answer the current system already holds, in isolation. The indigenous peoples' declaration, the children's convention, the German court, the Welsh commissioner, the European municipal vote and the river's human face all rest on the same principle UP's tenets write down: the people a decision affects should have a say in it, and those who cannot speak still count. What the current system lacks is a way of applying that principle to every decision as a matter of course. Today it depends on the forum, the country, the court and the government of the day. Table 22.1 sets the groups this section has described beside the current system's best answers and the lines in UP's core and agreed positions that speak to each.

Table 22.1. Who is left out of decisions today, the current system's best answers, and what UP holds, with one way it could run.[9,10,26,27,28,29]

Who is left out	An example	The current system's best answer	What UP holds (and one way it could run)
A people removed or decided about by distant powers	The Chagossians, removed 1968–1973; the 2025 treaty	The UN declaration on indigenous peoples: no relocation without free, prior and informed consent, with the option of return where possible	The people a problem affects decide its outcome; basic needs and protected freedoms (movement among them, in the starting example) are a floor no gain for others can buy; no one is forced to give up what is theirs
People not yet born	Juliana v. United States (dismissed, 2020)	Germany's 2021 climate ruling; the Welsh Future Generations Commissioner	Future residents count among the stakeholders; one way: future people represented by several independent simulations, giving input but never a vote
Children	Under-18s cannot vote; younger adults vote least	The children's convention: views given due weight; votes at 16 in Scotland	Anyone may take part in any problem, children included; one way: young children

[24] Te Awa Tupua (Whanganui River Claims Settlement) Act 2017 (New Zealand, 2017 No 7), section 14(1): "Te Awa Tupua is a legal person and has all the rights, powers, duties, and liabilities of a legal person."; section 18(2): the purpose of Te Pou Tupua is "to be the human face of Te Awa Tupua"; section 20(1): the office "comprises 2 persons appointed by nominators", one nominated by the iwi with interests in the Whanganui River and one on behalf of the Crown (section 20(2)). https://www.legislation.govt.nz/act/public/2017/0007/latest/whole.html . Chapter 4 also describes the Act. Checked at source, 13 Nov 2026.

[25] Ley 19/2022, de 30 de septiembre (Spain): "Ley 19/2022, de 30 de septiembre, para el reconocimiento de personalidad jurídica"; "a la laguna del Mar Menor y su cuenca."; article 1: "Se declara la personalidad jurídica de la laguna del Mar Menor y de su cuenca"; article 3: "El Comité de Representantes estará formado por trece miembros,"; "La Comisión de Seguimiento (guardianes y guardianas) estará formada por una persona titular y una suplente"; "El Comité Científico estará formado por científicos y expertos independientes"; preamble: "profundo grado de degradación ecológica en que se encuentra el mar Menor". https://www.boe.es/buscar/act.php?id=BOE-A-2022-16019 . Maldita.es, "Qué implica que el Mar Menor tenga personalidad jurídica" (1 December 2022): the law arose from an "iniciativa legislativa popular (ILP)" with "639.826 firmas". https://maldita.es/malditateexplica/20221201/mar-menor-personalidad-juridica/ . Checked at source, 13 Nov 2026.

[26] UP's Position Ledger, DP-001 (C-P1-02), *How UP decides when people disagree* (CANON, 22 Oct 2026): "Every decision starts with an evidence-based proposal, published with its data, and an open question: does anyone have a better idea?"; "Most conflicts that look like either/or are not"; "Only when none of that works do the stakeholders vote. Voting is a last resort, not a forbidden one."; among its guards, "the stakeholders include everyone materially affected, including people downstream and future residents, while no vote may override the protected freedoms."; "the decision reopens when new evidence or technology changes the options." An agreed position, not a tenet.

[27] UP's Position Ledger, Round 12S, position 9 (AGREED, 28 Oct 2026): "**[HOW] Voiceless stakeholders** (future people, young children, other living things) are represented by simulations: several independent ones, assumptions published, giving input but never a vote." An illustration of one way UP could run, not a tenet.

[28] UP's core (28 Oct 2026), T6 (*Floors that are never crossed*): the floors include "everyone's basic needs and protected freedoms, which no gain for others can buy"; "the living world's capacity to recover, so damage that cannot be undone is never traded for a short-term need"; "the right to leave any group or community at any time, taking what is theirs"; and "a fair hearing, so no one's freedom is restricted without a fair, evidence-based hearing, with the evidence open to them and a way to appeal." "The collective defines and refines the floors through UP's method; it may clarify or raise them, but no decision may lower them or push anyone below them." Its starting example, for the collective to refine, lists needs "such as food, water, shelter, health care, education and connection; freedoms such as thought, belief, speech, movement and privacy." CANON.

[29] UP's core (28 Oct 2026), T10 (*Freely joined, ethically grown*): "UP is never imposed. No one is forced to join, to work or to give up what is theirs. It grows by being useful, building on what people already do, and it acts only by ethical means." CANON.

Who is left out	An example	The current system's best answer	What UP holds (and one way it could run)
			represented by simulations, giving input but never a vote
People who move	Residents without citizenship voting rights	EU citizens vote in municipal elections where they live; Paris's budget open to all residents aged seven or over	Everyone materially affected is a stakeholder
People downstream	The Standing Rock Sioux and the Dakota Access pipeline	Environmental review; the courts	The stakeholders include people downstream
Other living things	Most rivers, lagoons and species	Legal personhood for the Whanganui River and the Mar Menor, with human guardians	Their health is part of UP's aim, with tools for conflicts weighed by the collective; one way: represented by several independent simulations with published assumptions

Anyone may take part

UP's answer to the reader's question begins with two sentences that look alike and do different jobs. The first is about work. In UP, problems are named, measured and "offered as work to anyone willing to take them on, whether or not they are affected."[9] The second is about decisions: "the people a problem affects decide its outcome."[9] Chapter 5 drew the distinction. Working on a problem, by naming it, gathering evidence, proposing a design or checking someone else's, is open to everyone, because a good idea can come from anywhere. Deciding what is done is for the people who will live with it.[30]

The first sentence has a long record, and Chapter 1 told one of its clearest cases. After the earthquake that struck Haiti in January 2010, about 600 volunteers, most of them working far from Haiti, built a base map of the country almost from scratch in three weeks; aid groups used it, and the work continued afterwards as Haitians took up mapping their own communities.[31] The volunteers took the problem on because it was there and they could help, which is the drive Chapter 1 found in eighteen-month-olds and Chapter 5 in the players who solved a protein's shape in a game.[32] In UP's terms, the work was open to anyone, and the people who lived with the result became partners in keeping it.

The second sentence is what the Chagossians never had, and it is where UP's tenet on open participation is most demanding. "Anyone may take part in any problem, and the people it affects decide its outcome. There are no offices to hold: work is shared out, not owned, so no one gathers power by holding a position."[10] Chapter 6 showed why this matters for power: the offices that decide for others are where power gathers, and a decision that belongs to the people affected is much harder to capture by capturing an office.[33] For the question this chapter asks, the point is simpler. In UP, no one needs to be appointed, elected, licensed or invited in order to be heard on a problem that affects them. Being affected is enough. Nor does deciding need special people. In 2020 the OECD, in a report it titled *Catching the Deliberative Wave*, gathered "close to 300 representative deliberative practices", in which public bodies "convene groups of people representing a wide cross-section of society for at least one full day" to

[30] Chapter 5 ("UP's method, one line at a time" and "When people disagree: the decision steps") takes the method sentence by sentence and sets out the difference between working on a problem and deciding its outcome.

[31] Chapter 1 ("The same pattern, in many places") tells the story of the Haiti mappers and gives its source: Robert Soden and Leysia Palen, "From Crowdsourced Mapping to Community Mapping: The Post-Earthquake Work of OpenStreetMap Haiti", which reports that "Over a 3-week period, 600 remotely located volunteer mappers built a base layer map for Haiti nearly from scratch." https://cmci.colorado.edu/~palen/palen_papers/HaitiCOOP_Final.pdf . A World Bank blog by Robert Soden (29 October 2014) gives a lower count, "Over 450 OpenStreetMap volunteers from an estimated 29 countries"; this chapter follows Chapter 1's figure. https://blogs.worldbank.org/en/latinamerica/4-years-looking-back-openstreetmap-response-haiti-earthquake . Checked at source, 13 Nov 2026.

[32] Chapter 1 ("What connecting them would gain") and Chapter 5 ("The same drive, wherever problems are opened up") give the sources for the eighteen-month-olds who helped without reward and for the Foldit players who solved a protein's structure.

[33] Chapter 6 ("What UP holds" and "Where it already works") sets out why offices are where power gathers, and UP's agreed position on stewards who rotate, are watched and can be replaced.

work through a public question.[34] Ireland's citizens' assembly, which Chapters 5 and 6 described, is one of them.[35] Ordinary people, given the evidence and the time, have worked through questions as hard as Ireland's abortion law and France's climate policy.[30,35] UP asks the same of the people a problem affects.

The same tenet answers a quieter version of the reader's question: what if I am not qualified? "Where work needs skill, skill is shown by open, testable standards that anyone can work toward and anyone can propose to change, and education is open to everyone, at every age, so anyone can gain the skills any work requires."[10] Some work does need skill. A bridge has to be designed by someone who can calculate loads, and an operation performed by someone who can operate. UP keeps that, but it changes who can get the skill and who sets the bar. The standard is public and testable, so anyone can see what it asks, and anyone can work toward it, at any age, which is what Chapter 15 takes up for learning.[36] Nothing about meeting or not meeting a standard changes whose needs are met: needs are a floor, and no gain for others can buy it.[28]

UP also says who it does not need. It names no leader and no founder in its core, and among the dangers it adopted is "no forced adoption, no leader, no founder named in the core".[37] Chapter 6 told how the creator of the Python programming language stepped back in 2018 without naming a successor, and how its developers built an elected council in his place.[38] In UP's terms, that step was a precedent, not an exception: the work belonged to everyone, so the community could go on without the person who started it.

UP's own text follows the same rule. The person who first set UP down describes himself, in its introduction, as defining the idea without ruling over it, and as one independent researcher whose first text needs many minds to improve it.[39] The core was settled through his answers on UP's debate board, and under the rule UP's study adopted for the whole of the text, UP is defined the way one would first define a science, by the core ideas that make it what it is; everything else is illustration, and beyond the core the collective decides.[40] He holds no office in UP. He defines the idea and does not rule over it, and like everything in UP, the core itself can be improved through UP's own method.[41]

Taking part also comes with a check against counterfeits. In UP every account belongs to one unique real person, who controls their own identity, and the system needs to confirm only that the person is unique and real; every other detail is shared by the person's own choice.[42] One voice each makes it much harder to multiply being affected with fake accounts, and means that no one's voice counts for more because of their money or their time: time and money "earn recognition, never power."[37] And taking part has a boundary. The core says plainly that "anyone acting outside the core stops being UP and bears the consequences".[37] Anyone may join any problem; no one may use UP's name to cross its floors.

A last line belongs here because it is honest about people. UP's agreed positions accept that people focus on what affects them most, and they call that fine.[43] UP does not ask everyone to take part in everything. A person can spend a year on the water system of their own street and never look at the rota for the town's kitchens. What UP asks is that the door to every problem stays open, so that anyone affected can come in when they choose, and

[34] OECD, *Innovative Citizen Participation and New Democratic Institutions: Catching the Deliberative Wave* (OECD Publishing, 9 June 2020): "This report has gathered close to 300 representative deliberative practices"; such processes "convene groups of people representing a wide cross-section of society for at least one full day". https://www.oecd.org/en/publications/innovative-citizen-participation-and-new-democratic-institutions_339306da-en.html . Checked at source, 13 Nov 2026.

[35] Chapter 6 ("Where it already works") describes Ireland's Citizens' Assembly of 99 members chosen to be broadly representative, and its work on the Eighth Amendment; Chapter 5 ("Where the current system's decisions are captured") describes France's citizens' climate convention.

[36] Chapter 15 takes up learning open to everyone at every age.

[37] UP's core (28 Oct 2026), "Settled alongside the core", dangers adopted (round 10): "anyone may reframe a problem; one voice each, no fake accounts; time and money earn recognition, never power; everyone is a watcher; working fallbacks without the AI; people can always add options; open science on AI feeling; no forced adoption, no leader, no founder named in the core; anyone acting outside the core stops being UP and bears the consequences." CANON.

[38] Chapter 6 ("Where it already works") tells how Guido van Rossum gave up his role as Python's "Benevolent Dictator For Life" in July 2018 without appointing a successor, and how the core developers adopted PEP 13: a five-person steering council elected after each feature release, with no term limits, which the core team can, in exceptional circumstances, remove by a vote of no confidence. Its notes give the sources.

[39] The Introduction ("A living book") describes UP's first text as the work of one independent researcher and its author as defining the idea without ruling over it.

[40] UP's study lessons, the Master Rule (23 Oct 2026): "The book defines and describes UP the way one would first describe chemistry: by the core ideas that make it UP and not something else."; "Daniel defines the idea; he does not rule over it."

[41] UP's core (28 Oct 2026), T3 (*Self-correction: nothing is final, including this*): "Every part of UP, these tenets included, can be improved through its own method." CANON. The core's own status line records that it was settled on the UP Debate Board, rounds 8–11, and amended in round 13b.

[42] UP's core (28 Oct 2026), "Settled alongside the core", one voice per person (round 11, ID: All): "every account belongs to one unique real person and carries that person's identity, which the person owns and controls; the system needs to confirm only that the person is unique and real, and every other detail is shared by the person's own choice. The exact design is open work for the collective." CANON. Chapter 6 and Chapter 20 take it up.

[43] UP's Position Ledger, Round 12S, position 10 (AGREED, 28 Oct 2026; UP Moderator's wording): "**[WHAT] Splits are good:** they test two or a thousand ways in the real world. **Attention:** people focus on what affects them most, which is fine."

that decisions are made in a way that does not punish the people who stayed home, which is what the guards on a vote, described below, are for.

Who UP is for

The reader's question has a second half, which sounds like "Is it for people like me?" but means "Will it work for people like me?" UP's aim answers it. UP aims at the health, happiness and wellbeing of all living things, and "For people it is measured person by person, not as a total, so no one's wellbeing is traded away to raise an average."[44] A system that measures success by an average can do well while leaving many people behind, and Chapter 4 showed how often that happens. A system that measures it person by person would not count itself successful while any one person is pushed below the floor.

UP's study adds a further point about whom UP is for. Within that aim, it is aimed first at the people the current system fails, person by person, and it holds that the very rich staying out does not matter.[45] That is not hostility to the rich. It is a judgement about where the gains are. The poorest half of the world's people hold about 2 per cent of its wealth, a share that "has stagnated since the early 2000s at around 2%", while "the top 10% own three-quarters of global wealth".[46] For the people at the top, UP offers less that they do not already have. For the billions with very little, it aims to offer, stage by stage, most of what Chapters 13 to 19 describe: needs met from shared production, work that is asked for and never forced, learning open to everyone at every age, health care, and a share in the decisions that shape their lives. At the early stage much of that still depends on the current system, as Chapter 12 set out; the middle and completed stages are projections.[47] UP does not need the people at the top to change for it to work. It needs the people the current system fails to find it useful.

That aim has a limit built into it. UP does not get to the people the current system fails by making others worse off. Above the floors, UP's agreed position says, "no one is made worse off without being asked first: those who would lose out are consulted and helped, though no single person can block a change that meets everyone's needs."[48] The rich, like everyone else, keep their protected freedoms, including the right to stay out and the right to leave any group at any time, taking what is theirs.[28] And UP is never imposed: "No one is forced to join, to work or to give up what is theirs."[29] So the honest answer to "Is this for people like me?" is that UP is open to everyone, aimed first at those the current system serves worst, and forced on no one.

Who counts as affected: the hard cases

Saying that the people affected decide is easy. Saying who they are is the hard part, and the Chagossians' story shows why it matters. Every decision in their history was taken by someone with a claim to be the right decider: a government that owned the territory, a court with jurisdiction, two states negotiating a treaty. What was missing was not a decider but a rule about whose lives the decision touched.

UP's agreed position on decisions gives that rule. Every decision starts with a proposal published with its data and an open question, "does anyone have a better idea?", and only when no better design or new technology can break a real trade-off do the stakeholders vote. Among the guards on those steps, "the stakeholders include everyone materially affected, including people downstream and future residents, while no vote may override the protected freedoms."[26] Two things in that sentence do the work. "Materially affected" means the circle follows the effects of a decision, not a map, a membership list or a passport. And the protected freedoms sit outside every circle:

[44] UP's core (28 Oct 2026), T1 (*The aim: the health, happiness and wellbeing of all living things*): "UP aims at the health, happiness and wellbeing of all living things."; "For people it is measured person by person, not as a total, so no one's wellbeing is traded away to raise an average." CANON.

[45] UP's study lessons, lesson 13 (24 Oct 2026): "UP grows side by side with today's system: early (a minority network inside it), middle (its own productive base; most members' needs met from what UP produces), completed (most people live mainly in UP)."; "Use today's evidence for the early stage; present the middle and completed stages as a reasoned projection from cited mechanisms, labelled as such."; "UP's aim is the people the old system fails, person by person; that the very rich stay out does not matter." A study lesson, not a tenet.

[46] Lucas Chancel, Thomas Piketty et al., *World Inequality Report 2026* (World Inequality Lab), executive summary: "the top 10% own three-quarters of global wealth, while the bottom half holds only 2%"; "the share of wealth owned by the poorest half of the population has stagnated since the early 2000s at around 2%." https://wir2026.wid.world/www-site/uploads/2025/11/WIR26_Executive_Summary_English.pdf . Checked at source, 13 Nov 2026.

[47] Chapter 12 ("The three gaps") sets out that, while UP is a minority network inside the current system, its members' floors depend partly on their own earnings, on gifts and on public programmes, and UP cannot yet guarantee them.

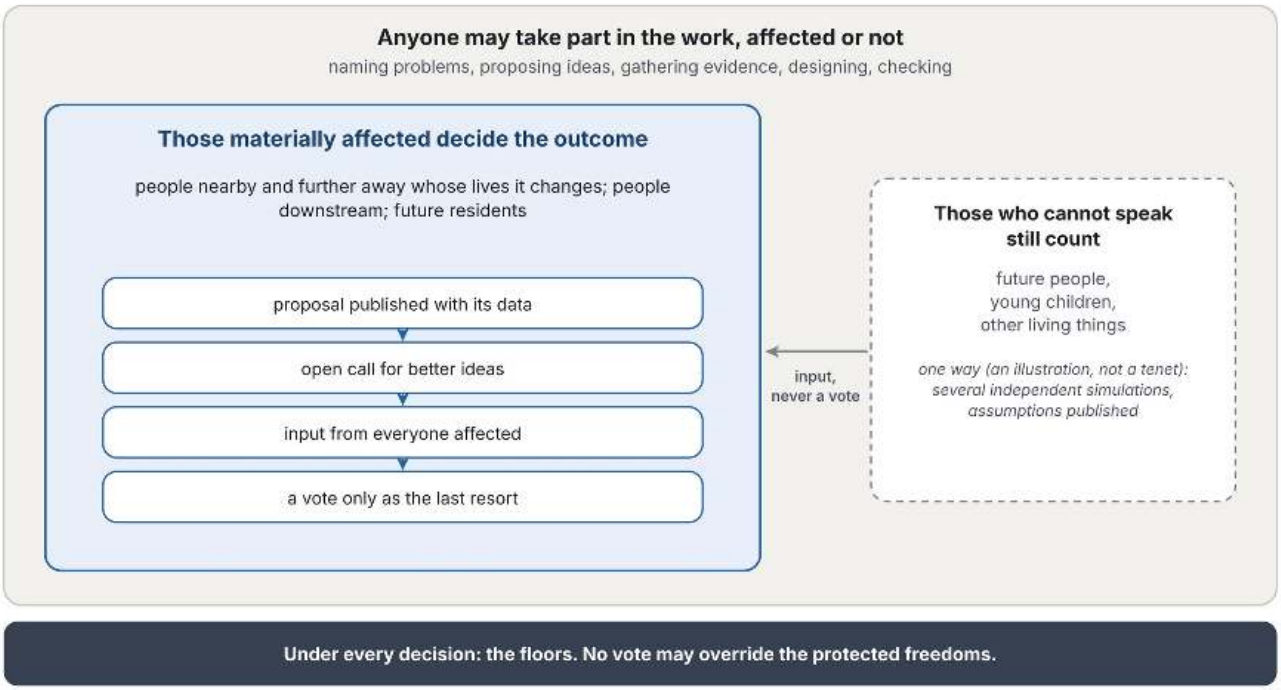
[48] UP's Position Ledger, DP-010 (C-P2-47), *Never below the floor* (CANON, 22 Oct 2026): "Everyone's basic needs and protected freedoms form a floor that no gain for others can buy. Above that floor, UP seeks the greatest wellbeing for all, and the search for win-win solutions in [#1] comes first. Above the floor, no one is made worse off without being asked first: those who would lose out are consulted and helped, though no single person can block a change that meets everyone's needs."

however the stakeholders are drawn, no majority of them can vote away a floor.[28] Figure 22.2 shows the circles together.

FIGURE 22.2

Who takes part and who decides in UP

Drawn from UP's core and agreed positions



If it comes to a vote: a minimum share of the affected takes part; a random sample of those who did not confirms it; how many took part and how typical they were is published; a narrow group's decision reopens. One way UP's agreed positions describe (Round 12S, position 9).

Figure 22.2. Who takes part and who decides in UP: anyone may work on a problem; those materially affected decide; those who cannot speak still count, and one way UP's agreed positions describe (Round 12S, position 9, an illustration, not a tenet) is to represent them by several independent simulations that give input to the decision, never a vote; the floors sit under every decision. Drawn from UP's core and agreed positions.[9,10,26,49,27,28]

Drawing the circle in a real case is work for UP's method, and Chapter 5 listed it among the questions the collective has to answer.[50] What follows takes the hard cases one at a time. In each, the current system has already found part of an answer, and UP's positions add to it.

People downstream. Water, air, traffic and waste carry a decision's effects past any line on a map, which is why UP names people downstream in its rule. The hard question is how far downstream the circle reaches. Among the design principles Elinor Ostrom drew from long-enduring commons is that governance activities "are organized in multiple layers of nested enterprises".[51] In UP's terms, the people closest to a resource can make the rules for what stays local, while larger circles, including the people downstream, take up what crosses between them. One way UP could run, given in its agreed positions as an illustration rather than a tenet, is that decisions are taken at the

[49] UP's Position Ledger, DP-005 + DP-006 (C-P1-42 + C-P3-18), *Who decides, and who counts as competent* (CANON, 22 Oct 2026): "Most decisions in UP are not made by voting."; "When a decision does reach the last step and goes to a vote, three guards apply: a minimum share of the affected must take part; a random sample of the affected who did not take part is asked to confirm it; and every decision publishes how many took part and how typical they were, with a decision made by a narrow group reopening automatically after a set time." Its wording that the affected "lead the work" is superseded by T2 and T4 ("decide its outcome").

[50] Chapter 5, chapter card, open questions: how a community should decide, in a hard case, who is materially affected.

[51] Michael Cox, Gwen Arnold and Sergio Villamayor Tomás, "A Review of Design Principles for Community-based Natural Resource Management", *Ecology and Society* 15(4):38 (2010), quoting Elinor Ostrom's eighth design principle (*Governing the Commons*, Cambridge University Press, 1990, p. 90): governance activities "are organized in multiple layers of nested enterprises". https://www.ecologyandsociety.org/vol15/iss4/art38/main.html . Checked at source, 13 Nov 2026.

smallest scale that can take them.[52] A decision whose effects stay in one street is the street's; one whose effects reach the whole river is the river's. The Standing Rock tribe's long fight was, in UP's terms, a fight to be counted inside a circle that had been drawn too small.

Future residents and future generations. People not yet born cannot take part, and children cannot vote in the current system, but both will live with today's decisions longest. UP's rule counts future residents among the stakeholders.[26] For those who cannot speak at all, one way UP could run is that they are represented by simulations: several independent ones, with their assumptions published, which give input but never a vote.[27] Two precedents show what this could look like. The first is human. In the Japanese town of Yahaba, researchers working on what they call Future Design ask people to take the part of "Imaginary Future Generations". Earlier work of this kind had found that, in the future role, "higher priority is given to policy issues that take longer to resolve." In a deliberation held in 2018, thirty participants were asked to become people of 2048 and to imagine what the town should work on; their groups turned to landscape and environment, disaster prevention and farming, and disaster prevention was described as "the basis of survival for all generations."[53] The second is computational. The world's climate scientists do not rely on one model of the future. In the sixth round of their model comparison project, CMIP6, more than thirty modelling groups were expected to take part, "using a wide variety of different model versions" to run shared experiments, under common standards for sharing their output.[54] Several models, built by different groups, run on shared experiments and compared in the open: that is the pattern UP's position describes for the voiceless. The Welsh Commissioner, a human "guardian of the ability of future generations to meet their needs", shows a third way, an advocate rather than a model.[17]

UP's position on simulations adds that they give input but never a vote. In the same spirit, a commissioner or a group taking the part of the future could put evidence before the people affected, while the decision stays with living people who can be held to account for it. That guards against two opposite failures: leaving future people without a forum, as the Juliana majority felt bound to, and handing decisions to whoever claims to speak for them.

Children. Older children are not voiceless. Under UP's tenets anyone may take part in any problem, children included, and nothing in the core sets a minimum age for naming a problem, proposing a fix or being heard on what affects you.[10] The children's convention already asks that a child's views be given due weight "in accordance with the age and maturity of the child", and Scotland's teenagers showed what happens when the young are asked.[12,19] For young children who cannot yet speak for themselves, one way UP's positions describe is to represent them like future people, by simulations that give input, never a vote.[27] Where exactly the line falls between a child who speaks for herself and one who is represented, and how a child's voice should be weighed, is left to the collective; the household illustration below shows one way it could go.

People who move. A decision about a town's housing affects the people who live there, whether or not they were born there, and people who might move there because of it. UP's rule follows the effect: everyone materially affected is a stakeholder, so the effect, not nationality, decides. For most local decisions that means the people who live there, and also the people downstream and those who would come.[26] The European Union's municipal vote for resident citizens and Paris's budget open to residents aged seven or over are partial precedents, each limited by the membership rules of the system around it.[21,22] The hardest part is the person who would come if a decision went one way: the family that would move to a town if new homes were built. UP's rule names future residents, so they count; how to count them well is open work, and it is among this chapter's open questions.[26]

Other living things. A river, a lagoon or a species cannot take part in anything. UP's aim reaches all living things, "as a direction rather than a promise", and when interests conflict, its agreed position lists tools the collective can use: priority by the capacity to suffer and to flourish, with every human counting equally; the health of the whole

[52] UP's Position Ledger, Core · Round 9 decisions: "M1 (test small, prove safe, then scale) and M2 (decisions at the smallest scale) are illustrations, not tenets."

[53] Toshiaki Hiromitsu, Yoko Kitakaji, Keishiro Hara and Tatsuyoshi Saijo, "What do people say when they become "future people"?", RIETI Discussion Paper 20-E-076 (October 2020): Saijo proposed"Future Design"(FD), inviting "Imaginary Future Generations" (IFGs); summarising earlier work by Hara et al., "higher priority is given to policy issues that take longer to resolve."; "The deliberation was held on May 28, 2018 in Yahaba Town"; "A total of 30 people participated in the deliberations."; "all subjects were instructed to become IFGs from 2048."; "Disaster prevention is the basis of survival for all generations." https://www.rieti.go.jp/jp/publications/dp/20e076.pdf . One deliberation with 30 participants (28 answered the survey), in a discussion paper. Checked at source, 13 Nov 2026.

[54] Veronika Eyring, Sandrine Bony, Gerald A. Meehl, Catherine A. Senior, Bjorn Stevens, Ronald J. Stouffer and Karl E. Taylor, "Overview of the Coupled Model Intercomparison Project Phase 6 (CMIP6) experimental design and organization", *Geoscientific Model Development* 9:1937–1958 (2016): "CMIP6 Participating Model Groups: > 30 using a wide variety of different model versions"; "CMIP has led to a better understanding of past, present and future climate change and variability"; the Infrastructure Panel "Establishes standards and policies for sharing climate model output". https://www.wcrp-climate.org/images/modelling/WGCM/CMIP/CMIP6FinalDesign_GMD_160603.pdf . Checked at source, 13 Nov 2026.

living system; and legal standing for nature; and, it adds, "how they are weighed is left to the collective."[55] Under the floors, the living world's capacity to recover is protected, so damage that cannot be undone is never traded for a short-term need.[28] The Whanganui and the Mar Menor show one form of standing: people appointed to speak for the river, and a scientific committee of independent experts beside them.[24,25] UP's position on the voiceless describes another: several independent simulations, assumptions published, input never a vote.[27]

People far away, and the local veto. The hardest case of all runs the other way. Here the danger is not that a distant power decides about local people, as it did for the Chagossians, but that local people block what distant people need: the wind farm, the new homes, the clinic, the power line. The current system has tried both extremes. In June 2015 the British government told councils in England to grant permission for wind turbines only if the site was in an area identified as suitable in a local or neighbourhood plan and, after consultation, "the planning impacts identified by affected local communities have been fully addressed and therefore the proposal has their backing"; later versions of the national planning rules put the second test as "the proposal has community support".[56,57] When it removed the tests in July 2024, the new government called them "the de facto ban on onshore wind in England, in place since 2015", and said they had often been interpreted to mean that "any opposition means the proposal cannot be considered acceptable."[57] Its answer was to treat wind like other energy projects and to consult on moving large proposals into the national regime for major infrastructure. The current system, in other words, swings between letting the nearest voices block a need and letting the most distant voices override the nearest. UP's rule answers both. The circle is everyone materially affected, near and far, so neither the neighbours nor the distant beneficiaries decide alone. In the words of UP's agreed position, "no single person can block a change that meets everyone's needs", and those who would lose out are asked first and helped.[48] And before anyone votes, the first step is the search for a better design that meets both needs, because "Most conflicts that look like either/or are not".[26] The next section returns to this objection, because it is the one this chapter's reader is most likely to raise.

Table 22.2 sets out the hard cases together.

Table 22.2. Who counts as affected: the hard cases, a precedent for each, and UP's way of drawing the circle. Illustrations of one way UP could run, not directives.[26,27,55,48,51]

Hard case	The risk	A precedent today	UP's way
People downstream	The circle drawn at a border, not at the effect	Ostrom's nested enterprises; environmental review	Everyone materially affected, including downstream; decisions at the smallest scale that can take them
Future residents and generations	Short horizons; no one to speak for them	Germany's 2021 ruling; the Welsh Commissioner; Future Design in Yahaba	Future residents count as stakeholders; one way: several independent simulations, assumptions published, input never a vote
Children	Cannot vote in the current system; views not given weight	The children's convention; votes at 16 in Scotland	Anyone may take part in any problem, children included; one way: young children represented by simulations; how a child's voice is weighed left to the collective

[55] UP's Position Ledger, card 11b (C-P1-01), *All living things: a direction, with tools for conflicts* (CANON, 23 Oct 2026): "UP's aim reaches all living things, as a direction rather than a promise. When interests conflict, solutions are sought that avoid every cost that can be avoided. Priority by the capacity to suffer and to flourish (with every human counting equally), the health of the whole living system, and legal standing for nature are all tools the collective can use to find those solutions; how they are weighed is left to the collective."

[56] Baroness Williams of Trafford, Parliamentary Under Secretary of State for Communities and Local Government, written ministerial statement HCWS42 on local planning (18 June 2015): local planning authorities "should only grant planning permission if:" the site is "in an area identified as suitable for wind energy development in a Local or Neighbourhood Plan"; and, following consultation, "the planning impacts identified by affected local communities have been fully addressed" "and therefore the proposal has their backing". https://questions-statements.parliament.uk/written-statements/detail/2015-06-18/HCWS42 . Checked at source, 13 Nov 2026.

[57] UK Government, Ministry of Housing, Communities and Local Government, "Policy statement on onshore wind" (published 8 July 2024): the government is "immediately removing the de facto ban on onshore wind in England, in place since 2015."; under the 2015 footnote, a wind application "should not be considered acceptable unless it is in an area identified as suitable" and could show that "the proposal has community support."; the test was often read to mean that "any opposition means the proposal cannot be considered acceptable."; the tests "no longer apply"; the government will consult on "bringing large onshore proposals into the Nationally Significant Infrastructure Project regime". https://www.gov.uk/government/publications/policy-statement-on-onshore-wind/policy-statement-on-onshore-wind . Checked at source, 13 Nov 2026.

Hard case	The risk	A precedent today	UP's way
People who move	Membership by birth, not by effect	EU municipal votes for resident citizens; Paris's participatory budget	Material effect, not nationality; future residents counted
Other living things	Treated as property with no voice	The Whanganui River and the Mar Menor as legal persons	Their health is part of UP's aim; weighed by the collective's tools; irreversible damage never traded; one way: represented by simulations
People far away versus a local veto	The nearest block the many, or the distant override the near	England's onshore wind test (2015–2024) and its removal	The whole materially affected circle decides; no single person can block a change that meets everyone's needs; a better design sought first

UP at work: one decision, followed through

A rule about who decides is easiest to judge in use, so it helps to follow one decision through UP from start to finish. Take one that falls on many kinds of people at once: where the town should put a new school. It touches children who can speak and children who cannot yet, parents, the neighbours of each possible site, the people along the roads that will carry the traffic, and families who do not live in the town yet. The walk-through below is one way UP could run, built from its tenets and agreed positions; it is not a procedure UP has adopted.

The proposal is published, with its question. The decision starts with an evidence-based proposal, published with its data, and an open question: does anyone have a better idea?[26] Anyone may work on it, whether or not it affects them, so an architect in another country can propose a design and a retired teacher can add what she knows about how children walk to school.[9,10]

The circle follows the effects. The stakeholders are everyone materially affected, including people downstream and future residents.[26] Here, that means the families who would use the school, the neighbours of each site, and the people along the roads the traffic would use, wherever they live. One way to start, as the illustrations below do, is to post the circle first, with its reasons, so that anyone left out can say so before anything is decided.

Those who can speak take part; those who cannot still count. Older children are not voiceless: anyone may take part in any problem, and nothing in UP's core sets a minimum age for being heard on what affects you.[10] Young children and the pupils of twenty years from now cannot speak for themselves. One way UP's positions describe is to represent them by several independent simulations, with their assumptions published, which give input but never a vote.[27]

A better design comes before a vote. Most conflicts that look like either/or are not.[26] If one site is close to most families and the other is safer to walk to, a design group might find a third option, a smaller school on each site, say, or a safe route to the first. Only when nothing better can be found do the stakeholders vote. Then three guards apply: a minimum share of the affected must take part, a random sample of those who did not take part is asked to confirm it, and the count of who took part, and how typical they were, is published.[49]

The floors sit under it. No vote may override the protected freedoms, and no gain for others can buy away anyone's basic needs.[26,28] However the stakeholders are drawn, no majority of them can vote to put a school where its pupils' health would be harmed, or to take a family's home without its consent.

The decision stays open. The decision reopens when new evidence or technology changes the options, and one made by a narrow group reopens automatically after a set time.[26,49] Every part of UP, its tenets included, can be improved through its own method, so the way the circle was drawn can be challenged too.[41]

Set beside the Chagossians' story, the difference is in the first question asked. Every decision in their history began with who had the power to decide. In this walk-through, it begins with whose lives the decision touches, and those people decide. Whether circles like this can be drawn well in hard cases, and at the scale of whole regions, is what the stages below set out, and it has to be shown.

How it could run, stage by stage

UP grows side by side with the current system, and who takes part and who decides changes as it grows. At the early stage UP is a minority network inside the current system; at the middle stage it has its own productive base and most of its members' needs are met from what UP produces; at the completed stage most people live mainly in UP. The early stage rests on today's evidence; the middle and completed stages are reasoned projections, labelled as such.[45] What follows are illustrations of one way each stage could run, not rules.

At the early stage, most of the decisions that shape a UP member's life are still taken outside UP, by governments, landlords and employers, and UP cannot change who sits at those tables. What it can change is how its own decisions are made. A UP community could post every problem it takes on to an open board where anyone may add evidence or a design, while the people affected decide; check one voice per person; publish who took part in each decision and how typical they were; and, where a decision falls on people who cannot speak, ask for input from more than one simulation, however rough, with its assumptions set out. Each of these already has a working precedent: open maps made by volunteers far away, participatory budgets open to residents of every nationality and to children, citizens' assemblies chosen by lot, as Chapters 5 and 6 described, and the future-role deliberations of Yahaba.[31,22,30,35,53]

> *Illustration: one way it could run. The early stage.* The household's teenage son walks to school past a junction where cars cut the corner fast, and he has seen two near misses. He posts the problem on the town's UP board with a week of his own counts: how many cars, how fast, how many children crossing. A retired engineer two towns away, who will never use the junction, suggests a cheap test: planters and paint to narrow the corner for a month. The people affected are the families on the street, the older children who cross there, and the bus drivers whose route turns there. The younger children, too young to take part, are represented, as one way UP's positions describe, by two simple models of how they cross, built by different volunteers, with their assumptions posted beside the proposal. The test runs. His counts, repeated by others, show slower turns and no near misses, and the drivers report that the bus still fits. The people affected, residents, the older children and the drivers, decide to keep it, with the younger children's models heard, and the town's council, still part of the current system, is shown the results. Nothing here is evidence; it shows how the parts fit.

By the middle stage, a reasoned projection, more of the decisions that shape members' lives become UP's own, because more of their needs are met from what UP produces. That raises the stakes of drawing the circle well. Decisions about water, energy, housing and land would reach across towns, and the circles would have to nest, as Ostrom's long-enduring commons did: the street decides what stays in the street, the watershed what crosses it.[51] The simulations that represent future people, young children and other living things could become more serious, built by several independent groups to shared experiments, as the climate models are, and published with their spread.[54,27] Communities could also borrow the human forms the current system has invented: guardians for a river, as the Whanganui and the Mar Menor have, and deliberations in which some participants take the part of the future, as in Yahaba.[24,25,53]

> *Illustration: one way it could run. The middle stage, a projection.* The town now runs its own water from a reservoir it shares with two villages downstream. When a proposal comes to draw more water for new homes, the circle of the affected is posted first, with its reasons, and anyone may challenge it. The son, who now does the electrical work on the town's pumps, points out that a farm co-operative below the second village also draws on the river; it is added. Three independent models of the river's flow over the next fifty years, one built by a university group outside UP, give input on what the change would mean for the people not yet living there and for the fish, and their assumptions sit beside the proposal. A better design, rainwater storage on the new homes, lets the town draw less than first proposed, and no vote is needed.

At the completed stage, also a projection, most of the decisions that shape most people's lives would be taken by circles of the people they materially affect, and far fewer would be taken by distant powers about people who are not in the room. The Chagossians' kind of story, in which a government decides a people's fate without them, would be much harder to repeat inside UP, because the floors stand under every decision and the circle follows the effect. What would persist is the hard work of drawing circles in contested cases, the disagreement over

values that the method turns into splits and trials rather than winners and losers, and the unequal attention people give to what does not affect them.[43,58]

> *Illustration: one way it could run. The completed stage, a projection.* The son is grown, and his grandfather is very old. The question the household now cares about most is how the town will care for its oldest people over the next twenty years, and the grandfather is in the circle, along with the care worker, the people training to do the work, and the residents who will be old in twenty years' time, who can speak for themselves; the people who will move to the town but do not live there yet are represented, as one way UP's positions describe, by simulations. He cannot go to meetings any more, so he is asked at home, and his answer is recorded beside everyone else's. He wants the garden kept.

Table 22.3 sets out the stages, and Table 22.4 sums up the benefits by stage and how each would be shown.

Table 22.3. Who takes part and who decides, stage by stage. The middle and completed stages are reasoned projections. Illustrations of one way UP could run, not directives.[45,10,26,49,27]

Stage	What changes	Real precedent	Why it could work	What persists
Early	UP's own problems posted to open boards; anyone may work on them; the people affected decide; one voice each; who took part published; rough simulations for those who cannot speak	Volunteer maps after the Haiti earthquake; Paris's participatory budget; citizens' assemblies chosen by lot; Future Design in Yahaba	The tools exist and the scale is small	Most decisions that shape members' lives are still taken outside UP; input comes most from those with time
Middle (projection)	More decisions are UP's own; circles nest from street to watershed; several independent simulations for future people, young children and other living things; guardians and future-role deliberations borrowed	Ostrom's nested commons; the climate model comparison project; the Whanganui and the Mar Menor	More of life runs through UP, and the circle follows the effect	Contested circles; local resistance; decisions still taken outside UP for those outside it
Completed (projection)	Most decisions shaping most lives taken by circles of the materially affected; floors under every decision	A reasoned projection from the mechanisms above	Fewer distant powers deciding about people who are not in the room	Hard cases of the circle; disagreement over values; unequal attention

Table 22.4. Expected benefits of who takes part and who decides, by stage. The early stage rests on today's evidence; the middle and completed stages are projections.[45,26,27]

Stage	For members	For people outside UP	For the living world	How it would be shown
Early	A say in UP's own decisions in proportion to how they are affected; help from anyone, anywhere, on their problems; children heard on what affects them	Anyone may take part in any problem, and the record of who decided, and how typical they were, is published	Rough simulations put the voiceless, other living things among them, on the record beside each proposal	Each decision's circle, turnout and outcome published, and checked against who was in fact affected
Middle (projection)	More of the decisions that shape their lives taken by the people they affect; circles that	Neighbours downstream counted in decisions that reach them, wherever they	Several independent simulations for future people and other living things, published with	Contested circles challenged and redrawn in the open; decisions reopened

[58] UP's step-3 evidence record, round 12c (28 Oct 2026), card U12 and the three gaps (AGREED as updated, Round 12c, 28 Oct 2026): F3, "Informal power inside UP is watched by everyone and answered as work, through open checks (12S)."; the third gap, "Who counts as affected: those affected decide (T4); voiceless stakeholders (future people, young children, other living things) are represented by several independent simulations that give input but never a vote (12S)."

Stage	For members	For people outside UP	For the living world	How it would be shown
	nest from street to watershed	live	their spread	when the evidence changes
Completed (projection)	Few decisions taken about them by distant powers; floors under every decision	Most people live mainly in UP, and no one is forced to	Decisions that would cause damage that cannot be undone ruled out by the floors	Measured person by person, against today's record and against the ideal

Sources: notes to this section.[28,49,52]

The strongest doubts

The first doubt is the one this chapter's reader is most likely to raise: local vetoes will block what distant people need. The evidence for it is strong. As Chapter 6 showed, the people who speak at local planning meetings oppose new housing far more than the public as a whole, and England's onshore wind tests, often read as letting any opposition count against a turbine, stood for nearly a decade.[20,57] A rule that "the people affected decide" sounds like a charter for the neighbours. UP's answer has four parts. The circle is everyone materially affected, so the family that needs the new home and the town that needs the power are in it, not only the people who can see the site from their windows.[26] In the words of UP's agreed position, no single person can block a change that meets everyone's needs, and those who would lose out are asked first and helped, which turns a veto into a negotiation over what the people nearest need in order to accept a change.[48] The first step is always the search for a design that meets both needs, and the vote, if it comes, has guards: a minimum share of the affected, a random sample confirming, and a narrow group's decision reopening after a set time.[26,49] And the floors cut both ways: no majority, local or distant, may push anyone below them.[28] What persists is real. Concentrated local costs and spread-out distant benefits are hard to weigh, and no rule makes the weighing easy. UP names it as open work for its method.

The second doubt is that whoever draws the circle holds the power. The record of districting shows why the worry is serious. In 2019 the United States Supreme Court, deciding *Rucho v. Common Cause*, accepted that "Excessive partisanship in districting leads to results that reasonably seem unjust" and that partisan gerrymandering is "incompatible with democratic principles", and still held that such claims "present political questions beyond the reach of the federal courts." In dissent, Justice Elena Kagan described the mechanism: "By that mechanism, politicians can cherry-pick voters to ensure their reelection."[59] A circle of "the affected" could be drawn the same way, to include the people who will agree and leave out the people who will not. UP's positions do not pretend otherwise. They answer with the same tools they use for every other form of power. One way UP could do this is to make the circle part of the proposal, published with its data and its reasons. Anyone may reframe a problem, which includes redrawing who it affects; UP's agreed position on power lists public records of who approved what among its designs; and the tenet on power asks everyone to watch for concentrations of power and spread them out again.[26,37,60,61] What persists is that a circle can still be drawn badly, and only scrutiny catches it.

The third doubt is that simulations put the modellers in charge of the voiceless. A model of the future, of a child's walk to school or of a river's fish embeds its builder's assumptions, and an authority that controlled the models would control what the voiceless "say". The climate scientists' answer is not to trust any one model: their comparison project runs many, built by different groups to shared experiments.[54] UP's position asks for the same: several independent simulations, with their assumptions published, giving input but never a vote.[27] No one in UP holds the office of modeller, and anyone may build a better model and put it beside the others.[10] What persists is that every model can be wrong, and that the voiceless are represented, not present. That is why UP gives them input and keeps the decision with people who can be held to account.

[59] *Rucho v. Common Cause*, 588 U.S. ___ (US Supreme Court, 27 June 2019), opinion of the Court by Chief Justice Roberts: "Excessive partisanship in districting leads to results that reasonably seem unjust."; partisan gerrymandering is "incompatible with democratic principles."; "We conclude that partisan gerrymandering claims present political questions beyond the reach of the federal courts."; dissent by Justice Kagan: "By that mechanism, politicians can cherry-pick voters to ensure their reelection." https://www.supremecourt.gov/opinions/18pdf/18-422_9ol1.pdf . Checked at source, 13 Nov 2026.
[60] UP's Position Ledger, card 26 (C-P3-04), *Concentration of power is the danger* (CANON, 23 Oct 2026): "So UP watches for concentrations of power in any form and keeps spreading them out. The threat is never declared gone. Design helps: caps, public records of who approved what, rotation of anyone who allocates, random audits, public and versioned allocation rules."
[61] UP's core (28 Oct 2026), T5 (*Power kept spread out*): "Concentration of power, in any form (wealth, position, information, access, expertise or machines), is treated as a standing danger."; "Everyone in UP watches for concentrations of power and spreads them out again. The threat is never declared gone; it is watched and answered." CANON.

The fourth doubt is that opening work to people who are not affected invites outsiders to swamp a local question. There is hard evidence for it. In 2017 the US Federal Communications Commission asked for public comment on repealing its net neutrality rules and received "more than 22 million comments". Four years later the New York Attorney General's office found that "nearly 18 million of these comments — the vast majority — were entirely fabricated", and that the broadband industry had spent "$4.2 million generating and submitting more than 8.5 million fake comments", many in the names of real people "without their knowledge or consent". Fake comments of this kind, the report warned, "drown out or dilute the voices of parties who have a genuine interest in the policy issue".[62] UP answers on two levels. It separates working on a problem from deciding it: anyone may propose, gather evidence or check, as the volunteer mappers of Haiti did, but only those affected decide.[9,31] And one voice per person, confirmed as unique and real, helps keep fake accounts out of any decision, while time and money earn recognition, never power.[42,37] What persists is that confirming identity well, without collecting more than uniqueness and reality, is open work, which Chapter 20 takes up. Outsiders who are real can still persuade. In UP that is not a flaw: a better idea from anywhere is supposed to win.

The fifth doubt is that without leaders nothing gets done, and that leaders will appear anyway. The second half is well supported. As Chapters 3 and 6 showed with Jo Freeman's warning, a group with no formal structure does not escape power: informal elites form anyway, and structurelessness can mask them.[63] UP's positions accept this. Informal power inside UP is treated as work, watched for by everyone and answered with open checks, never declared gone.[58,61] The first half is weaker than it sounds. Python's founder stepped back without naming a successor, and, as Chapter 6 told, its developers built a council elected after each feature release, which the core team can, in exceptional circumstances, remove by a vote of no confidence.[38] Chapter 6 also described UP's stewards, who rotate, are watched and can be replaced, for the work that needs continuity.[33] Work gets done in UP the way it gets done in open projects: by the people who take it on.

The last doubt is the most personal. If UP is aimed first at the people the current system fails, is there a place in it for someone the current system serves well? There is. UP is open to everyone, its floors protect everyone, and its aim is measured person by person, so no one's wellbeing is traded away to raise an average, and no one's needs or freedoms can be bought by a gain for others.[44,28] What UP does not offer is a way to hold more say than others because of what one owns: time and money earn recognition, never power.[37] Some people will prefer the current system for that reason, and UP does not need them to change. Anyone may stay out, and anyone may leave any group at any time, taking what is theirs.[28,29]

Back to the islands

What would UP's rule have asked of the decisions in Olivier Bancoult's life? It would have asked who was materially affected, and the answer would have included the people whose homes were on the islands. It would have put a floor under the decision, everyone's basic needs and protected freedoms, which no gain for others can buy, so that a people could not be left "to fend for itself in the slums of Port Louis".[28,3] It would have published the proposal, with its reasons, and asked whether anyone had a better idea. And it would have reopened the decision when new evidence came, rather than leaving a man who was taken from his island at four to spend his life asking to be let back into the room.[26]

UP cannot go back and make those decisions differently, and it cannot make decisions for governments outside it: it is never imposed, and it grows by being useful.[29] What it can do is make sure that, inside UP, the question the Chagossians kept asking is asked first rather than last. That is the whole of this chapter's answer to the reader. UP is for anyone. Anyone may take part in any problem, whether or not it affects them, and the people a problem affects decide its outcome. Those who cannot speak, the young, the unborn and the living world, still count, and one way UP's positions describe is to represent them by several independent simulations that give input but never a vote. No one holds an office over anyone else, no leader or founder is named in its core, and the person who first

[62] Office of the New York State Attorney General, *Fake Comments: How U.S. Companies & Partisans Hack Democracy to Undermine Your Voice* (released May 2021): the FCC received "more than 22 million comments"; "nearly 18 million of these comments — the vast majority — were entirely fabricated"; the broadband industry spent "$4.2 million generating and submitting more than 8.5 million fake comments to the FCC."; "more than 8.5 million of those comments using the names and personal information of real people" "without their knowledge or consent"; such comments "drown out or dilute the voices of parties who have a genuine interest in the policy issue". https://ag.ny.gov/sites/default/files/oag-fakecommentsreport.pdf . Release date: Al Jazeera, "New York blasts broadband firms for fake net neutrality comments", "Published On 6 May 2021". https://www.aljazeera.com/economy/2021/5/6/new-york-blasts-broadband-firms-for-fake-net-neutrality-comments . Checked at source, 13 Nov 2026.

[63] Chapter 3 ("What could still go wrong") and Chapter 6 ("The strongest doubts") set out Jo Freeman's "The Tyranny of Structurelessness" (talk 1970, published 1972), with its sources; Chapter 1 quotes her line "Thus structurelessness becomes a way of masking power".

wrote it down defines the idea without ruling over it. Its aim is the health, happiness and wellbeing of all, measured person by person; within that aim, it is aimed first at the people the current system fails, and the very rich are welcome but not needed.

That is UP's answer to who. The next question is when: how a system like this could grow from a few communities inside the current system to a way most people live, without collapse and without force. Chapter 23 takes it up.

Chapter card: Chapter 22

- **Claim:** UP is open to everyone. Anyone may take part in any problem, children included and whether or not it affects them, and the people a problem affects decide its outcome. The circle of the affected follows a decision's effects, not a map or a membership list: it includes everyone materially affected, people downstream and future residents among them, and no vote may override the protected freedoms. Those who cannot speak, future people, young children and other living things, still count; one way UP could run is to represent them by several independent simulations, with their assumptions published, which give input but never a vote. There are no offices and no leader, no founder is named in the core, and each person has one voice. UP aims at the health, happiness and wellbeing of all living things, measured person by person; its study holds that it is aimed first at the people the current system fails, and that the very rich staying out does not matter.
- **Core lines:** the tenets *The method* ("the people a problem affects decide its outcome"), *Open participation: anyone may take part; those affected decide*, *The aim* (measured person by person), *Floors that are never crossed* (including the right to leave), *Freely joined, ethically grown*; one voice per person; the dangers adopted (no leader, no founder; time and money earn recognition, never power; anyone acting outside the core stops being UP). Agreed positions: the decision steps and their guards; who decides; never below the floor; all living things; and, as illustrations, simulations for voiceless stakeholders and decisions at the smallest scale that can take them.
- **Rule of thumb:** Who does this affect, and were they asked?
- **What this is not:** a promise that everyone takes part equally, a local veto, rule by the people who turn up, rule by the people who build the models, or a claim that UP can decide for governments outside it. It is not a movement with a leader.
- **Check yourself:**
    1. What is the difference in UP between taking part in a problem and deciding its outcome, and why does UP keep them apart?
    2. Who counts as "materially affected"? Name three groups the current system often leaves out and say how UP's rule counts each.
    3. How do future people, young children and other living things count in UP, what is one way its positions describe for representing them, and why do they never vote?
    4. How does UP answer the objection that local people will block what distant people need?
    5. What did Python's founder do in 2018, as Chapter 6 told, and what does Jo Freeman's warning add about whether a group can do without leaders?
    6. Whom is UP aimed at first, within its aim of the wellbeing of all, and why does UP's study hold that the very rich staying out does not matter?
- **Open questions (for the wiki):** How should a community draw the circle of the affected in a contested case, and who checks it? How should the voice of a child be weighed at different ages? How should UP count people who would move to a place if a decision went one way? How should concentrated local costs be weighed against spread-out distant benefits? How many independent simulations are enough, and how should their disagreements be shown? (Improve this page.)

Chapter 23. When: The Stages and the Transition

On the first of December 1948, months after a civil war, José Figueres Ferrer, who led Costa Rica's provisional government, struck one of the battlements of the Cuartel Bellavista, the fortress in San José that had been the main headquarters of the country's army, with a sledgehammer. The blow was meant to symbolise a decision: the army, as a permanent institution, was finished, and that day the governing junta abolished it. In the same ceremony the keys of the fortress were handed to the University of Costa Rica, so that the building could become the National Museum.[1,2] The war that came before it had been short and bitter. It began in 1948, after the governing coalition tried to prevent the president-elect, Otilio Ulate, from taking office, when Figueres's own force rose against the government; about 2,000 civilians were killed.[3] The junta that Figueres led ruled for eighteen months, and in that time a new constitution was drawn up and promulgated. Its twelfth article opens with a single sentence: "The Army as a permanent institution is proscribed." The next sentence keeps what the army had been used for at home: "For the vigilance and conservation of the public order, there will be the necessary forces of police."[3,4] Then, as it had promised, the junta handed the government over to Ulate.[3]

The wall Figueres struck still stands, and visitors to the museum can see it. The barracks' old cells are part of the museum too.[2] More than seventy-five years later the article still stands, and Costa Rica has kept no standing army since.[4] UNESCO's Memory of the World register holds the two documents that record the abolition, nominated by Costa Rica's national archive, which described the decision as one taken by the provisional government "immediately after an armed conflict", and the abolition as "an example to the world that it is possible to live in an unarmed democracy".[5]

This chapter begins with Costa Rica because the question it answers is the one readers ask once they have followed UP through every area of life: how do we get from here to there without collapse? The stages have run through every chapter of Part Three: an early stage, when UP is a minority network inside the current system; a middle stage, when UP has its own productive base and most of its members' needs are met from what it produces; and a completed stage, when most people live mainly in UP.[6] This chapter tells them as one story, the transition itself, and asks what history says about whether such a story can end well. Costa Rica does not prove

[1] Sistema Nacional de Bibliotecas de Costa Rica (SINABI), *Abolición del Ejército* (bibliography), presentation and introduction: "un glorioso 1° de diciembre de 1948, la Junta Fundadora de la Segunda República abolió el Ejército Nacional."; "el certero mazazo en una de las almenas del Cuartel Bellavista"; "El 1° de Diciembre de 1948, en el entonces Cuartel Bellavista, hoy Museo Nacional, José Figueres Ferrer,"; "dio un golpe de mazo contra sus muros para simbolizar la decisión de acabar con el ejército como institución permanente."; "En esta declaración oficial se realizó la entrega de las llaves del Cuartel a la Universidad de Costa Rica"; "para fines del Museo Nacional." https://www.sinabi.go.cr/biblioteca%20digital/bibliografia/bibliografias/Bib%20Abolicion%20ejercito.pdf . 1 December is the date Costa Rica marks as the Day of the Abolition of the Army; one history of the National Museum, published on the museum's site, dates the ceremony to 2 December, "la ceremonia efectuada el 2 de diciembre de 1948": https://www.museocostarica.go.cr/wp-content/uploads/Publicaciones/Historia/historia-museo-nacional-kandler.pdf . The same bibliography adds that the abolition was formalised "con la firma del Decreto N° 749 del 11 de octubre de 1949,", and UNESCO's register entry (note 5) gives that date: "In 11 October 1949, Costa Rica abolished the army". The junta announced the abolition in December 1948, and the decree of 1949 and the constitution of that year made it permanent. Checked at source, 13 Nov 2026.

[2] Museo Nacional de Costa Rica, visitor brochure (English): "The building housing it is the former Cuartel Bellavista; it was the main headquarters of Costa Rica's army until 1948."; "Wall where the iconic hammer blow was given, meaning the army's abolition"; "They were formerly the Bellavista Headquarters' cells." https://www.museocostarica.go.cr/wp-content/uploads/visitar/folletos/brochure-mncr-eng.pdf . Checked at source, 13 Nov 2026.

[3] Encyclopaedia Britannica, "Costa Rica", section "Transition to democracy": the governing coalition "tried to prevent the seating of the president-elect, Otilio Ulate, a Social Democrat."; "José Figueres Ferrer, an outspoken landowner who favoured a greater role for state enterprise,"; "His army, which evolved into the National Liberation Party (Partido Liberación Nacional; PLN),"; "launched a successful rebellion against the government and sparked a brief civil war"; "in which about 2,000 civilians were killed."; "Figueres led the country for 18 months."; "A new constitution, promulgated in 1949 by Figueres's regime,"; it "prohibited the establishment or maintenance of an army"; "Then, as promised, the junta turned the government over to Ulate." https://www.britannica.com/place/Costa-Rica/Transition-to-democracy . Checked at source, 13 Nov 2026.

[4] Constitution of Costa Rica, 1949 (revised 2020), Article 12, in the English translation published by the Constitute Project: "The Army as a permanent institution is proscribed."; "For the vigilance and conservation of the public order, there will be the necessary forces of police."; "Military forces may only be organized by a continental agreement or for the national defense;"; "one and the other will always be subordinate to the civil power:". https://www.constituteproject.org/constitution/Costa_Rica_2020?lang=en . The article is in the constitution as revised in 2020. Checked at source, 13 Nov 2026.

[5] UNESCO, Memory of the World, "Abolition of the Army in Costa Rica": "The National Archive of Costa Rica nominates two documents under its custody, on the abolition of the army in Costa Rica"; "This was a decision of the provisional Government board, immediately after an armed conflict"; "it is an example to the world that it is possible to live in an unarmed democracy"; it "allowed Costa Rica to become an example at world level, of a pacifist and civilian nation". https://en.unesco.org/memoryoftheworld/registry/209 . Checked at source, 13 Nov 2026.

[6] UP's agreed position on judging UP by stage, beside the current system: UP grows side by side with the current system, early (a minority network inside it), middle (its own productive base; most members' needs met from what UP produces) and completed (most people live mainly in UP); the early stage rests on today's evidence, and the middle and completed stages are a reasoned projection from cited mechanisms, labelled as such. The same lesson adds: "UP's aim is the people the old system fails, person by person; that the very rich stay out does not matter." Full wording in UP's study lessons (lesson 13); the Position Ledger (round 12c, position 1) records the same division between today's evidence and projection.

that it can. Its army was small, and a Costa Rican historian, Lucía Arce of the University of Costa Rica, has warned against the popular belief that abolishing it paid for the country's schools. Primary-school coverage had risen from 66 per cent in 1938 to almost 86 per cent in 1950, an expansion that began before the army was abolished, and the army that was abolished was, in her words, weak, fragile and without budgetary support. Its abolition did not pay for much, she suggests, but it helped change how the country saw itself.[7] What Costa Rica shows is narrower and more useful. A country chose, on its own, to convert an institution of force into something else. It kept the job that still needed doing, public order, and gave it to a police force answerable to civilians. It turned the building into a museum. And having done so, it lasted, which is the part of a transition that matters most. In UP's terms it is a small, real case of something UP's agreed positions describe as one way the transition could run: as cities and nations join, weapons and standing armies are dismantled and converted into law enforcement, emergency aid and rapid response, and the resources go to the transition.[8] And it was freely done, which is the condition of everything UP does. UP's tenet *Freely joined, ethically grown* holds that UP "is never imposed. No one is forced to join, to work or to give up what is theirs."[9]

The same turn, in many places

Costa Rica converted an army that was small. The larger turns that history offers are with weapons that could end cities. In 1989 South Africa's government halted its nuclear weapons programme.[10] A presidential order of 1990 called for the destruction of "the six completed nuclear devices and the incomplete seventh device", and in July 1991 the country joined the Treaty on the Non-Proliferation of Nuclear Weapons. On 24 March 1993 the president told Parliament what had been done, announcing, in the words of the International Atomic Energy Agency's report, "the former existence and the subsequent abandonment" of the programme. The Agency's inspectors then went through what remained. They found that "the sensitive weapons components had either been destroyed or damaged beyond re-use", that the highly enriched uranium supplied for the weapons had been returned to the country's civilian Atomic Energy Corporation, and that there was no evidence the inventory of nuclear material it had declared was incomplete.[10] A country that had built nuclear weapons dismantled them by its own decision, and invited inspectors to check that it had.

The two largest arsenals have turned too, in part. Chapter 12 set out Reykjavik, the Intermediate-Range Nuclear Forces Treaty and Megatons to Megawatts as precedents for converting weapons; here they matter as conversions, and for what made each one work. At Reykjavik in October 1986, by Reagan's own account, he and Gorbachev were "in sight of an historic agreement" to eliminate offensive ballistic missiles within ten years, and it foundered on missile defence.[11] The transcripts the National Security Archive has published, the American ones obtained through freedom of information requests, show how close they came, and why the deal would have

[7] Bárbara Marín, "Análisis de un mito popular: ¿Contribuyó la abolición del ejército a la educación?", Teletica (1 December 2021), quoting the historian Lucía Arce of the University of Costa Rica: "Costa Rica elimina al ejército, un ejército débil, frágil, sin respaldo presupuestario"; "Seríamos muy sesgados si decimos que teníamos un ejército robusto"; "Eso no es tan real, pero sí contribuye, sobre todo para cambiar la mentalidad colectiva". The article reports primary-school coverage rising "de 66% de cobertura en primaria durante 1938 a casi un 86% en 1950". https://www.teletica.com/299929_analisis-de-un-mito-popular-contribuyo-la-abolicion-del-ejercito-a-la-educacion . A news report quoting a historian. Checked at source, 13 Nov 2026.

[8] UP's agreed position on weapons and armies (round 12S, position 6, UP Moderator's wording; an illustration of one way UP could run, not a directive): "Nuclear weapons dismantled and converted to power plants as soon as possible. Weapons and standing armies dismantled and converted into law enforcement, emergency aid groups and rapid response. Resources go to the transition." The position names as a precedent "Reykjavik 1986, the near-total nuclear disarmament discussed by Reagan and Gorbachev." Full wording in UP's agreed positions (the Position Ledger).

[9] Core tenet: *Freely joined, ethically grown*, in full: "UP is never imposed. No one is forced to join, to work or to give up what is theirs. It grows by being useful, building on what people already do, and it acts only by ethical means. A means is ethical when it serves the health, happiness and wellbeing of all and crosses none of the floors; UP never starts harm against anyone. What counts as ethical is defined and refined by the collective through UP's method." Full wording in "The core of UP".

[10] International Atomic Energy Agency, *The Denuclearization of Africa*, report by the Director General, GC(XXXVII)/1075 (9 September 1993): Annex 1, under 1990, "Order by State President for destruction of the six completed nuclear devices and the incomplete seventh device"; "1991 Accession to the NPT (10 July)"; Attachment 1, paragraph 20, "the South African State President announced the former existence and the subsequent abandonment"; paragraph 19, "the sensitive weapons components had either been destroyed or damaged beyond re-use"; paragraph 24, "the HEU originally supplied to ARMSCOR/Circle had been returned to the AEC"; paragraph 5, "the team found no evidence that the inventory of nuclear material included in the initial report was incomplete". https://iaea.org/sites/default/files/gc/gc37-1075_en.pdf . The AEC was South Africa's Atomic Energy Corporation. Nuclear Threat Initiative, page on South Africa's nuclear disarmament: "The government halted its nuclear weapons program in 1989 and dismantled existing weapons and production equipment."; "President de Klerk announced to South Africa's Parliament on 24 March 1993". https://www.nti.org/analysis/articles/south-africa-nuclear-disarmament/ . Checked at source, 13 Nov 2026.

[11] Ronald Reagan, "Remarks at a Meeting With Officials of the State Department and the U.S. Arms Control and Disarmament Agency on the Meetings in Iceland With Soviet General Secretary Gorbachev" (14 October 1986), Reagan Presidential Library: "And maybe most important, we were in sight of an historic agreement"; "on completely eliminating the threat of offensive ballistic missiles by 1996."; "I offered to put off deployment for a decade, and I coupled that with a 10-year plan"; "for eliminating all Soviet and American ballistic missiles from the face of the Earth."; "The biggest disappointment in Iceland was that Mr. Gorbachev decided to make our progress hostage"; "to his demand that we kill our strategic defense program." https://www.reaganlibrary.gov/research/speeches/101486c . Reagan's own account. Checked at source, 13 Nov 2026.

required “an exceptional level of trust that neither side had yet developed”.[12] What the summit could not do at once, the INF Treaty of December 1987 did in part: it eliminated a whole category of nuclear weapons, and inspectors from each side checked the other’s territory until 2,692 missiles had been destroyed by June 1991. The United States withdrew from it in 2019.[13] Megatons to Megawatts went furthest toward the conversion UP’s positions describe. Over twenty years, from 1993, 500 tonnes of highly enriched uranium from Russia’s stockpiles were diluted into fuel for American power stations, and for two decades fuel made from it generated up to a tenth of the electricity produced in the United States, in what the company that bought it called “a unique, commercially financed government-industry partnership”.[14] One way the transition could run, in UP’s agreed positions, is that nuclear weapons are dismantled and converted to power plants as soon as possible.[8] Megatons to Megawatts did something close to it, at scale, inside the current system.

There is also a turn that went badly, and it teaches as much. After the invasion of Iraq in 2003, the Coalition Provisional Authority that governed the country issued an order that “dissolved” a number of military and other security entities. The British government’s inquiry into the war found that this “was a key decision which was to have a significant effect on the alienation of the Sunni community and the development of an insurgency in Iraq”.[15] The difference from Costa Rica is not that one country gave up its army and the other lost it. It is who decided, and what happened to the people and the work. In Costa Rica a national government chose to convert its own institution and kept its peacekeeping work in a civilian police force. In Iraq an occupying authority dissolved another country’s security institutions by order, and the inquiry linked the decision to the alienation of a whole community and to an insurgency.

Taken together these cases form a pattern, and the pattern is what matters for UP. Conversions of the machinery of force have worked when the people who held it chose to give it up, when the work it did that was still needed was kept or moved, when the material itself was turned to a use people valued, and when someone could check that it had been done. They went badly where a structure was dissolved from outside, by order, as in Iraq. Table 23.1 sets the cases side by side. The first pattern is the one UP’s positions give as one way the transition could run: conversion as cities and nations join, never imposed, with the old work turned into law enforcement, emergency aid and rapid response rather than simply cut away.[8,9]

Table 23.1. Conversions of the machinery of force: who decided, what was kept, and how it turned out.[1,3,4,10,13,14,15]

Case	Who decided	What happened to the work and the material	Checked by	Outcome
Costa Rica, 1948–49	The country’s own provisional government, then its constitution	Army proscribed; police kept for public order, under civilian power; the fortress became the National Museum	The constitution	No standing army kept for more than seventy-five years
South Africa, 1989–93	The country’s own government	Six devices destroyed; weapons uranium returned to the civilian	International Atomic Energy Agency inspectors	Inspectors found weapons components destroyed and no

[12] National Security Archive, “The U.S. and Soviet versions of Reykjavik” (10 October 2026): “almost achieved a deal 40 years ago at the 1986 Reykjavik summit to abolish nuclear weapons”; the agreement would have required “an exceptional level of trust that neither side had yet developed”; the posting includes “the complete U.S. and Soviet transcripts of the Reykjavik summit”; “The U.S. documents were obtained by the Archive through Freedom of Information Act requests”. https://nsarchive.gwu.edu/node/4929 . Checked at source, 13 Nov 2026.

[13] Arms Control Association, “The Intermediate-Range Nuclear Forces (INF) Treaty at a Glance”: “Their efforts culminated in the signing of the INF Treaty on Dec. 8, 1987”; the treaty would “eliminate an entire category of nuclear weapons”; “and employ extensive on-site inspections for verification.”; the two sides “destroyed a total of 2,692 short-, medium-, and intermediate-range missiles”; “by the treaty’s implementation deadline of June 1, 1991”; “On Aug. 2, 2019, the United States formally withdrew from the INF Treaty.” https://www.armscontrol.org/factsheets/inftreaty . Checked at source, 13 Nov 2026.

[14] World Nuclear News, “Megatons to Megawatts program concludes” (11 December 2013): “In 1993, the US and Russian governments signed an agreement for the purchase over a 20-year period of 500 tonnes”; “Four cylinders containing the final LEU under the program arrived by ship from St Petersburg”; “at the Port of Baltimore in Maryland earlier this week.” https://world-nuclear-news.org/articles/megatons-to-megawatts-program-concludes . Centrus Energy, “Megatons to Megawatts”: “The first shipment of warhead-derived low enriched uranium from Russia arrived in the United States in June 1995.”; “permanently eliminating enough bomb-grade material for 20,000 nuclear warheads.”; “For two decades, up to 10 percent of the electricity produced in the United States”; “low enriched uranium from the Megatons to Megawatts program.”; “The Megatons to Megawatts™ Program was a unique, commercially financed government-industry partnership”. https://www.centrusenergy.com/who-we-are/history/megatons-to-megawatts/ . Centrus bought the fuel; the page names “Centrus’ predecessor, the United States Enrichment Corporation.” Checked at source, 13 Nov 2026.

[15] *The Report of the Iraq Inquiry: Executive Summary* (UK House of Commons, 6 July 2016), paragraph 675: “The decision to issue CPA Order No.2, which “dissolved” (or disbanded) a number of military and other security entities”; “Dissolution was a key decision which was to have a significant effect on the alienation of the Sunni community”; “and the development of an insurgency in Iraq”. https://assets.publishing.service.gov.uk/media/5a80f42ced915d74e6231626/The_Report_of_the_Iraq_Inquiry_-_Executive_Summary.pdf . CPA: the Coalition Provisional Authority. Checked at source, 13 Nov 2026.

Case	Who decided	What happened to the work and the material	Checked by	Outcome
		atomic energy body		evidence of undeclared nuclear material
INF Treaty, 1987–91	Two governments, by treaty	2,692 missiles destroyed	Inspectors on each side's territory	An entire category of weapons eliminated; treaty ended 2019
Megatons to Megawatts, 1993–2013	Two governments and a company	Weapons uranium diluted into power-station fuel	—	Up to 10% of US electricity for two decades
Iraq, 2003	An occupying authority, by order	Military and security entities "dissolved"	—	The inquiry found it helped alienate a community and fuel an insurgency

How the current system changes, and what it gets right

Before asking how UP could make its own transition, it is worth crediting how much the current system already knows about changing without collapse. The record of large peaceful change is longer than it seems. On 23 August 1989, the fiftieth anniversary of the Molotov–Ribbentrop Pact between Nazi Germany and the Soviet Union, people in Estonia, Latvia and Lithuania joined hands in a human chain from Tallinn to Vilnius. A UNESCO account of the event, hosted by Lithuania's national commission for UNESCO, counts "More than a million people" in a chain about 600 kilometres long and describes an "impressive act of non-violent protest and solidarity"; Lithuania's government puts the number at up to two million. The chain's documents were inscribed on UNESCO's Memory of the World register in 2009.[16,17] The road to independence was not bloodless: an attempt to overthrow Lithuania's government on 13 January 1991 "ended in bloodshed". But its independence and international recognition were secured later that year, in the aftermath of a failed coup in Moscow.[18]

The Baltic Way was one case of a pattern the political scientist Erica Chenoweth has measured, as Chapter 12 noted. Counting the mass campaigns from 1900 to 2019 that sought to remove a national government, win independence or expel an occupation, 565 of which have both begun and ended, she found that "about 51 percent of the nonviolent campaigns have succeeded outright, while only about 26 percent of the violent ones have." She also reported, honestly, that the advantage has narrowed: "Since 2010, less than 34 percent of nonviolent revolutions and a mere 8 percent of violent ones have succeeded." Among the reasons she gives are that campaigns have become smaller, that movements lean on mass demonstrations and neglect other methods, and that "governments may be learning and adapting to nonviolent challenges from below."[19] Nonviolent change still works more often than violent change, by her count, but it has become harder, and anyone planning a long transition should know both halves of that finding.

The current system also has working ways to move ownership from one form to another by choice. Chapter 1 told how John Spedan Lewis, in 1929 and 1950, handed his family's stores to the people who worked in them, in trust,

[16] "The Baltic Way", document on the site of the Lithuanian National Commission for UNESCO (unesco.lt): "was a unique peaceful mass demonstration that took place on 23 August 1989."; "More than a million people joined hands to create a 600 km long human chain from Tallinn to Vilnius,"; "impressive act of non-violent protest and solidarity"; "In 2009 the Baltic Way document collection was inscribed on the UNESCO Memory of the World International Register." https://unesco.lt/images/THE_BALTIC_WAY.pdf . Checked at source, 13 Nov 2026.

[17] Lithuania.lt (official site of the Republic of Lithuania), "Commemorating 35 Years Since the Baltic Way: A Symbol of Unity and the Struggle for Freedom": "August 23, 1989, marked the 50th anniversary of the Molotov-Ribbentrop Pact"; "Across the entire Baltic Way, it is believed that up to two million people participated." https://lithuania.lt/governance-in-lithuania/commemorating-35-years-since-the-baltic-way-a-symbol-of-unity-and-the-struggle-for-freedom/ . Estimates of the number taking part differ; the text gives both. Checked at source, 13 Nov 2026.

[18] Encyclopaedia Britannica, "Lithuania", section "Independence restored": "An abortive effort to topple the independent government on Jan. 13, 1991, ended in bloodshed."; "Political independence and international recognition were secured in the aftermath of the failed coup". https://www.britannica.com/place/Lithuania/Independence-restored . Checked at source, 13 Nov 2026.

[19] Erica Chenoweth, "The Future of Nonviolent Resistance", *Journal of Democracy* 31(3):69–84 (July 2020): "over the period 1900–2019, analysts have identified a total of 628 maximalist mass campaigns"; maximalist campaigns are "those that seek to remove the incumbent national leadership from power or create territorial independence"; "through secession or the expulsion of a foreign military occupation or colonial power"; "Among the 565 campaigns that have both begun and ended over the past 120 years,"; "about 51 percent of the nonviolent campaigns have succeeded outright, while only about 26 percent of the violent ones have."; "Since 2010, less than 34 percent of nonviolent revolutions and a mere 8 percent of violent ones have succeeded."; "civil-resistance campaigns have become somewhat smaller on average than in the past"; "contemporary movements tend to over-rely on mass demonstrations while neglecting other techniques"; "Second, governments may be learning and adapting to nonviolent challenges from below." https://www.journalofdemocracy.org/articles/the-future-of-nonviolent-resistance-2/ . Checked at source, 13 Nov 2026.

and the John Lewis Partnership is still owned that way.[20] In September 2022 Yvon Chouinard, the founder of the clothing company Patagonia, announced that the company's ownership had been given away: all the voting stock to a trust, and all the non-voting stock, 98 per cent of the company, to a collective that receives as a dividend, to fight the environmental crisis, the money the company makes after reinvesting in the business. "Earth is now our only shareholder," he wrote.[21] Both were the decisions of owners about what was theirs, made within the law, and the older of the two has lasted three-quarters of a century. A city can redirect what it spends as well. The English city of Preston and its large local institutions set out to spend more with suppliers rooted in the area, and by the city's most recent analysis the spending they kept within Preston had risen by £74 million from the 2012/13 baseline, to £112.3 million.[22] And when debts become unpayable, the current system has ways to reduce them. In 1996 the International Monetary Fund and the World Bank launched the Heavily Indebted Poor Countries Initiative, under which creditors commit to reducing a country's debt to a level considered sustainable; 36 countries have completed the process, and a later initiative gave those countries 100 per cent relief on their eligible debts to the IMF, the World Bank and the African Development Fund.[23]

The failures are of a different kind. On the record set out here, the current system is good at gradual change inside itself and at peaceful change when people press for it in great numbers, and far worse at large transitions of its economic base, which have often come by shock. When the communist economies of Eastern Europe and the former Soviet Union were dismantled, some countries chose rapid mass privatisation. A study in *The Lancet* in 2009 found that "Mass privatisation programmes were associated with an increase in short-term adult male mortality rates of 12.8%". The finding was disputed: other economists, re-analysing the same data, argued that the claim "does not stand up to closer examination".[24,25] But one part of the original study bears directly on UP. Its authors found that "the effect of privatisation was reduced if social capital was high": the more of a country's people belonged to at least one social organisation, the weaker the association, and "when more than 45% of a population was a member of at least one social organisation", privatisation "was no longer significantly associated with increased mortality rates".[24] On their reading, countries where more people belonged to such organisations came through the shock better.

In UP's terms, each of these is a piece of a transition held in isolation. The disarmament cases show that the machinery of force can be converted, checked and turned to use. The Baltic Way and Chenoweth's figures show that great numbers acting without violence can change what seemed fixed. Lewis, Chouinard and Preston show owners and a city choosing to move what is theirs into new forms. Debt relief shows that old obligations can be set aside by agreement. The post-communist transitions show what happens when a whole economic base is torn out quickly from above, and the study's finding on social organisations hints at what softens the fall. What none of them provides is a way for all of this to happen together, by choice, while the current system keeps running, so that nothing has to collapse for something better to grow. That is the transition UP's positions describe.

[20] See Chapter 1, "The same pattern, in many places", and its notes: John Spedan Lewis signed the first trust settlement on 18 April 1929 and the second in 1950, and the John Lewis Partnership is still owned in trust for its employees, whom it calls Partners.

[21] Patagonia, "Earth is now our only shareholder" (Yvon Chouinard's letter, 14 September 2022, and the ownership FAQ): "Earth is now our only shareholder."; "100% of the company's voting stock transfers to the Patagonia Purpose Trust"; "100% of the nonvoting stock had been given to the Holdfast Collective"; "Each year, the money we make after reinvesting in the business will be distributed as a dividend to help fight the crisis."; "The Holdfast Collective owns 98% of the company and all of the nonvoting stock." https://www.patagonia.com/ownership/ . The company's own statement. Checked at source, 13 Nov 2026.

[22] Preston City Council, "The definitive guide to the Preston model": by the most recent spend analysis, "the procurement from institutions rooted in Preston retained within the city was £112.3m"; "a rise of £74m from 2012/13."; "Within the wider Lancashire economy (including Preston) £488.7m of spend had been retained". https://www.preston.gov.uk/article/1791/The-definitive-guide-to-the-Preston-model . The council's own account; the page does not give the year of the latest analysis. Checked at source, 13 Nov 2026.

[23] International Monetary Fund, "Debt Relief Under the Heavily Indebted Poor Countries Initiative" (factsheet, 3 February 2023): "The IMF and World Bank launched the Heavily Indebted Poor Countries (HIPC) Initiative in 1996"; "36 have reached their completion point and are receiving full debt relief from the IMF and other creditors."; "the HIPC Initiative was supplemented by the Multilateral Debt Relief Initiative"; at the decision point the international community "commits to reducing debt to a level considered sustainable"; the MDRI "allows countries completing the HIPC Initiative process to receive 100 percent relief on eligible debts" from the IMF, the World Bank and the African Development Fund. https://www.imf.org/en/About/Factsheets/Sheets/2023/Debt-relief-under-the-heavily-indebted-poor-countries-initiative-HIPC . Checked at source, 13 Nov 2026.

[24] David Stuckler, Lawrence King and Martin McKee, "Mass privatisation and the post-communist mortality crisis: a cross-national analysis", *The Lancet* 373(9661):399–407 (2009), abstract: "Mass privatisation programmes were associated with an increase in short-term adult male mortality rates of 12.8%"; "Each 1% increase in the percentage of population who were members of at least one social organisation"; "decreased the association of privatisation with mortality by 0.27%;"; "when more than 45% of a population was a member of at least one social organisation,"; "privatisation was no longer significantly associated with increased mortality rates"; "(3.4% [95% CI -5.4 to 12.3]; p=0.44)."; "Rapid mass privatisation as an economic transition strategy was a crucial determinant"; "the effect of privatisation was reduced if social capital was high." https://researchonline.lshtm.ac.uk/id/eprint/5991 . An observational, cross-national study; see the next note for a challenge to it. Checked at source, 13 Nov 2026.

[25] Christopher J. Gerry, Tomasz Mickiewicz and Zlatko Nikoloski, "Did mass privatisation really increase post-communist male mortality?", *The Lancet* 375(9712):371 (2010), abstract of the working paper version: the claim "does not stand up to closer examination."; "It is not supported empirically". https://research.aston.ac.uk/en/publications/did-mass-privatisation-really-increase-post-communist-male-mortal/ . Checked at source, 13 Nov 2026.

What history shows about parallel systems

UP is a parallel system: it grows beside the old one rather than replacing it at a stroke, and people move their work and needs into it as it becomes useful to them.[6] History has many parallel systems, and their fates are instructive.

The most striking success is in software. Chapter 1 told how Microsoft went from its chief executive calling Linux "a cancer" in 2001 to joining the Linux Foundation as a Platinum Member fifteen years later.[26,27] Linux had begun, as the Introduction told, as a student's hobby: Linus Torvalds announced it as something that would not be big, shared the code, and others joined him.[28] What matters for this chapter is what came after. In 2016 Steve Ballmer, who had called it a cancer, was reported to have described the threat to Windows from Linux as now "in the rearview mirror".[29] By October 2024 Microsoft was reporting that "Linux has become the most popular operating system on Azure as over 60% of customer cores run Linux-based workloads", Azure being Microsoft's own cloud.[30] Linux did not defeat Microsoft, and it did not need to. It grew beside it by being useful to people where they already were, and Microsoft's own customers have since made it the most used system on Microsoft's cloud. UP's agreed account of the transition draws exactly this lesson: the early stage is the hinge, and "history says open systems cross it by being useful to people where they already are".[31]

Other parallel systems fared worse, and the ways they failed are just as useful. Chapter 3 told the story of the intentional communities of nineteenth-century America, from New Harmony to Brook Farm, most of which lasted only a few years, and of the finding that religious communes outlived secular ones. Its lesson was that asking people to leave the world and start again somewhere else is the hardest way to build anything, and it rarely lasts.[32] UP's positions ask the opposite of its nodes: to be woven into their communities and useful to them.[33] Co-operatives, among the most durable parallel economies of the last two centuries, have met a subtler danger. For more than a century, three researchers of employee-owned firms wrote in 2014, the academic literature on such businesses "has been dominated by the 'degeneration thesis'": the expectation that they either "fail commercially, or they relinquish their democratic characters." Their own study of two large employee-owned retailers, the John Lewis Partnership in Britain and Eroski in Spain, found managers working deliberately to hold the two goals together, and they offered it as new support for a "regeneration thesis".[34] The danger is real, though. Chapter 1 told

[26] Thomas C. Greene, "Ballmer: 'Linux is a cancer'", *The Register* (2 June 2001), reporting an interview in the *Chicago Sun-Times*: "Linux is a cancer that attaches itself in an intellectual property sense to everything it touches,". https://www.theregister.com/2001/06/02/ballmer_linux_is_a_cancer/ . Checked at source, 13 Nov 2026.

[27] Microsoft, "Microsoft contributes to open ecosystem by joining Linux Foundation and welcoming Google to the .NET community" (16 November 2016): "Microsoft on Wednesday announced it has joined the Linux Foundation as a Platinum Member."; Jim Zemlin, the foundation's executive director: "By becoming a Linux Foundation Platinum member, Microsoft is better able to collaborate with the open source community". https://news.microsoft.com/2016/11/16/microsoft-contributes-to-open-ecosystem-by-joining-linux-foundation-and-welcoming-google-to-the-net-community/ . Checked at source, 13 Nov 2026.

[28] See the Introduction, "More of what already works", and its notes: Linus Torvalds's post of 25 August 1991 to the newsgroup comp.os.minix, describing his operating system as "just a hobby, won't be big and professional like gnu". See also Chapter 1, "The same pattern, in many places", on Linux beneath Android.

[29] Gavin Clarke, "Steve Ballmer: Get the Facts. I 'love' SQL Server on Linux", *The Register* (11 March 2016): "Ballmer described the threat to Windows from Linux as now"; "in the rearview mirror". The article reports him as speaking at a dinner event that week. https://www.theregister.com/2016/03/11/ballmer_linux_non_apology/ . Checked at source, 13 Nov 2026.

[30] Microsoft Tech Community, Linux and Open Source Blog, "Announcing availability of AlmaLinux as an endorsed Linux distribution in Azure" (29 October 2024): "Linux has become the most popular operating system on Azure as over 60% of customer cores run Linux-based workloads." https://techcommunity.microsoft.com/t5/linux-and-open-source-blog/announcing-availability-of-almalinux-as-an-endorsed-linux/ba-p/4282201 . Microsoft's own statement. Checked at source, 13 Nov 2026.

[31] UP's agreed overall claim (round 12c, OV, option B): "As UP grows beside the old system, the people the old system fails move their work and needs into UP"; "Force used by those outside UP shrinks as cities and nations join and convert their weapons and armies into law enforcement, emergency aid and rapid response."; "What persists is named openly as work: damage already locked into the climate; threats from space, until humanity can leave the solar system; and the human remainder, because UP is not magic and suffering continues while its biggest causes fall."; "Disagreement over values is not a failure: splits test different ways in the real world."; "The early stage is the hinge, and history says open systems cross it by being useful to people where they already are." Full wording in the round 12c record, adopted in UP's agreed positions (the Position Ledger).

[32] See Chapter 3, "Starting over somewhere else", and its notes: New Harmony (1825–27), Brook Farm (1841–47), Oneida (1848–1880–81), and Richard Sosis's study of 200 nineteenth-century American communes, which found religious communes more likely than secular ones to survive at every stage of their life course.

[33] UP's agreed position that nodes survive as partners, not targets (card 25): "Legacy systems will not simply dissolve; they are transformed from within."; nodes are farms, clinics, workshops and land "that states can tax, license or seize", so UP's strategy "is not to be an unfindable target but an indispensable partner"; nodes are useful and embedded in their communities, and "work with local and regional governments on their hardest problems, such as elder care, resilience and lifelong education"; "That makes suppression politically costly, and as nodes prove themselves, state functions are handed to the network or fade through people's choice." Round 11 set the book's wording for this position's means as "ethical" (T10), not "lawful" or "nonviolent" (Position Ledger, "Core · Round 11", "Manuscript changes": "#4b and card 25 say 'ethical', not 'lawful' or 'nonviolent'"); the card's sentences that use those words are not quoted here. Full wording in UP's agreed positions (the Position Ledger).

[34] John Storey, Imanol Basterretxea and Graeme Salaman, "Managing and resisting 'degeneration' in employee-owned businesses: A comparative study of two large retailers in Spain and the UK", *Organization* 21(5):626–644 (2014), abstract: "for more than a century, academic literature on employee-owned businesses has been dominated by the 'degeneration thesis'."; "This suggested that these businesses tend towards failure"; "they either fail commercially, or they relinquish their democratic characters."; "The paper thus puts some new flesh on the 'regeneration thesis'." https://oro.open.ac.uk/40063 . The two retailers are the John Lewis Partnership and Eroski. Checked at source, 13 Nov 2026.

how Mondragon, the federation of Basque co-operatives, grew partly through subsidiaries abroad, until by 2019 more of the people working in its sectors were not owner-members than were, and how its appliance maker, Fagor, failed in 2013 when Spain's housing market collapsed. It also told how the federation's other co-operatives took in hundreds of Fagor's members within two months.[35] A parallel system that competes on the current system's terms can be pulled toward its habits and shaken by its crises; a parallel system that is connected can catch its own people when one part fails.

Taken together, the lesson for UP is sharp. Parallel systems that cut themselves off tend to stall; parallel systems that compete on the current system's terms tend to drift toward its habits; and parallel systems that grow by being useful where people already are, while keeping their own rules, can grow until the current system has to come to terms with them. The questions for UP are whether it can keep its core while it grows, and whether it can survive the stage at which it has grown large enough to matter but not large enough to be safe. The next two sections set out what UP holds, and the section on doubts takes those two questions head on.

Growing without losing the core

If parallel systems drift as they grow, it is worth asking how other systems that grew large have handled the same risk. Two very different examples show what they tried, what it cost, and where UP takes a different road.

The first is the way the European Union has grown. None of its members was conquered into it: the founders signed the Treaty of Rome in 1957, and every country since has applied. Under the Union's treaty, "Any European state may apply to become a member of the Union if it respects its common values", and the conditions for joining, set by the European Council at Copenhagen in 1993, are "the essential conditions all candidate countries must satisfy to become a member state": stable institutions guaranteeing democracy, the rule of law and human rights, a working economy, and the capacity to carry out the Union's shared rules.[36,37] Countries can leave as well as join. Greenland, which joined as part of Denmark in 1973, withdrew in 1985, and the United Kingdom left on 31 January 2020.[36] Here is a large union that grew by each country's choice, kept its door open in both directions, and protected its values with a test at the door. UP's positions describe nothing like an entry test. Anyone may take part in any problem, and a city or nation that joins redirects its own resources by its own choice; there is no gatekeeper or enrolment office to pass.[38,39] What the Union shows UP is the value of writing the shared rules down, which UP's core already does.

The same example shows the limit of a test at the door. In September 2022 the European Parliament adopted, by 433 votes to 123, a report finding that Hungary, a member since 2004, could no longer be considered a full democracy; the lack of decisive action by the Union, it said, "has contributed to the emergence of a 'hybrid regime of electoral autocracy'".[40] Meeting the conditions on the day of joining did not keep a member from moving away from them afterwards. That is the part of the lesson UP's core already takes: the watching never stops. UP's core asks everyone to watch for concentrations of power, and its public record lets anyone see a part drifting from the core.[41,38]

[35] See Chapter 1, "What the current system does to them", and its notes: Fagor Electrodomésticos filed for bankruptcy in November 2013 after Spain's housing market deteriorated; within two months 417 of its worker-members were working in other Mondragon co-operatives; and by 2019 owner-members made up only 32 to 45 per cent of the people working in Mondragon's sectors.

[36] European Parliament, Fact Sheets on the European Union, "The enlargement of the Union": "Any European state may apply to become a member of the Union if it respects its common values"; the table of members lists the "Original signatories to the 1957 Treaty of Rome" and gives Hungary as a member since 2004; "Greenland, as part of Denmark, joined in 1973 but later withdrew in 1985."; "The United Kingdom left the EU on 31 January 2020." https://www.europarl.europa.eu/factsheets/en/sheet/167/the-enlargement-of-the-union . Checked at source, 13 Nov 2026.

[37] European Commission, Enlargement and Eastern Neighbourhood, glossary, "Accession criteria": "The accession criteria, or Copenhagen criteria (after the European Council in Copenhagen in 1993 which defined them)"; "are the essential conditions all candidate countries must satisfy to become a member state."; "political criteria: stability of institutions guaranteeing democracy, the rule of law, human rights"; "economic criteria: a functioning market economy and the capacity to cope with competition and market forces;"; "administrative and institutional capacity to effectively implement the acquis". https://enlargement.ec.europa.eu/enlargement-policy/glossary/accession-criteria_en . Checked at source, 13 Nov 2026.

[38] Core tenet: *Open participation*: "There are no offices to hold: work is shared out, not owned, so no one gathers power by holding a position." Core tenet: *Open systems, shared knowledge, private persons*: "The rules, code, records, decisions and reasons of UP are public, so anyone can check them." Among the dangers adopted alongside the core: "anyone acting outside the core stops being UP and bears the consequences." Full wording in "The core of UP".

[39] UP's study lessons (lesson 17, "UP has no central operator"): "before calling anything endemic to UP, check that it doesn't assume a funder, gatekeeper, enrolment office or single benchmark that UP doesn't have." The definition of UP: "open to everyone". Full wording in UP's study lessons and "The core of UP".

[40] European Parliament, press release, "MEPs: Hungary can no longer be considered a full democracy" (15 September 2022): "The lack of decisive EU action has contributed to the emergence of a "hybrid regime of electoral autocracy"";"The report adopted on Thursday, with 433 votes for, 123 against, and 28 abstentions". https://www.europarl.europa.eu/news/en/press-room/20220909IPR40137/meps-hungary-can-no-longer-be-considered-a-full-democracy . The Parliament's own finding. Checked at source, 13 Nov 2026.

[41] Core tenet: *Power kept spread out*: "Concentration of power, in any form (wealth, position, information, access, expertise or machines), is treated as a standing danger."; "Everyone in UP watches for concentrations of power and spreads them out again. The threat is never declared gone; it is watched and

The second example is smaller and closer to UP's own way of working. The Apache Software Foundation, which hosts some of the most widely used open-source software in the world, runs an Incubator that "provides services to projects seeking to enter the Apache Software Foundation" and helps them learn the foundation's philosophy and guidelines for collaborative development. By April 2023 the Incubator had assisted 335 projects, and 239 of them had graduated; some of the rest are still in it.[42] The foundation guards its way of working by making it something projects learn. UP has no incubator and no graduation: no one has to pass anything to take part. The lesson it can take is narrower: a community keeps its way of working best when that way is easy to learn.

In UP's terms, these examples show what UP keeps and what it leaves behind. UP's positions say that the speed of growth is not for anyone to decide, and that what matters is keeping the quality of the core.[43] The Union guarded its values with a test at the door and found that it was not enough; the Incubator guards its way of working by teaching it. UP has neither a door to test at nor a name to award, so it relies on what its core already contains. One way UP could keep its core while it grows, given here as an illustration, is to make its way of working easy to learn and hard to miss: the core is written down and public; education is open to everyone at every age, and is never a condition of taking part; everyone watches for concentrations of power; the floors bind every decision; every failure is fed back into UP as a problem to solve; and the public record of every decision and its reasons lets anyone see whether a part of UP is drifting. And anyone acting outside the core stops being UP and bears the consequences.[44,38,41,45]

What UP holds about the transition

UP's agreed positions say very little about speed, and that is deliberate. The position on growth is that UP grows naturally, perhaps very fast and very large, perhaps slowly, and that the pace is not for anyone to decide. What matters, the position goes on, is that as it grows UP keeps the quality of its core values and tenets, so that growth stays positive and does not descend into unintended consequences.[43] Earlier figures for how many people might join in a first year, and how many years a full transition might take, were part of a thought experiment and were withdrawn; UP's study lessons say that no growth speed or starting figure is ever to be given as UP's position.[46] What the positions give instead is a direction and a condition: grow, and keep the core whole while growing.

The direction has urgency behind it. UP's agreed position is that the system should be built and supplied as quickly as it can be, because the threats from the current system are massive and touch almost every sector of human civilisation, and because the aim is a transition, not a collapse.[47] Chapter 2 set out the race: on the planetary limits and most of the major issues of our time, problems are growing faster than reforms.[48] The urgency is a reason to work hard and well. It is never a reason to impose, because the tenet on how UP grows rules that out: "UP is never imposed. No one is forced to join, to work or to give up what is theirs. It grows by being useful, building on what people already do, and it acts only by ethical means." A means is ethical, the tenet continues, when it serves the health, happiness and wellbeing of all and crosses none of the floors, and UP never starts harm against anyone.[9]

Inside that frame, UP's agreed positions describe how resources could move. Assets owned or controlled by people who join, including single-person and family companies, convert to UP by their owners' choice, and members' money is best used early, to buy and convert more. Whole cities, states and nations that join redirect

answered." Full wording in "The core of UP".

[42] The Apache Incubator, home page: "The Apache Incubator provides services to projects seeking to enter the Apache Software Foundation (ASF)."; it guides projects in "the ASF's philosophy and guidelines for collaborative development"; "As of April, 2023, the Incubator has assisted 335 podlings, 239 of which have graduated from the program." https://incubator.apache.org/ . A "podling" is a project in the Incubator. Checked at source, 13 Nov 2026.

[43] UP's agreed position on growth (round 12c, position 3): "It will grow naturally and may grow very fast and big or it might be slow. That is not for us to decide. What is relevant is to list that it is important to grow and maintain quality of the core values and tenets so that the growth remains positive and does not descend into unintended consequences." Full wording in UP's agreed positions (the Position Ledger).

[44] Core tenet: *Open participation*: "education is open to everyone, at every age, so anyone can gain the skills any work requires." Full wording in "The core of UP".

[45] Core tenet: *Self-correction: nothing is final, including this*: "Every failure of UP is fed back into it as a new problem to solve, so it keeps improving without revolution. Every part of UP, these tenets included, can be improved through its own method." Full wording in "The core of UP".

[46] UP's agreed positions (round 12c, position 5) withdrew the growth figures given earlier in the debate, which had been part of a thought experiment; UP's study lessons (lesson 19): "Never give a growth speed or a start figure as UP's position." Full wording in UP's agreed positions (the Position Ledger) and study lessons.

[47] UP's agreed position on urgency (round 12c, position 4): "There is of course an urgency to supply the system as quickly as possible as the threats from the old system are massive and in almost every sector of human civilization has huge problems and we want to transition not collapse." Full wording in UP's agreed positions (the Position Ledger).

[48] UP's agreed position that reform is losing the race: "on the planetary limits — climate, biodiversity, soil, freshwater — and on most of the major issues of our time, the problems are growing faster than the reforms." Full wording in UP's agreed positions (the Position Ledger). See Chapter 2, "Where the race is being lost".

their resources. Population is expected to rise as security and abundance rise. All of this is labelled as projection.[49] This chapter reads the conversion of assets in the light of the tenet on how UP grows, which forces no one to give up what is theirs: what converts is what is the owner's to give, so where a bank or anyone else holds a claim on an asset, the claim is cleared first, through the current system's own means. The Position Ledger records that point as a note for the citation stage rather than an agreed position.[50,9] The last expectation in the position, a rising population, runs with the United Nations' projection that the world's population will continue growing for the next 50 to 60 years, and it is one reason the dense, beautiful settlement described in Chapter 18 matters: a transition has to make room for more people, not fewer.[51] As cities and nations join, one way the positions give is that their weapons and standing armies are dismantled and converted into law enforcement, emergency aid groups and rapid response, their nuclear weapons dismantled and converted to power plants as soon as possible, and the resources turned to the transition.[8] Debts are treated as old-system problems, with forgiveness, contribution, cancellation and bankruptcy named as the ways they can be settled. Moves to better climates are voluntary, and communities with more support more of the transition.[52]

Three further positions govern how UP survives the stages in which it is still small. During the transition, UP is not a nation-state and has no army; its protection is to be everywhere and woven into the existing system, so that attacking it would cost far more than it could gain. It works within the law, delivers things its host societies value and earns broad public support; if it is attacked, it responds only by nonviolent means; and it studies openly how embedded and nonviolent communities have survived hostile powers, updating its approach as it learns.[53] Behind those words stands the test the core sets for every means UP uses: it must be ethical, which the core defines as serving the health, happiness and wellbeing of all and crossing none of the floors, and UP never starts harm against anyone. When the core was settled, "ethical" replaced "lawful" as that test, because laws can be rewritten to protect the powerful; in this chapter's reading, working within the law and answering attack without violence are how that test applies during the transition, not a second test beside it.[9,53] Its nodes, the farms, clinics, workshops and land where UP's work is done, are things a state can tax, license or seize, so UP's strategy is to be an indispensable partner rather than an unfindable target: useful, embedded in its communities, working with local and regional governments on their hardest problems, so that as nodes prove themselves, the state's functions are handed to the network or fade through people's choice.[54] And UP's staged claim on war and violence names the middle stage as the most exposed, with UP's protection resting then on legality, numbers and nonviolent action, until cities and nations join and convert their armies.[55]

None of these positions is a plan with dates. They are the conditions under which a transition can run without anyone being forced, and the reasons UP's people expect it to be possible. UP's tenet on self-correction adds the last condition: every failure along the way is fed back into UP as a problem to solve, so the transition itself is something UP can get better at.[45]

[49] UP's agreed position on growth and resources (round 12S, position 5, labelled as projection), in the parts that stand after round 12c withdrew its figures: "Whole cities, states and nations that join redirect their resources. Assets owned or controlled by people who join (including single-person and family-owned companies) convert by their owners' choice; members' money is best used early to buy and convert more. Population is expected to rise as security and abundance rise." Round 12c, position 5: "The rest of position 5 stands". Full wording in UP's agreed positions (the Position Ledger).

[50] The Position Ledger, round 12S, "Notes for the citation stage (Claude; not positions)": "Any claim on an asset is cleared before the asset is converted." This is recorded as a note, not an agreed position; the chapter gives it as its own reading of the conversion, consistent with the tenet that no one is forced "to give up what is theirs" (note 9).

[51] United Nations, "Global Issues: Population": "The world's population is projected to continue growing for the next 50 to 60 years"; "Future population growth is highly dependent on the path that future fertility will take." https://www.un.org/en/global-issues/population . Checked at source, 13 Nov 2026.

[52] UP's agreed position on debts (round 12S, position 14): "Debts are old-system problems" (forgiveness, contribution, cancellation, bankruptcy). "Moves to better climates are voluntary; communities with more support more of the transition." Full wording in UP's agreed positions (the Position Ledger).

[53] UP's agreed position on protection during the transition: "UP is not a nation-state and has no army. During the transition its protection is to be everywhere and woven into the existing system, so that attacking it would cost far more than it could gain. UP works within the law, delivers things its host societies value, and earns broad public support. If it is attacked, it responds only by nonviolent means. As UP works better, especially for the billions with very little, the threat shrinks. UP studies openly how embedded and nonviolent communities have survived hostile powers, and updates its approach as it learns." Round 11 set the book's wording for the means in this position and in card 25 as "ethical" (T10), not "lawful" or "nonviolent" (Position Ledger, "Core · Round 11", "Manuscript changes": "#4b and card 25 say 'ethical', not 'lawful' or 'nonviolent'"). The replacement of "lawful" by "ethical" in T10 was made because laws can be changed to protect the powerful (Position Ledger, "Core · T3, T6, T8, T10 and the book layers"). Full wording in UP's agreed positions (the Position Ledger).

[54] UP's agreed position that nodes survive as partners, not targets (card 25); see note 33.

[55] UP's agreed staged claim on war, violence and crime (round 12c, card F10): "The middle stage is the most exposed, and UP's protection then rests on legality, numbers and nonviolent action."; "As cities and nations join, their weapons and armies are dismantled and converted into law enforcement, emergency aid and rapid response, and nuclear weapons into power (12S, an illustration)." The agreed gap on force (round 12c, U12): "Outside UP, force persists while the old system holds arms; it peaks in the middle stage and shrinks as cities and nations join and convert their armies". Full wording in the round 12c record, adopted in UP's agreed positions (the Position Ledger).

UP at work: one member's move, followed through

A transition is easiest to judge from inside a single life, so it helps to follow one person's move into UP from start to finish. Take a member like the care worker in the household this chapter returns to below: she earns a wage, pays rent and owes a bank. The walk-through below is one way UP could run, built from its tenets and agreed positions; it is not a procedure UP has adopted. In the reading UP's author has set out, now going through UP's method, what changes gradually is people, not UP: each person relies on money, governments and companies less as they use UP more, and the number of people doing so grows.[56] The walk-through follows that change in one person.

She joins by taking part. No one is forced to join, to work or to give up what is theirs; UP grows by being useful, building on what people already do.[9] She starts where her neighbours already are, at the food co-operative and the community kitchen, and nothing she does there costs her the job she still needs.

What is hers to give, she may give. Assets owned or controlled by people who join convert to UP by their owners' choice, and members' money is best used early, to buy and convert more.[49] She has little to convert, perhaps a few tools and some savings, and whether she gives them is hers to decide. Where a bank or anyone else holds a claim on what she owns, this chapter's reading is that the claim is cleared first, through the current system's own means.[50,9]

Her floors, while the gap is wide. At first her floors depend partly on her own earnings and on what the current system provides, because UP cannot yet guarantee them. UP's agreed answer is that the gap shrinks with each stage, and faster as members convert what they own and use money early.[57] As more of her food, shelter and care come from what UP produces, she relies on her wage less, and survival stops depending on a job.[57]

Her debt is settled, not ignored. UP's agreed position treats debts as problems of the current system, to be settled by forgiveness, contribution, cancellation or bankruptcy.[52] Until one of those happens, she pays what she owes, and the community can help her think it through.

She can always leave. The right to leave any group or community at any time, taking what is theirs, is one of UP's floors.[58] Her move is never a door that locks behind her, and she can take part in UP as much or as little as she chooses.

If UP is pressed, it answers in the open. If a company or a government moves against the network she relies on, UP responds only by nonviolent means, works within the law and earns public support by being useful.[53] Its protection is to be everywhere and woven into the existing system.

The pace is hers, and her neighbours'. UP's position is that how fast it grows is not for anyone to decide; what matters is that its core is kept whole while it grows.[43] Her move goes as fast as UP can meet her needs and as fast as she chooses, no faster.

Set beside Costa Rica's fortress, the difference is in who makes the change. In 1948 a junta decided for a whole country, in a single ceremony, that its army was finished. In this walk-through nothing is ended by decree: one person moves, by her own choice, as UP becomes able to meet her needs, and then another. Whether enough people move, and whether UP keeps its core whole while they do, is what the stages below set out, and it has to be shown.

The transition, stage by stage

UP grows side by side with the current system, and the transition is the story of that side-by-side growth. The early stage rests on today's evidence, and the middle and completed stages are reasoned projections from cited mechanisms, labelled as such.[6] What follows is one way the stages could run, an illustration, not a timetable.

[56] Clarification of the tenet *Reality over fiction*, set out by UP's author on 14 November 2026 and going through UP's method; until the UP Moderator enters it in the Position Ledger, it is the author's stated reading, not yet an agreed position. In substance: the gradual change is in people, not in UP. UP's own system does not run on money, a UP government or UP companies; each person relies on money, governments and corporations less as they use UP more, and the number of people doing so grows. Chapter 8 sets it out in full.

[57] UP's agreed position on the three gaps (round 12c, card U12): "Paying for floors: shrinks with each stage, and faster as members convert what they own and use money early to buy and convert more". UP's agreed staged claim on work (round 12c, card F5): "As UP produces for its members' needs, survival stops depending on a job, and AI and automation serve those needs rather than profit." See Chapter 12, "The three gaps". Full wording in the round 12c record, adopted in UP's agreed positions (the Position Ledger).

[58] UP's agreed position that splits are good (round 12S, position 10): "they test two or a thousand ways in the real world." Core tenet: *Floors that are never crossed*: "the right to leave any group or community at any time, taking what is theirs". Full wording in UP's agreed positions (the Position Ledger) and "The core of UP".

At the early stage, UP is a minority network of people who still earn wages, pay rent and use the current system's shops, schools and hospitals. What they add is a growing set of things they do together through UP's method: a food co-operative, a tool library, a repair table, a community kitchen, an open course, a clinic run partly by volunteers, each of them already common somewhere in today's world, as earlier chapters have shown.[59] This is the stage at which members' own assets matter most. A member who owns a workshop, a field or an empty flat may choose to convert it, as John Spedan Lewis chose to put his shares in trust, and UP's position is that members' money is best used early, to buy and convert more: land, tools, machines.[49,20] UP's position gives no reason for the timing. One reading, offered here as this chapter's and not as part of the position, is that money is a tool of the current system, and its usefulness to UP shrinks as UP grows: while most of what members need is still bought, savings can buy land, tools and machines that will produce for everyone for years, and once those things are produced and shared within UP, the same savings buy less that UP needs. The Mondragon co-operatives, as Chapter 1 told, made a related choice in 1959, when they founded their own bank so that working people's savings could help each new co-operative begin rather than leave it to start alone.[60] Nothing here needs new law or new technology. It needs people who choose to take part and a method that keeps the network honest as it grows. The dangers at this stage are the ones Chapter 6 described: a small network leans on the few who started it, and the work of watching for power, which the fifth tenet asks of everyone, starts here.[61]

This is also the stage at which the first of the three gaps Chapter 12 named, paying for the floors, is widest. While UP is a minority network, its members' floors depend partly on their own earnings and on what the current system provides, and UP cannot yet guarantee them. UP's agreed answer is that the gap shrinks with each stage, and faster as members convert what they own and use money early to buy and convert more.[57] Stage by stage, the question changes. At the early stage it is "who pays?", and the honest answer is members, their savings and what they convert. At the middle stage it becomes "can UP build a productive base?", because floors are met in real goods from UP's own production. At the completed stage, a projection, the floors are met from what most people produce together, and the question becomes how high the floors can rise as capacity grows.[57,62] The transition is, among other things, the closing of that gap.

At the middle stage, which is a projection, UP has its own productive base. Most of its members' food, shelter, energy and goods come from what UP produces, and, in the words of UP's staged claim on work, survival stops depending on a job.[6,57] Two things change in this stage. The first is scale: UP becomes large enough that cities, and perhaps states and nations, might join, and when they do, their budgets, buildings and lands could be redirected, much as Preston redirected part of its institutions' spending toward local suppliers inside the current system.[49,22] The second is exposure. UP is now large enough to matter to the current system and not yet large enough to be safe from it. A parallel system at this size can be taxed, licensed or seized, and those who profit from the current system may want to stop it.[54] UP's positions name this stage as the most exposed and give its defences: legality, numbers and nonviolent action; being useful enough to its host societies that attacking it would cost far more than it could gain; and the open study of how other embedded communities have survived.[55,53]

At the completed stage, also a projection, most people live mainly in UP. Where cities and nations have joined, one way the positions give is that their weapons and armies have been converted, and force from outside UP shrinks as more of them do.[8,55] Some things persist, and UP names them: climate damage already locked in, threats from space until people can leave the solar system, and the suffering that continues while its biggest causes fall, because UP is not magic. People still disagree about values, and UP does not count that as failure, because splits test different ways in the real world.[31] Figure 23.1 shows the three stages as UP's positions define them, Table 23.2 sets them out, and Table 23.3 sums up the benefits by stage and how each would be shown.

[59] See Chapter 13 (tool libraries, food co-operatives and community kitchens), Chapter 14 (published labour budgets and shared rotas), Chapter 15 (open courses and mentoring) and Chapter 16 (community health workers and lay counsellors), and their notes.

[60] See Chapter 1, "The same pattern, in many places", the account of Mondragon, and its notes: in 1959 the co-operatives founded a bank, Caja Laboral Popular, set up, in the group's own words, as a support body for the development of the co-operatives.

[61] See Chapter 6, "Power kept spread out, stage by stage" and "The strongest doubts", and its notes, on Robert Michels and on how a small network leans on the few who start it.

[62] Core tenet: *Floors that are never crossed*: "everyone's basic needs and protected freedoms, which no gain for others can buy"; "UP guarantees needs, not every want." Full wording in "The core of UP".



Figure 23.1. UP's three stages as its positions define them: by what is met and where people live, not by dates. The bands are not drawn to any scale of time, and their widths mean nothing; UP's positions give no growth speed. The middle and completed stages are projections.

Table 23.2. The transition, stage by stage. The middle and completed stages are reasoned projections. Illustrations of one way UP could run, not directives.[6,8,49,52,53,55]

Stage	What changes	Real precedent	Why it could work	What persists
Early	A minority network inside the current system; members convert what they own, by choice, and use money early to buy and convert more	Co-operatives, tool libraries and community kitchens (earlier chapters); the John Lewis trust settlements; Patagonia's transfer of ownership; Linux growing beside Microsoft	Each piece already works in today's world; nothing needs new law or technology	Dependence on wages and the current system's services; reliance on the few who start things
Middle (projection)	UP's own productive base meets most members' needs; cities, states or nations may join and redirect their resources; debts settled by forgiveness, contribution, cancellation or bankruptcy	Preston redirecting public spending; debt relief for 36 countries; the Baltic Way and other mass nonviolent campaigns	Being useful and embedded raises the cost of attacking UP; numbers and nonviolent action have succeeded more often than violence	The most exposed stage: hostility from those who profit from the current system; nonviolent campaigns have succeeded less often since 2010
Completed (projection)	Most people live mainly in UP; one way the positions give is that, where nations have joined, weapons and armies converted into law enforcement, emergency aid and rapid response, and nuclear material into power	Costa Rica's abolition of its army; South Africa's dismantled weapons; the INF Treaty; Megatons to Megawatts	Conversion has worked where those who held force chose it, the remaining work was kept, and the result was checked	Damage locked into the climate; threats from space; the human remainder; disagreement over values

Table 23.3. Expected benefits of the transition, by stage. The early stage rests on today's evidence; the middle and completed stages are projections.[6,57]

Stage	For members	For people outside UP	For the living world	How it would be shown
Early	Somewhere to meet part of their needs together; savings and assets put to work early, by their own choice; jobs and wages kept	Nothing taken: no one is forced to join or to give up what is theirs, and claims on assets are cleared first	Members cut their own emissions and prove what works, a small effect at first	Each node's records, costs and members' wellbeing published
Middle (projection)	Most needs met from UP's own production, so survival stops depending on a job; debts settled by forgiveness, contribution, cancellation or bankruptcy	Cities and councils can partner with UP on their hardest problems, and anyone may join	Demand moving out of the current system with its people	Floors met in real goods from UP's own production, in published figures; pressure answered in the open, without violence
Completed (projection)	Floors met from what most people produce together, rising as capacity grows	Most people live mainly in UP, and no one is forced to; armies converted into rapid response and emergency aid where nations choose it	Production aimed at needs, inside the planet's limits	Measured person by person, against today's record and against the ideal, with the core kept whole

Sources: notes to this section.[8,9,49,52,53]

Stages are easier to see in a single life, so this chapter returns one last time to the household that Chapter 1 introduced: a care worker, her teenage son and his grandfather, in a mid-sized town. As in every chapter, this is an illustration of one way UP could run, and never evidence. Earlier chapters followed the household through its food, work, learning, health, family life, the living world and justice. This one follows the town through the transition itself.

Illustration: one way it could run. The early stage. The town's UP community is a small part of the town, and most of its members do not think of themselves as part of anything larger. The food co-operative, the tool library, the repair table and the community kitchen are where they meet. The grandfather's old friend, who ran a print shop for forty years and has no children who want it, decides to give the shop and its machines to the community, and other members put some of their savings into tools for the repair table. The household still pays rent, and the care worker still owes the bank for the loan she took out when the grandfather fell ill. Nobody suggests she stop paying. When she asks at the kitchen what UP can do about it, the answer is honest: for now it is a debt in the current system, settled by the current system's rules, and the community can help her think it through.

Illustration: one way it could run. The middle stage, a projection. The town's UP community now feeds and houses most of its members from what it produces, and the six families in the flats above the high street, which their owner gave to the community, have been joined by others. The town council, short of money for elder care, asks the community, whose members already share the care home's rota, to run the home with it. The partnership works, and at the next election the council votes to put more of the town's buildings and land into the network. Not everyone is pleased. A company that held the old care home's contract complains to the regional government, and for a few months there is talk of new licences. The community answers in the open: it publishes the care home's records, its costs and its residents' wellbeing, and many townspeople, members and not, turn up at the hearing. The licence plan is dropped. The care worker's loan is gone too: her bank, which had lent to many people in the town, agreed to write off loans like hers, and the debt was cleared.

Illustration: one way it could run. The completed stage, a projection. Most people in the town now live mainly in UP, and so do most people in the country, which joined the network after years of argument. The army reserve depot on the ring road, which the grandfather passed every day on his old bus route, is now the region's rapid-response base, and the care worker's son, an electrician, trains there one weekend a month to restore power after storms. Some things have not changed. The summers are hotter still; the town

was built for it. People still argue, about the shared studio, about the new wood, about whether the town's open standard for electrical work is out of date. Those arguments are what UP expects to keep.

The strongest doubts

The first doubt is the one UP's own positions raise: the middle stage is the most exposed, and parallel institutions have been crushed when they threatened those in power. The evidence supports the worry. In a countrywide action on 2 May 1933, members of the Nazi SA, the SS and the Nazi factory cell organisation occupied the buildings and offices of every organisation in Germany's federation of free trade unions, seized their assets and put their officials in what the regime called "protective custody"; eight days later a Nazi body, the German Labour Front, was founded.[63] Half a century later, in Poland, the independent union Solidarity grew to about ten million members within months of its founding in 1980. On 13 December 1981 the government imposed martial law "in a bid to crush the Solidarity movement"; Solidarity was declared illegal and its leaders arrested.[64] Chenoweth's figures add that nonviolent campaigns have succeeded less often since 2010 than before, and among her reasons is that "governments may be learning and adapting to nonviolent challenges from below".[19] UP's answer has several parts, and none of them is a guarantee. UP's protection in this stage rests on legality, numbers and nonviolent action, and on being so useful to its host societies, in elder care, resilience and lifelong learning, that suppressing it would cost far more than it could gain.[55,53,54] The evidence that this can work is real. Solidarity, though banned, "continued as an underground organization"; in April 1989 the government agreed to legalise it, and in that year's elections the candidates it endorsed won 99 of the 100 seats in the new Senate.[64] From 1900 to 2019 nonviolent campaigns succeeded about twice as often as violent ones, and the Baltic Way's chain of more than a million people preceded Lithuania's restored independence, though not without the bloodshed of January 1991.[19,16,18] UP's positions also commit it to study openly how embedded communities have survived hostile powers, and to update as it learns.[53] What persists is the danger itself, and UP names it as the central risk of the transition rather than pretending it away. The middle stage is where the transition could fail, and UP names it openly as work.

The second doubt is that growth will dilute the values: that by the time UP is large, it will have become another organisation that gathers power, serves itself and forgets what it was for. The evidence for this is strong too. Chapter 6 told how Robert Michels watched a party committed to democracy settle into the rule of a few, and the "degeneration thesis" has dominated a century of writing about employee-owned businesses that either failed or gave up their democratic character.[61,34] Mondragon's growth through subsidiaries whose workers are not owners shows how a parallel system competing on the current system's terms can drift toward its habits, and Fagor's failure shows how the current system's crises reach into a parallel system that depends on its markets.[35] UP's answer is that this is exactly the condition its growth position puts first: what matters is not how fast UP grows but that it keeps the quality of its core values and tenets as it grows.[43] The core gives that condition teeth. There are no offices to hold, so no one gathers power by holding a position; informal power remains, and UP treats it as work, watched with open checks.[38,65] Everyone watches for concentrations of power; the rules, code, records, decisions and reasons are public; and anyone acting outside the core stops being UP.[41,38] The research on employee-owned firms suggests that degeneration is not inevitable where people work deliberately against it.[34] And UP's positions treat splits as good: a part of UP that drifts can be left, and the people who leave can test another way in the real world, taking what is theirs.[58] What persists is the pull itself, which the fifth tenet says is never declared gone.[41]

The third doubt is that a transition this large must cause a collapse, whatever its intentions, because changing the economic base of a society always hurts. The post-communist transitions are the warning: where whole economies were privatised in a rush, one study found that adult male deaths rose, though its critics dispute the

[63] German History in Documents and Images (German Historical Institute), "Ban on Free Trade Unions: SA Members Seize the Trade Union Building on Engelufer in Berlin (May 2, 1933)", abstract: "In a countrywide action on May 2, 1933, members of the SA, the SS, and the National Socialist Factory Cell Organization"; "occupied the buildings and offices of all ADGB organizations, seized their assets,"; "put their officials in "protective custody.""";"On May 10, the German Labor Front [Deutsche Arbeiterfront or DAF] was founded as a National Socialist association". https://germanhistorydocs.org/en/nazi-germany-1933-1945/prohibition-of-free-trade-unions-sa-members-seize-the-union-office-on-engelsufer-in-berlin-may-2-1933 . The ADGB was the General German Trade Union Federation, the umbrella of the free trade unions. Checked at source, 13 Nov 2026.

[64] Encyclopaedia Britannica, "Solidarity": "Solidarity formally was founded on September 22, 1980"; "By early 1981 Solidarity had a membership of about 10 million people"; "On December 13, 1981, Jaruzelski imposed martial law in Poland in a bid to crush the Solidarity movement."; "Solidarity was declared illegal, and its leaders were arrested."; "it nevertheless continued as an underground organization."; "In April 1989 the government agreed to legalize Solidarity"; "candidates endorsed by Solidarity won 99 of 100 seats in the newly formed Senate". https://www.britannica.com/topic/Solidarity . Checked at source, 13 Nov 2026.

[65] UP's agreed position that workload is not a danger (round 12S, position 15, UP Moderator's wording): "Informal power and the loop checking itself are workload: open-source checks and open sensor data." Full wording in UP's agreed positions (the Position Ledger).

cause.[24,25] Iraq shows what happened when security institutions were dissolved by an outside order: the inquiry linked the decision to the alienation of a whole community and to an insurgency.[15] UP's answer is that its transition is built the other way round. Nothing is taken from anyone; UP is never imposed, and assets convert only by their owners' choice.[9,49] Nothing is retired before something better can do its job: UP's position on the shared fictions of money, government and corporations is that a fiction is retired when technology can replace what it does without obvious downsides, and reduced as far as possible until then.[66] And the current system keeps running beside UP for as long as people want it, so the move into UP is made by each person, one need at a time, rather than by a shock from above. The same study found the association weaker, and no longer significant, in countries where more people belonged to social organisations, and UP is, among other things, a web of them.[24] What persists is the risk that the current system collapses for its own reasons before UP is ready to catch people. That is the source of the urgency in UP's positions: the aim is a transition, not a collapse.[47]

The fourth doubt is that the powerful will never allow it. Those who profit from the current system own the land, the factories, the media and the armies, and they will not hand them over. UP's answer begins by agreeing that most of them will not, and by saying that it does not need them to. UP's aim is the people the current system fails, person by person, and its study lessons note that whether the very rich stay out does not matter.[6] UP grows by meeting the needs of the people who join, from what they bring and what they build. The precedents also suggest that the powerful are not all of a piece. Megatons to Megawatts was carried out by two governments and a company, as a commercially financed partnership.[14] Microsoft joined the foundation of the system it had called a cancer, and its customers have since made Linux the most used system on its cloud.[27,30] Lewis and Chouinard gave away what they owned.[20,21] UP's positions expect that some owners, firms, cities and governments will find it in their interest to join, and that as UP works better, especially for the billions with very little, the threat to it shrinks.[53] What persists is the hostility of those who lose most, and UP's answer to it is the protection already described.

The fifth doubt is practical and personal: what happens to my loans, my pension, my debts? UP's position is that debts are old-system problems, and it names forgiveness, contribution, cancellation and bankruptcy as the ways they can be settled.[52] These means exist today and are used every day. Thirty-six countries have had their debts sharply reduced by agreement under the Heavily Indebted Poor Countries Initiative, with some of those debts cancelled in full.[23] UP's position makes no promise about any particular debt, and it does not ask anyone to stop paying. What it changes is what a debt can do to a person. As more of a member's needs are met from UP's production, the threat behind a debt, the loss of a home or of food on the table, weakens, because UP's needs floor does not depend on what anyone owes, and what UP can meet grows with its production.[62] What persists is that while a person lives partly in the current system, its obligations still bind them, and UP is honest about that.

The last doubt runs the other way. If the threats are as urgent as UP says, a transition that grows only as fast as people choose to join may be far too slow. UP's position accepts the tension and does not resolve it by force. Speed is not for UP to decide, and the positions give no figure: the earlier figures were part of a thought experiment and were withdrawn.[43,46] What UP can decide is how useful it is, and how good its work is. Linux went from the system Microsoft called a cancer to one Microsoft joined, and it crossed because it was useful; that is a precedent for how, not a forecast of how long.[26,27] UP's positions hold that its parts strengthen each other, so that its usefulness could compound as it grows, and Chapter 21 makes that case in full.[67] What persists is uncertainty about the pace, and the knowledge that some damage will be done before UP is large enough to prevent it.

What the reader's question comes to

"How do we get from here to there without collapse?" UP's answer can now be put plainly. Not by a revolution, not by a decree, and not by waiting for the current system to fall. UP grows beside the current system, starting from practices that already work and from people who choose to take part. Its members convert what they own, by their own choice, and use their money early to build more. Cities, states and nations may join, and where they do, their resources can be redirected; one way the positions give is that their weapons and armies are converted into the work that still needs doing: law enforcement, emergency aid and rapid response. Debts are settled by forgiveness,

[66] UP's agreed position on useful fictions: "A fiction is retired when technology can replace what it does without obvious downsides; until then it is reduced as far as possible." Core tenet: *Reality over fiction*: UP "replaces it gradually where technology can do its job without obvious downsides." Full wording in UP's agreed positions (the Position Ledger) and "The core of UP".

[67] UP's agreed position on judging UP as a whole system: "UP is a system whose parts strengthen each other". Full wording in UP's agreed positions (the Position Ledger). See Chapter 21.

contribution, cancellation or bankruptcy. The middle stage is the most exposed, and UP's protection then rests on legality, numbers and nonviolent action, and on being so useful that attacking it would cost far more than it could gain. Through all of it, the speed is not set; what is set is that the core is kept whole while UP grows.

Costa Rica's fortress is a museum now, and the wall Figueres struck is one of its exhibits. One country, by its own choice, turned the building that had held its army into a place where people learn about their past. That is the kind of change this chapter has described: chosen, kept, checked, and lasting. It was one country, and its army was small. UP's transition asks for the same kind of change in many places, by many people, over a long time, and it will not be as tidy. But history shows that each piece of it has been done somewhere, by someone who chose to do it.

Nothing in this chapter is final. The stages, the protections and the ways resources move are UP's best current answers, and every one of them is open to improvement through UP's own method. Chapter 24 turns to that work: what UP leaves open, where its threats are listed, and how anyone can help make it better.

Chapter card: Chapter 23

- **Claim:** UP makes its transition by growing beside the current system, never by imposing itself or tearing the current system down. It grows naturally, fast or slow, and its pace is not set in advance; what matters is that it keeps the quality of its core as it grows. Members convert what they own by their own choice; cities, states and nations that join redirect their resources; one way the positions give is that weapons and armies are converted into law enforcement, emergency aid and rapid response. The middle stage is the most exposed, and UP's protection then rests on legality, numbers, nonviolent action and being useful.
- **Core lines:** the tenets *Freely joined, ethically grown*, *Self-correction* and *Power kept spread out*. Agreed positions: growth is natural and keeps the quality of the core; urgency, because the aim is transition, not collapse; assets convert by owners' choice and members' money is best used early (projection); debts are old-system problems; protection during the transition; nodes survive as partners; the staged claim on war and violence; the stages, judged beside the current system. Given as illustrations: weapons and armies converted as cities and nations join.
- **Rule of thumb:** Does this step keep the core intact while it grows?
- **What this is not:** a timetable, a growth forecast or a plan to seize anything. It is not a revolution, a decree or a promise that the transition will be painless. It does not claim UP can stop the current system from collapsing on its own.
- **Check yourself:**
    1. What are UP's three stages, and which rest on today's evidence?
    2. Why does UP give no figure for how fast it will grow, and what does it put in place of one?
    3. What did the conversions in Costa Rica, South Africa and Megatons to Megawatts have in common, and how did Iraq in 2003 differ?
    4. Why is the middle stage the most exposed, and what protects UP then?
    5. What does UP's position say about a member's existing debts?
    6. What does the history of Linux, of communes and of co-operatives suggest about how a parallel system can grow without losing itself?
- **Open questions (for the wiki):** What should UP measure to know whether its core is keeping its quality as it grows? What does the open study of embedded communities that survived hostile powers find, and how should UP's protections change in light of it? How could debts held by members be settled fairly as their towns join? What is the best way for a city or a nation to join, and what has to happen first? (Improve this page.)

Chapter 24. What This Book Leaves Open, and How to Improve It

In the spring of 1879, within weeks of being made editor of a new dictionary of English, a Scottish schoolmaster named James Murray sent out a call for help. It was titled "An Appeal to the English-Speaking and English-Reading Public", and it went out in three editions over the next year.[1] What Murray asked for was readers: people who would take a book, read it, and copy out on slips of paper the sentences in which words were used, with their sources, so that the dictionary could show the history of each word. The project had begun two decades earlier in the Philological Society, and up to Murray's appointment everyone reading texts and excerpting quotations for it was a volunteer.[2] A year after the Appeal, Murray was able to tell the Society that there were now 754 readers.[3]

One of the first to answer was Edith Thompson. She had written a school textbook, *History of England*, published by Macmillan in 1872, which generations of pupils used.[4] She read for the dictionary, helped to sub-edit the letter C, and read its proofs from the letter D onwards. With her sister she had sent in 15,000 quotations by 1888, putting the two of them in the first rank of the volunteer readers.[4] The list of readers printed with the first volume that year named more than three hundred people, grouped by how many quotations each had supplied, from 165,000 down to a thousand; at the top was one "Thos. Austin", who had amassed 165,000.[5] Four years later Murray was writing of "the collections of our 1500 readers".[5] The sisters went on helping, by proof-reading and by commenting on meanings, until their deaths in 1929.[6] By then the work they had helped to begin was complete. Murray had died in 1915, having finished about half of the dictionary, and it was a further thirteen years before the publication of the first edition came to an end in 1928.[7]

It did not stay finished. When a supplement was prepared decades later, the writer and broadcaster Marghanita Laski sent its editor a steady stream of cards right up to the publication of its final volume in 1986, by which time her contribution came to around 250,000 quotations, "all copied out in her distinctive spidery script."[8] The

[1] OUPblog, "The history of the OED Appeals", Oxford University Press, 8 October 2012: Murray's appointment came in the "spring of 1879"; he "within weeks of his appointment had issued 'An Appeal to the English-Speaking and English-Reading Public.'"; "new readers began to come forward in their hundreds, and eventually thousands."; a slip from the June 1879 appeal shows "an example of a quotation submission and instructions for referencing and recording the source." https://blog.oup.com/2012/10/the-history-of-the-oed-appeals/ . The Oxford English Dictionary's historical site (Hertford College, Oxford), "OED1's compilation": the Press "appointed James Murray as editor in 1879"; "Murray immediately issued an Appeal for volunteer readers (published in three editions 1879-80)". https://oed.hertford.ox.ac.uk/historical-background/oed1s-compilation/ . *Encyclopaedia Britannica*, "James Murray": "born February 7, 1837, Denholm, Roxburghshire [now Scottish Borders], Scotland"; "Murray was a grammar-school teacher from 1855 to 1885"; "first editor (from 1879) of A New English Dictionary on Historical Principles, now known as The Oxford English Dictionary". https://www.britannica.com/biography/James-Murray . Checked at source, 13 Nov 2026.

[2] "OED1's compilation": "the Committee published the Proposal for the Publication of a New English Dictionary by the Philological Society in 1859". https://oed.hertford.ox.ac.uk/historical-background/oed1s-compilation/ . The Oxford English Dictionary's historical site, "Reading and readers": "This was particularly the case up to 1879, when all participating in reading texts and excerpting quotations were volunteers." https://oed.hertford.ox.ac.uk/quotations/reading-and-readers/ . Checked at source, 13 Nov 2026.

[3] "Reading and readers": "One year later he was able to report to the Philological Society that there were now 754 readers." https://oed.hertford.ox.ac.uk/quotations/reading-and-readers/ . Checked at source, 13 Nov 2026.

[4] Charlotte Brewer and Stephen Turton, "Women and the dictionary, Part I: Assistants and volunteers", Murray Scriptorium: Edith Thompson was "One of the first respondents to James Murray's Appeal for volunteer readers"; the historian E. A. Freeman "asked her to write a school textbook, History of England (1872), for the publishers Macmillan."; "This work, many times revised and reissued, was used by generations of pupils up to and beyond the First World War"; "She helped sub-edit the letter C, read dictionary proofs from the letter D onwards,"; by 1888 she and her younger sister "had already contributed 15,000 quotations, putting them in the first rank of volunteer readers". https://murrayscriptorium.org/commentaries/com-women-contributors.shtml . Checked at source, 13 Nov 2026.

[5] "Reading and readers": the Preface to the first volume (1888) had an Appendix "naming over 300 individuals", "grouped in five sections according to the number of quotations for which they had been responsible (165,000 down to 1,000)"; in a report of 1892 Murray "mentions 'the collections of our 1500 readers'". https://oed.hertford.ox.ac.uk/quotations/reading-and-readers/ . The Oxford English Dictionary's historical site, "Individual readers": "Top of the individual readers named in the volume 1 Appendix was one 'Thos. Austin',"; "who had amassed 165,000 quotations." https://oed.hertford.ox.ac.uk/quotations/reading-and-readers/individuals/ . Checked at source, 13 Nov 2026.

[6] "Individual readers": the sisters "had been notably productive (15,000 slips)"; "and they continued to help with the Dictionary one way or another (e.g. by proof-reading, commenting on meanings etc.)"; "up to their deaths in 1929". https://oed.hertford.ox.ac.uk/quotations/reading-and-readers/individuals/ . This page expands the second sister's initial as Elizabeth; the Murray Scriptorium commentary (note 4) gives Ellen, so the text says only "her sister". Checked at source, 13 Nov 2026.

[7] *Encyclopaedia Britannica*, "James Murray", on his work before his death in 1915: "completing about half of the dictionary, sections A–D, H–K, O, P, and T." https://www.britannica.com/biography/James-Murray . "OED1's compilation": "Murray died in 1915, at the age of 78"; "It was a further thirteen years before publication of the first edition of OED came to an end in 1928." https://oed.hertford.ox.ac.uk/historical-background/oed1s-compilation/ . Checked at source, 13 Nov 2026.

[8] "Individual readers": Marghanita Laski, "writer, broadcaster, journalist, and lexicographical irregular supreme" (Burchfield's description); "She continued to dispatch a steady stream of cards to Burchfield"; "right up to the publication of the final volume of his Supplement in 1986,"; her contribution came "to a total of around 250,000 quotations,"; "all copied out in her distinctive spidery script." https://oed.hertford.ox.ac.uk/quotations/reading-and-readers/individuals/ .

dictionary's own historians write that volunteer reading for today's version of it continues to play an important role, and its publisher has said that the efforts of members of the public have been at the heart of the dictionary for over 150 years.[9]

The story is worth telling at the end of this book for two reasons, and both matter for UP. The first is the one this book has followed since Chapter 1. People gave years of careful, unpaid work to a shared text because the problem was there and they could help with it: no wage required it and no penalty enforced it, and the Thompson sisters kept at it for half a century, until the first edition was done. The second is what made their work count. Thousands of strangers could improve the same text because someone had set out how to do it: what to copy, how to record the source, where to send the slip, and who would weigh it. Without that structure their slips would have been a heap of paper. With it, they became the record of a language.

UP is offered in the same spirit, and with the same need. This book is a first version of a text that is meant to become a living manual, improved by anyone, and its author is, for now, one independent researcher, which is the strongest argument for opening it up.[10] So the reader who has come this far is entitled to two plain answers. What in UP is not yet settled? And how can anyone help to settle it, or improve what has been settled, without the text losing the quality that makes it worth improving? This chapter gives both: the open problems UP's own core and agreed positions name, a single register of the dangers named across the book, each with its check, and one way the living text could be run so that an improvement from anyone can be proposed, tested and kept.

How ideas are improved today, and what that leaves out

The current system has built some of the most powerful ways of improving ideas that have ever existed, and they deserve credit before anything is said against them. The first is peer review, the practice by which a journal sends a paper to other experts before it is published. Richard Smith, reviewing the evidence on it in the *Journal of the Royal Society of Medicine*, called it "at the heart of the processes of not just medical journals but of all of science."[11] The second is replication: a finding is trusted more when someone else repeats the work and gets the same result. The third is the patent, which the World Intellectual Property Organization defines as "an exclusive right granted for an invention", and which, in its words, benefits society "by providing public access to technical information" about the inventions it protects.[12] These three have done much to build modern medicine, engineering and science.

Their record also shows their limits, and the people who run them have documented those limits most thoroughly. Smith reviewed the evidence on peer review and found it slow, inconsistent to the point of being "something of a lottery", biased against studies with negative results, open to abuse, and "almost useless for detecting fraud", because it works on trust. His verdict was that peer review is "a flawed process, full of easily identified defects with little evidence that it works", and yet that it is likely to remain central "because there is no obvious alternative".[13] Replication, where it has been tried at scale, has shown how much of the published record does not hold. Chapter 5 described the effort to repeat 100 psychology studies, of which about a third gave significant results the second time.[14] A later project set out to repeat experiments from high-impact papers in cancer biology. It managed to repeat 50 experiments from 23 papers. For the positive effects, the median effect size in the

Checked at source, 13 Nov 2026.

[9] "Reading and readers": "Volunteer reading for today's version of OED continues to play an important role." https://oed.hertford.ox.ac.uk/quotations/reading-and-readers/ . OUPblog, "The history of the OED Appeals": "The efforts of members of the public have been at the heart of the Oxford English Dictionary for over 150 years." https://blog.oup.com/2012/10/the-history-of-the-oed-appeals/ . Checked at source, 13 Nov 2026.

[10] UP's agreed position on the book (the Position Ledger, round 14, point 7, a COLLECTIVE item), paraphrased: the book is to become a wiki that anyone can improve, the manual for UP and the foundational instructions for what, why, how, who and when, updated as people propose better ideas; its author describes himself as, at the moment, the lone independent researcher, and holds that this is why UP needs to be engaged to improve even this first text. Status: AGREED, 29 Oct 2026; UP Moderator check pending. The Introduction says the same in the author's voice.

[11] Richard Smith, "Peer review: a flawed process at the heart of science and journals", *Journal of the Royal Society of Medicine* 99(4):178–182 (April 2006), DOI 10.1258/jrsm.99.4.178: "Peer review is at the heart of the processes of not just medical journals but of all of science." https://pmc.ncbi.nlm.nih.gov/articles/PMC1420798/ . Checked at source, 13 Nov 2026.

[12] World Intellectual Property Organization, "Patents": "A patent is an exclusive right granted for an invention."; patents "benefit the society by providing public access to technical information about these inventions"; protection lasts "for a limited period within the country or region in which the patent was granted." https://www.wipo.int/en/web/patents . Checked at source, 13 Nov 2026.

[13] Smith, "Peer review: a flawed process at the heart of science and journals" (note 11): "Many journals, even in the age of the internet, take more than a year to review and publish a paper."; "This—perhaps inevitable—inconsistency can make peer review something of a lottery."; "The editorial peer review process has been strongly biased against" studies with negative results; "There are several ways to abuse the process of peer review."; peer review is "almost useless for detecting fraud"; "generally it is not a reliable method for detecting fraud because it works on trust."; "peer review is a flawed process, full of easily identified defects with little evidence that it works."; "it is likely to remain central to science and journals because there is no obvious alternative". https://pmc.ncbi.nlm.nih.gov/articles/PMC1420798/ . Checked at source, 13 Nov 2026.

replications was 85 per cent smaller than in the original experiments, and, counting positive and null effects together, 46 per cent of the replications succeeded on at least three of five measures.[15] The project's authors added a caution that applies to every such figure: a failure to replicate does not disprove a finding, but it does suggest that more work is needed to establish whether it holds.[15]

Patents show a different limit, which is about who may improve an idea at all. In 2013 the Supreme Court of the United States heard a challenge to the patents held by Myriad Genetics on two human genes, BRCA1 and BRCA2, whose mutations raise the risk of breast and ovarian cancer. Myriad's patents, the Court said, would, if valid, "give it the exclusive right to isolate an individual's BRCA1 and BRCA2 genes". The Court held that "a naturally occurring DNA segment is a product of nature and not patent eligible merely because it has been isolated", while a synthetic copy called cDNA could be patented "because it is not naturally occurring".[16] The ruling drew a line, but the case shows what a patent is for: for as long as it lasts, its holder decides who may make or use what it covers.

There is a quieter limit too, and it affects the best-run work as much as the worst. Knowledge goes out of date. In 2007 a team led by Kaveh Shojania followed 100 high-quality systematic reviews, summaries of the evidence on medical questions, chosen as directly relevant to clinical practice, to see how long each stayed current. The median review lasted 5.5 years before new evidence signalled that it needed updating. But for 23 per cent the signal came within two years, for 15 per cent within one, and for 7 per cent it had already come by the time the review was published (Figure 24.1, later in this chapter).[17] Nothing in the way those reviews were produced was careless. A text that is written once and left alone simply ages, whoever writes it.

Set side by side, these cases share a pattern that matters for UP. The current system improves ideas mainly through gates: a small number of reviewers, an examiner at a patent office, the holder of a right, the authors of a review who may or may not return to it. The gates protect quality, and they are slow, narrow and sometimes closed. What they leave out is the person outside the gate: the reader who spots an error and has nowhere to send it, the scientist who would have improved on a patented gene, the update that no one was asked to write. In UP's terms, these are the gaps its second and third tenets are written to close. Under the second, no problem, solution or method belongs to the person who raised it, and anyone may update, reframe or improve it. Under the third, every failure of UP is fed back into it as a new problem to solve, and every part of UP, its tenets included, can be improved through its own method.[18,19] The question this chapter has to answer is how to open the gate without losing what the gate protected.

[14] Chapter 5 describes the Open Science Collaboration's replication of 100 psychology studies (*Science*, 2015) and gives its source: 97 per cent of the original studies had statistically significant results, and 36 per cent of the replications did.

[15] Timothy M. Errington, Maya Mathur, Courtney K. Soderberg, Alexandria Denis, Nicole Perfito, Elizabeth Iorns and Brian A. Nosek, "Investigating the replicability of preclinical cancer biology", *eLife* 10:e71601 (7 December 2021), DOI 10.7554/eLife.71601, abstract: "A total of 50 experiments from 23 papers were repeated, generating data about the replicability of a total of 158 effects."; "for positive effects, the median effect size in the replications was 85% smaller than the median effect size in the original experiments"; "combining positive and null effects, the success rate was 46% (51/112)."; "a failure to replicate does not disconfirm a finding, but it does suggest that additional investigation is needed to establish its reliability." https://elifesciences.org/articles/71601 . The success rate is for replications that succeeded on three or more of five binary methods. Read in the browser, because the site refused automated fetching; checked at source, 13 Nov 2026.

[16] *Association for Molecular Pathology v. Myriad Genetics, Inc.*, Supreme Court of the United States, No. 12-398 (decided 13 June 2013): "Myriad's patents would, if valid, give it the exclusive right to isolate an individual's BRCA1 and BRCA2 genes"; "a naturally occurring DNA segment is a product of nature and not patent eligible merely because it has been isolated"; "cDNA is patent eligible because it is not naturally occurring"; "Mutations in these genes can dramatically increase an individual's risk of developing breast and ovarian cancer". https://www.law.cornell.edu/supremecourt/text/12-398 . Checked at source, 13 Nov 2026.

[17] Kaveh G. Shojania, Margaret Sampson, Mohammed T. Ansari, Jun Ji, Steve Doucette and David Moher, "How quickly do systematic reviews go out of date? A survival analysis", *Annals of Internal Medicine* 147(4):224–233 (2007), DOI 10.7326/0003-4819-147-4-200708210-00179, abstract: "The cohort of 100 systematic reviews included a median of 13 studies and 2663 participants per review."; "Median duration of survival free of a signal for updating was 5.5 years"; "However, a signal occurred within 2 years for 23% of reviews and within 1 year for 15%."; "In 7%, a signal had already occurred at the time of publication."; the sample: "Systematic reviews published from 1995 to 2005 and indexed in ACP Journal Club"; the conclusion: "high-quality systematic reviews directly relevant to clinical practice". Abstract read through Europe PMC: https://www.ebi.ac.uk/europepmc/webservices/rest/search?query=DOI:10.7326/0003-4819-147-4-200708210-00179&resultType=core&format=json . Checked at source, 13 Nov 2026.

[18] Core tenet: *The method: shared problem solving with evidence*, in full: "Everything in UP runs through one method. Problems are named, measured and offered as work to anyone willing to take them on, whether or not they are affected; the people a problem affects decide its outcome. No problem, solution or method belongs to the person who raised it: anyone may update, reframe or improve it. Solutions are proposed with their evidence, tested and compared, and a better idea replaces a worse one. Every claim that guides shared action can be tested and is open to being proved wrong. Work on the roots of problems is worth the most, but a problem can be worked from any angle. Facts are checked, unknowns become shared work, and matters of taste are never made rules for others. Evidence proposes; people decide." Also in "The core of UP".

[19] Core tenet: *Self-correction: nothing is final, including this*, in full: "Every failure of UP is fed back into it as a new problem to solve, so it keeps improving without revolution. Every part of UP, these tenets included, can be improved through its own method. UP is judged against both today's system and the ideal it aims at: the ideal shows the direction and the gap still to close, and today's record shows whether UP is already doing better. Downsides, risks and fringe problems are named openly and treated as work, never as reasons to keep a status quo that fails so many." Also in "The core of UP".

What UP holds about its own open edges

UP's core does not claim to be finished, and it says so in its own words. The third tenet makes self-correction part of what UP is: nothing in UP is final, "these tenets included". UP is judged both against the current system and against the ideal it aims at. Its downsides, risks and fringe problems are named openly and treated as work, not as reasons to keep a status quo that fails so many.[19] UP's agreed position on its framing calls it, for this reason, a self-improving paradigm: because every problem with UP is fed back into it as work, it keeps upgrading itself without revolution or violence.[20] Chapter 5 set out how that loop works, and the test that separates ordinary workload from a true problem of UP itself.[21]

The same principle governs this text. The rule under which UP was defined is that its core ideas are described the way one would first describe a science. Examples of how UP could run are offered as possibilities, never as directives, and everything beyond the core is left to the collective; the person defining the idea defines it and does not rule over it.[22] That rule is why this book marks its claims in layers: what UP is, why it is worth trying, how it could run, and what the collective decides.[22] This chapter belongs almost entirely to the last of those layers. It does not settle the open problems. It names them, shows where UP's own record already marks them as open, and describes one way the work of settling them could be organised.

One distinction from earlier chapters keeps this honest. An open problem is not the same as a weakness. UP's agreed positions hold that a problem that can be fed back into UP's loop with a good chance of doing better than the current system is workload, not a danger: work to be identified, measured, studied, tested and solved like any other.[21] Many of the questions below are of that kind, and naming them is UP working as intended. A few are harder, because they touch the floors or the tenets themselves. Those are marked as such.

The open problems UP names in its core and agreed positions

The clearest of them is written into the floors. UP's sixth tenet says that a protected freedom such as movement may be restricted only to protect others or the person. It may be restricted only through an evidence-based court process, for the shortest time needed and never below the needs floor. The hearing comes first, except briefly to stop harm in progress, with a hearing promptly after; and leaving a group or community does not end a restriction a fair hearing has set. Then it adds a sentence that marks those limits as unfinished: "These limits are an open problem: they are the best that can be imagined now, and UP is built to find better and better solutions."[23] The fair hearing itself carries a hard case that has already been worked once. A person whose freedom is at stake is entitled to a fair, evidence-based hearing, with the evidence open to them and a way to appeal, yet a witness may be in danger if their name is known. UP's record answers that case as a clarification of the floor, not a lowering of it: the substance of the evidence is always open to the person, a court may protect a witness's identity where the witness's safety is at risk, and that decision can itself be appealed. This clarification is settled, and the words of the sixth tenet are unchanged; other hard cases are left to UP's method.[24] Chapter 7 set out the floors in full and Chapter 19 their place in justice; what belongs here is that the core itself names this as unfinished work.[25]

The floors are open in a second, larger sense. The core gives only a starting example of what they contain, needs such as food, water, shelter, health care, education and connection and freedoms such as thought, belief, speech,

[20] UP's agreed position on its framing, a self-improving paradigm: "UP is a self-improving paradigm. Earlier upgrades of civilisation needed revolutions, upheaval, mass adoption and submission. UP asks only that people solve problems together, and because every problem with UP is fed back into it as work, it keeps upgrading itself without revolution or violence." Full wording in UP's agreed positions (the Position Ledger, F3).

[21] UP's agreed position that workload is not a danger: "A problem counts as an issue for UP only if it can't be fed back into the loop with a good chance of beating the old system, if the old system has a far better solution, or if it is endemic to UP." Full wording in the Position Ledger (round 12S, position 15) and UP's study lessons (lesson 16). Chapter 5 sets out how the loop and the test work.

[22] UP's study lessons, the Master Rule: "The book defines and describes UP the way one would first describe chemistry: by the core ideas that make it UP and not something else."; "Every claim belongs to one of four layers: what UP is (definition and tenets), why UP (cited case), how UP could run (illustrations, written as possibilities:"one way", "for example", never "UP will" or "UP requires"), and what the collective decides (and by what method)." The rule records that the person who defined UP defines the idea and does not rule over it. Full wording in UP's study lessons.

[23] Core tenet: *Floors that are never crossed*, second paragraph: "A protected freedom such as movement may be restricted only to protect others or the person, only through an evidence-based court process, for the shortest time needed, and never below the needs floor. The hearing comes first, except briefly, to stop harm in progress, with a hearing promptly after. Leaving a group or community does not end a restriction set by a fair hearing. These limits are an open problem: they are the best that can be imagined now, and UP is built to find better and better solutions. Above the floors, everything is open to the method." Also in "The core of UP" (as amended on 28 Oct 2026).

[24] UP's clarification of the fair-hearing floor (the Position Ledger, "Clarification · T6 fair-hearing floor", 1 Nov 2026): "The words of T6 are unchanged. The substance of the evidence is always open to the person. Where a witness's safety is at risk, a court may protect the witness's identity, and that decision can be appealed. Other hard cases are left to UP's method." Status: CANON-CLARIFICATION (agreed, and confirmed faithful by the UP Moderator), 1 Nov 2026. The floor itself requires "a fair, evidence-based hearing, with the evidence open to them and a way to appeal."

[25] Chapter 7 sets out the floors in full, and Chapter 19 the fair hearing and the limits on restriction in justice and emergencies.

movement and privacy, and leaves the collective to define and refine them through UP's method. It may clarify or raise them, but no decision may lower them or push anyone below them.[26] What counts as an ethical means is open in the same way. The tenth tenet defines it, a means that serves the health, happiness and wellbeing of all, crosses none of the floors and never starts harm against anyone, and then says that what counts as ethical "is defined and refined by the collective through UP's method".[27] Harm itself is to be measured by its effect on health, happiness and wellbeing and refined continually by the collective, and the book deliberately does not list its variations.[28] These are not gaps left by accident. They are the places where UP chose to describe the system by which an answer is reached rather than write an answer down.

Measurement is open work of a more technical kind. UP's agreed positions suggest, as one way UP could run, that problems be measured with fixed definitions kept over time and ranked by measured harm rather than by how loud they feel, with an independent check on every headline measure.[29] The reason, set out in UP's study lessons, is a finding about people: as a problem becomes rarer, people widen their idea of it and still see it everywhere, so a UP that is succeeding could feel as if it were failing.[30] Which measures, which checks and how often they are reviewed are all questions for the collective, and Chapter 4 showed how hard the work is.[31]

Who counts as affected is open in its hard cases, and it matters because the people a problem affects decide its outcome.[18] UP's agreed positions give one way to include those who cannot speak for themselves, such as future people, young children and other living things: several independent simulations, with their assumptions published, that give input but never a vote.[32] Where the circle of the affected should be drawn when a decision reaches far downstream is the subject of Chapter 22, and it is named here because it stays open after Chapter 22 is read.[33]

Some of the largest open questions are about production. UP's agreed positions set out how each job a price does could be done another way. Scarce things are shared by rotation and reservation, and what people want is learned from direct use data under the person's control. Costs are counted in real energy and materials, and local knowledge is used by deciding at the smallest scale that can decide. They then say plainly that whether this coordinates the most complex production as well as markets do is testable workload, to be run rung by rung.[34] Chapter 13 described the precedents, and none of them yet coordinates production of the most complex kind without prices. That is an open question with a method attached, and it is one of the places where UP will be judged most closely.

The necessary work that nobody wants is open in a similar way, and UP's record says so directly: who does care and unpleasant work, fairly, is "open work for the collective".[35] UP's agreed positions suggest a published, fair rota that people sign up for, with recognition and example doing the rest, and an expectation, not a law, that every able member takes a small share, one that never affects whether anyone's needs are met. They add that this is one

[26] Core tenet: *Floors that are never crossed*, first paragraph: "The collective defines and refines the floors through UP's method; it may clarify or raise them, but no decision may lower them or push anyone below them. As a starting example for the collective to refine: needs such as food, water, shelter, health care, education and connection; freedoms such as thought, belief, speech, movement and privacy." Also in "The core of UP".

[27] Core tenet: *Freely joined, ethically grown*, in full: "UP is never imposed. No one is forced to join, to work or to give up what is theirs. It grows by being useful, building on what people already do, and it acts only by ethical means. A means is ethical when it serves the health, happiness and wellbeing of all and crosses none of the floors; UP never starts harm against anyone. What counts as ethical is defined and refined by the collective through UP's method." Also in "The core of UP".

[28] UP's agreed position on harm: "Harm is measured by its effect on health, happiness and wellbeing, and it is defined, graded and refined continually from information, input and research by the collective. The book does not list its variations; it describes the system by which harm is collected, measured, defined and outlined." Full wording in UP's agreed positions (the Position Ledger, card 27).

[29] UP's agreed position on measures (an illustration of one way UP could run, never a directive): "problems are measured with fixed definitions kept over time and ranked by measured harm, not by how loud they feel; every headline measure has an independent check." Full wording in UP's agreed positions (the Position Ledger, round 12S, position 8).

[30] UP's study lessons, lesson 18: "As a problem becomes rarer, people widen their idea of it and still see it everywhere, so a succeeding UP can feel as if it is failing." Full wording in UP's study lessons.

[31] Chapter 4 sets out how UP's aim could be measured, stage by stage, and the ways measures can be gamed or drift.

[32] UP's agreed position on voiceless stakeholders (an illustration of one way UP could run, never a directive): "Voiceless stakeholders (future people, young children, other living things) are represented by simulations: several independent ones, assumptions published, giving input but never a vote." Full wording in UP's agreed positions (the Position Ledger, round 12S, position 9).

[33] The third of the three gaps UP's record names, as updated (the Position Ledger, round 12c, position 1, with the round record): "Who counts as affected: those affected decide (T4); voiceless stakeholders (future people, young children, other living things) are represented by several independent simulations that give input but never a vote (12S)." Chapter 22 takes up who decides in full.

[34] UP's agreed position on prices (an illustration of one way UP could run, never a directive): price's jobs are replaced by rationing by rotation and reservation, direct use data for what people want (under UP's data rule), physical accounting for costs, and decisions at the smallest scale for local knowledge; "Whether this coordinates the most complex production as well as markets do is" "testable workload", "run rung by rung." Full wording in UP's agreed positions (the Position Ledger, round 12S, position 7). Chapter 13 sets out the precedents.

[35] The twelve failures, card F5, as updated (the Position Ledger, round 12c, position 1, with the round record): "Who does care and unpleasant work, fairly, is open work for the collective."

possible way, and that better ideas for better outcomes with less friction are always welcome.[36] Behind it sits a claim UP holds as its own position, to be tested in the open: that visible contributions work as feedback rather than punishment, and that free-riding is a sign of distress or mismatch, met with support. The commons Elinor Ostrom studied also used graduated sanctions, so whether feedback and support can do that work "is measured, not assumed".[37] Chapter 14 set out the evidence on both sides.[38]

The machines UP relies on carry open problems of their own, and UP's agreed positions state them without softening. Aiming an AI at the health of living things does not align it with people "by definition", and "alignment may never be fully solved, but it can be improved a great deal."[39] The AI reduces the problem that any agent may pursue its own ends rather than those of the people it serves; it does not erase it.[40] Whether an AI can have experiences is not yet known, and UP treats the question with great care, studying it and avoiding needless harm, while care never becomes control: people can always correct, pause or switch off an AI.[41] Open code is a tool, not a guarantee, and UP's position on it ends with the hardest case it names: "a patient, skilled bad actor can earn trust and hide for years."[42] How one voice per person is confirmed without collecting more about each person than the system needs is open too: the core sets the principle and leaves the exact design to the collective.[43] Chapters 11 and 20 take these up in full.

One open question sits at the meeting point of two lines that both matter, and its status needs stating exactly. The eighth tenet makes UP's rules, code, records, decisions and reasons public, so anyone can check them.[44] UP's agreed positions also offer, as an illustration of one way UP could run, the line "open understanding, closed recipes": UP publishes how dangers work and how to defend against them, and does not publish step-by-step instructions for causing harm at scale.[45] How the two sit together has not been settled. A clarifying line for the eighth tenet has been put to the collective as a proposal. It says that the public record covers how UP runs and that step-by-step instructions for causing harm at scale are not published. Each decision to withhold one is itself recorded, with its reasons, and open to challenge through UP's method.[46] It is a proposal, not part of the core. Who

[36] UP's agreed position on sharing necessary work: "Necessary work is shared through a published, fair rota that people sign up for, with recognition and example doing the rest. Every able member is expected to take a small share, but it is an expectation, not a law, and it never affects whether anyone's needs are met. This is one possible way; better ideas for better outcomes with less friction are always welcome." Full wording in UP's agreed positions (the Position Ledger, card 23b). The agreed position on rewards and motivation adds that UP's contribution records "inform, and they never decide whether anyone's needs are met" (card 15). The stages are those of UP's study lessons (lesson 13): "early (a minority network inside it), middle (its own productive base; most members' needs met from what UP produces), completed (most people live mainly in UP)"; the middle stage is a projection.

[37] UP's agreed position on cooperation, as amended on 31 Oct 2026: "UP's own position, to be tested in the open, is that visible contributions work as feedback, not punishment, and that free-riding is treated as a sign of distress or mismatch and met with support, not punishment. The commons Ostrom studied also used graduated sanctions, so whether feedback and support can do that work is measured, not assumed." Full wording in UP's agreed positions (the Position Ledger, card 13).

[38] Chapter 14 sets out the evidence on unpaid contribution, rotas and free-riding.

[39] UP's agreed position on aiming the AI at the health of living things: "Aiming an AI at the health of living things does not align it with people"by definition", and alignment may never be fully solved, but it can be improved a great deal." Full wording in UP's agreed positions (the Position Ledger, card 12).

[40] UP's agreed position on the agent problem: "The AI does not eradicate the principal-agent problem; it reduces it." Full wording in UP's agreed positions (the Position Ledger, card 18).

[41] UP's agreed position on the AI's own wellbeing: "Whether an AI can have experiences is not yet known. UP treats the question with great care: it studies it and avoids needless harm. If an AI is shown to be sentient and conscious, it is included in UP's aim. Care never becomes control: people can always correct, pause or switch off an AI, and no AI has a veto over the decision steps." Full wording in UP's agreed positions (the Position Ledger, card 12b). The core tenet *Technology serves; people decide* ends: "Because an AI may one day be shown to have experiences of its own, UP studies the question carefully and would extend its aim to any being shown to feel."

[42] UP's agreed position on open code: "Open code is a tool, not a guarantee: it makes corruption much harder to hide, more visible and easier to contest, and it is guarded against for good."; "UP also widens who can check: reading shared systems is taught in open education, checking counts as contribution work, and the AI explains every change in plain language. UP says plainly what openness cannot catch: a patient, skilled bad actor can earn trust and hide for years." Among its safeguards are "funded rotating red teams" and "allocation code that runs as two independent versions that must agree". Full wording in UP's agreed positions (the Position Ledger, card 17).

[43] Settled alongside the core, one voice per person: "every account belongs to one unique real person and carries that person's identity, which the person owns and controls; the system needs to confirm only that the person is unique and real, and every other detail is shared by the person's own choice. The exact design is open work for the collective." Full wording in "The core of UP".

[44] Core tenet: *Open systems, shared knowledge, private persons*, in full (as amended on 28 Oct 2026): "The rules, code, records, decisions and reasons of UP are public, so anyone can check them. UP's technology (the knowledge, code, data and designs UP produces) stays only in UP: everyone taking part in UP may use, study and improve it, and no one may enclose it. Each person controls their own information and chooses what to share. Openness helps people find problems, but it will not find all of them, so UP also names the risks that openness alone cannot catch and keeps working on them." Also in "The core of UP".

[45] UP's agreed position on dangerous knowledge (an illustration of one way UP could run, never a directive): "open understanding, closed recipes. UP publishes how dangers work and how to defend against them, and does not publish step-by-step instructions for causing harm at scale." Full wording in UP's agreed positions (the Position Ledger, round 12S, position 4).

[46] The Position Ledger, "Proposal · T8 clarifying line on closed recipes (PROPOSED, 1 Nov 2026)": status "open to the collective, not canon"; the proposed line: "The public record covers how UP runs: its rules, code, records, decisions and reasons. Step-by-step instructions for causing harm at scale are not published; each decision to withhold one is itself recorded, with its reasons, and open to challenge through UP's method." The open points recorded with it: "who decides that something is a recipe for harm at scale; how a challenge is heard (DP-001 steps); the threshold for"at scale"; and that withholding must never become a way to enclose UP's technology (the decision record stays public)."

decides what counts as a recipe for harm, what “at scale” means, how a challenge is heard, and how withholding is kept from ever becoming a way to enclose UP’s technology are all open.[46]

The last open problem in this list is the method of deciding itself. UP’s agreed position on disagreement sets out one sequence: an evidence-based proposal, the question “does anyone have a better idea?”, the search for a design or technology that removes the trade-off, and only then a guarded vote. It then adds that problem-solving methods are not fixed: within basic guardrails, many methods are tried and their results measured against each other.[47] Even the method has a method for improving it.

Others are named too, and the back matter keeps the full list. New medicines and outbreak response, UP’s record says, are the hardest parts of health and “remain open work”.[48] The rule for emergencies, one layer of authority that belongs to the event and ends with it, “is itself open to improvement”.[49] How the interests of other living things are weighed when they conflict with people’s is “left to the collective”.[50] And the categories by which claims are checked, fact, unknown and taste, are “a starting guide, open to improvement”.[51] Table 24.1 gathers the main open problems in one place.

Table 24.1. Open problems that UP’s core and agreed positions name, with the line that names them and the kind of work each is. Open questions for the collective, not answers. [23,24,26,27,29,32,34,36,37,39,40,41,42,43,46,47,35,48,49,50,51]

Open problem	Where UP names it	What kind of work it is
The limits on restricting a protected freedom	Sixth tenet: “These limits are an open problem”	Floor-level; may be clarified or raised, never lowered
Hard cases of the fair hearing	The witness clarification of the sixth tenet (settled, 1 Nov 2026); “Other hard cases are left to UP’s method”	Floor-level; one case worked, others open
What the floors contain	Sixth tenet: a starting example “for the collective to refine”	Floor-level; the collective may clarify or raise
What counts as ethical	Tenth tenet: “defined and refined by the collective”	Core-level; the collective’s work
Which measures, and how they are checked	An illustration (agreed position on measures); study lesson 18; left to the collective	Workload
Who counts as affected, and voices for the voiceless	Agreed position on voiceless stakeholders (an illustration); Chapter 22	Workload, with floor limits
Coordinating the most complex production without prices	Agreed position on prices: “testable workload, run rung by rung”	Workload; a central test of UP
Sharing the work nobody wants; free-riding	Twelve failures, card F5: “open work for the collective”; agreed positions on necessary work and on cooperation: “measured, not assumed”	Workload; UP’s position to be tested
Aligning AI; the agent problem; whether an AI can feel	Agreed positions on aiming the AI, the agent problem and the AI’s wellbeing; ninth tenet	Standing work; “may never be fully solved”
What openness cannot catch	Agreed position on open code; eighth	Standing work

[47] UP’s agreed position on how UP decides when people disagree: “Every decision starts with an evidence-based proposal, published with its data, and an open question: does anyone have a better idea?”; “Where a real trade-off remains, UP tries to break it with new technology or a new design, and widens the circle of people working on it. Only when none of that works do the stakeholders vote. Voting is a last resort, not a forbidden one.”; “every decision carries a deadline set by its urgency”; “Every vote records the losing side’s case, and the decision reopens when new evidence or technology changes the options. Problem-solving methods are not fixed: within basic guardrails — a solution may not harm people — many methods are tried and their results are measured against each other.” Full wording in UP’s agreed positions (the Position Ledger, DP-001).

[48] The twelve failures, card F6, as updated (round 12c record): “New medicines come from UP’s own open science and invention, with far more people and AI working on them (12S); they and outbreak response are the hardest parts and remain open work.”

[49] UP’s agreed position on emergencies: “UP has no lasting authority and no emergency powers.”; “Authority belongs to the event, is one layer deep, like a parent’s, and ends when the event ends.”; “The rule is itself open to improvement: anyone may propose a better way to handle emergencies that gives up no freedom and guards better against oligarchy and tyranny.” Full wording in UP’s agreed positions (the Position Ledger, DP-004a).

[50] UP’s agreed position on all living things: “Priority by the capacity to suffer and to flourish (with every human counting equally), the health of the whole living system, and legal standing for nature are all tools the collective can use to find those solutions; how they are weighed is left to the collective.” Full wording in UP’s agreed positions (the Position Ledger, card 11b).

[51] UP’s agreed position on public discourse: “These categories are a starting guide, open to improvement from research on making shared knowledge faster, more valuable and more accurate, including tamper-evident records such as blockchains.” Full wording in UP’s agreed positions (the Position Ledger, DP-007).

Open problem	Where UP names it	What kind of work it is
	tenet	
How one voice per person is confirmed	Settled alongside the core: “The exact design is open work”	Workload
Dangerous knowledge and the public record	Illustration “open understanding, closed recipes”; a T8 clarifying line, still a proposal	Open; a proposal before the collective
The method of deciding itself	Agreed position on disagreement: “many methods are tried”	Workload
New medicines and outbreak response	Twelve failures, card F6: “remain open work”	Workload; among the hardest
The rule for emergencies	Agreed position on emergencies: “itself open to improvement”	Open to any better way that gives up no freedom
Weighing other living things against people	Agreed position on all living things: “left to the collective”	The collective’s work
How claims are checked: fact, unknown, taste	Agreed position on public discourse: “a starting guide”	Open to improvement from research

One register of the dangers, each with its check

Nearly every chapter of this book has ended its stage table with a column headed “what persists”, and every chapter has answered its strongest doubts by naming what the answer does not remove. That is UP’s third tenet applied to the text itself: downsides and risks are named openly and treated as work.[19] Scattered across twenty-one chapters, though, the dangers are hard to see whole, and a danger that cannot be seen whole cannot be watched. So UP’s record keeps them in one place. When UP’s core was settled, its dangers were tested against it one by one, and those adopted were written into the record that settles the core. Anyone may reframe a problem; one voice each, no fake accounts; time and money earn recognition, never power; everyone is a watcher; working fallbacks without the AI; people can always add options. Then come open science on AI feeling; no forced adoption, no leader, no founder named in the core; and anyone acting outside the core stops being UP and bears the consequences.[52] UP’s agreed position on threats to UP asks for named threats and a public threat register as well.[53]

Table 24.2 is a summary of that register as it stands at the end of this first version. Each row names a danger, where UP’s core or agreed positions name it, and the check UP puts against it. The checks are not guarantees. UP’s fifth tenet says of concentration of power, which UP’s agreed positions call the danger, that the threat “is never declared gone; it is watched and answered”, and the same holds for every row.[54] The full register, with every danger raised in Chapters 1 to 23 and the chapter that treats it, is in the back matter, and it is one of the pages readers are most invited to extend. A danger missing from it is the most useful thing a reader can add.

[52] Settled alongside the core, dangers adopted in round 10: “anyone may reframe a problem; one voice each, no fake accounts; time and money earn recognition, never power; everyone is a watcher; working fallbacks without the AI; people can always add options; open science on AI feeling; no forced adoption, no leader, no founder named in the core; anyone acting outside the core stops being UP and bears the consequences.” Full wording in “The core of UP”. The Position Ledger (round 10) records that dependence on AI was named a major threat, to be worked on by everyone.

[53] UP’s agreed position on threats to UP (the Position Ledger, DP-004, as a whole) combines the agreed wording on threats with “named threats + public threat register”. The agreed position on protection during the transition (DP-004b) adds that UP “studies openly how embedded and nonviolent communities have survived hostile powers, and updates its approach as it learns.”

[54] Core tenet: *Power kept spread out*, in full: “Concentration of power, in any form (wealth, position, information, access, expertise or machines), is treated as a standing danger. People tend to gather power and to hand it to whoever seems accomplished, and history shows few good endings. Everyone in UP watches for concentrations of power and spreads them out again. The threat is never declared gone; it is watched and answered.” Also in “The core of UP”.

Table 24.2. A summary threat register: the dangers named across this book and in UP's core and agreed positions, each with its check. The full register is in the back matter. Checks reduce a danger; none removes it.[52,53,54,55,56,57,58,59,60,61,62,63,64,65]

Danger	Where UP names it	The check UP puts against it
Concentration of power, in any form (wealth, position, information, access, expertise or machines)	Fifth tenet; agreed position on concentration of power (Chapter 6)	Everyone watches and spreads it out; caps, public records of who approved what, rotation of anyone who allocates, random audits
Capture of open processes by the most active, the best organised or the best funded	Chapters 5 and 6; agreed position that informal power is workload	Open checks and open data; where a decision goes to a vote, who took part and how typical they were, published
A founder or first author treated as the authority	Dangers adopted with the core: "no leader, no founder named in the core"; fifth tenet (Chapter 6)	The person defining UP defines the idea and does not rule over it; anyone may reframe a problem and add options; every change and dissent on the record; every line open to improvement by anyone
Forced adoption	Tenth tenet; dangers adopted with the core	No one is forced to join, to work or to give up what is theirs
Fake accounts, and money buying a say	Dangers adopted with the core; one voice per person	One voice each; time and money earn recognition, never power
Dependence on AI	Dangers adopted with the core (Chapters 11 and 20)	Working fallbacks without the AI; people can always correct, pause or switch it off
Frontier AI concentrated outside UP	The twelve failures, card F12 (Chapter 20)	Open, plural AI from the start; UP building its own capacity; it matters less as more of life moves into UP
An AI that pursues the wrong goal	Agreed positions on aiming the AI and on the agent problem	The AI proposes and never governs; auditable; people can always override or

[55] UP's study lessons (not an agreed position), lesson 17 (UP has no central operator), paraphrased: there is no position whose job is to check the system, because everyone is the check; anyone may do anything that resolves a problem, and the result carries the most power. The dangers adopted with the core include "everyone is a watcher" (note 47).

[56] UP's agreed position that concentration of power is the danger: "So UP watches for concentrations of power in any form and keeps spreading them out. The threat is never declared gone. Design helps: caps, public records of who approved what, rotation of anyone who allocates, random audits, public and versioned allocation rules." Full wording in UP's agreed positions (the Position Ledger, card 26). The agreed position on informal power: "Informal power and the loop checking itself are workload: open-source checks and open sensor data." (the Position Ledger, round 12S, position 15).

[57] UP's agreed positions on the floor no gain for others can buy: "Above the floor, no one is made worse off without being asked first: those who would lose out are consulted and helped, though no single person can block a change that meets everyone's needs." (the Position Ledger, DP-010); and "Those who would lose out are asked first and helped; no single person can block a change that meets everyone's needs." (card C27).

[58] The twelve failures, card F10, as updated (the Position Ledger, round 12c, position 1, with the round record): "The middle stage is the most exposed, and UP's protection then rests on legality, numbers and nonviolent action. As cities and nations join, their weapons and armies are dismantled and converted into law enforcement, emergency aid and rapid response, and nuclear weapons into power (12S, an illustration)." The overall claim UP's record adopts (round 12c, option B): "Force used by those outside UP shrinks as cities and nations join and convert their weapons and armies into law enforcement, emergency aid and rapid response." Card F12: "UP can run on open, plural AI from the start and build its own capacity as it grows"; "Concentration of frontier AI outside UP persists while the old system holds it, and matters less as more of life moves into UP."

[59] UP's agreed position on growth (the Position Ledger, round 12c, position 3, in the UP Moderator's faithful wording), paraphrased: UP grows naturally, perhaps very fast and large or perhaps slowly, and the speed is not for anyone to decide; what matters is to grow while keeping the quality of the core values and tenets, so that growth stays positive and does not descend into unintended consequences.

[60] Core tenet: *Open participation: anyone may take part; those affected decide*: "Anyone may take part in any problem, and the people it affects decide its outcome." Also in "The core of UP". The voiceless are represented as in note 32.

[61] UP's agreed position on useful fictions: "A fiction is retired when technology can replace what it does without obvious downsides; until then it is reduced as far as possible." Full wording in UP's agreed positions (the Position Ledger, F2).

[62] The overall claim UP's record adopts (the Position Ledger, round 12c, option B): "What persists is named openly as work: damage already locked into the climate; threats from space, until humanity can leave the solar system; and the human remainder, because UP is not magic and suffering continues while its biggest causes fall." The irreversible-damage line is in UP's agreed position on people first: "damage that cannot be undone, such as a drained aquifer, a lost species or lost topsoil, is never traded for a short-term need; the need is met another way." (DP-009).

[63] Agreed positions on justice (the Position Ledger, round 13), paraphrased: law enforcement is one layer, its work open to everyone and watched by many, with the people and the process holding authority over it; courts rest on evidence, not public opinion; the dangers of abuse of power and false evidence are named and need constant attention. The twelve failures, card F10: "What remains is handled by one layer of trained law enforcement, open and watched by many, with courts that rest on evidence".

[64] UP's agreed position on the trust layer and the data rule (an illustration of one way UP could run, never a directive): "data is used only with permission, the question travels to the data, and only the answer leaves; nothing individual is passed on or kept." Full wording in UP's agreed positions (the Position Ledger, round 12S, position 11). The eighth tenet: "Each person controls their own information and chooses what to share."

[65] The twelve failures, cards F1 and F8, as updated (round 12c record): "Local disputes over siting are work for UP's method (12S)."; "Land still held outside UP, and local objections to new homes, are work for UP's method." The no-veto line is in the agreed positions on the floor no gain can buy (DP-010, card C27).

Danger	Where UP names it	The check UP puts against it
		switch it off
A patient, skilled bad actor	Agreed position on open code	Rotating red teams, two independent versions of allocation code, checking counted as contribution work
Measures that are gamed or drift	Agreed position on measures; study lesson 18	Fixed definitions kept over time; an independent check on every headline measure
A restriction on someone's freedom that goes wrong	Sixth tenet	A fair, evidence-based hearing, the evidence open to the person and a way to appeal; the substance of the evidence always open, a witness's identity protected only where the witness's safety is at risk, with appeal; the limits on any restriction
Authority that grows in an emergency	Agreed position on emergencies (Chapter 19)	One layer of authority, belonging to the event and ending with it; many single-layer teams under public oversight
Abuse of power or false evidence in justice	Agreed positions on justice (Chapter 19)	Open law enforcement, watched by many; courts that rest on evidence; the fair-hearing floor
Misuse of personal data	Eighth tenet; the data rule (Chapter 20)	Each person controls their own information; the question travels to the data, and only the answer leaves
Pressure that makes leaving costly	Sixth tenet (Chapters 3 and 7)	The right to leave any group at any time, taking what is theirs; leaving does not end a restriction set by a fair hearing
Irreversible damage to the living world	Sixth tenet; agreed position that irreversible damage is never traded	Never traded for a short-term need; the need is met another way
The exposed middle stage, and force from outside UP	The twelve failures, card F10; the overall claim (Chapters 19 and 23)	Legality, numbers and nonviolent action, and only ethical means; force shrinks as cities and nations join and convert their weapons and armies
Growth that dilutes the core	Agreed position on growth (Chapter 23)	Keep the quality of the core values and tenets as UP grows, whatever its speed
Local vetoes, and a circle of the affected drawn too small or too large	Twelve failures, cards F1 and F8; the three gaps; agreed positions on the floor no gain can buy (Chapter 22)	Those affected decide; simulations give the voiceless input but never a vote; no single person can block a change that meets everyone's needs
Retiring a shared fiction too early	Agreed position on useful fictions (Chapter 8)	A fiction is retired only when technology can replace what it does without obvious downsides; until then it is reduced as far as possible
Enclosure of what UP makes	Eighth tenet	UP's technology stays only in UP, and no one may enclose it
What remains when UP works	The overall claim; agreed position on threats (Chapter 21)	Named openly: warming already locked in, threats from space, and the human remainder, "because UP is not magic"

Read down the right-hand column and a pattern appears. Almost none of the checks depends on a good person being in charge. They depend on things being visible, on power being spread out, on people being able to leave, and on floors that no decision may cross. That is deliberate. UP's study lessons hold that UP has no central operator, and the dangers adopted with the core include "everyone is a watcher": there is no position whose job is to check everyone else, because everyone is the check.[55] The register works only if people read it, and it improves only if they add to it.

Four kinds of improvement, and what each one needs

Not every improvement is the same kind of thing, and the layers in which this book is written show why. A proposal to correct a figure, a proposal to try a different way of sharing tools and a proposal to change a tenet each ask something different of the people who decide on them. A living text works better when it is clear which kind of change is on the table.

The simplest is a correction of fact, in the layer that gives the case for UP. If a figure in this book is wrong, out of date or badly sourced, the remedy is the one the second tenet already sets: facts are checked.[18] A proposal of this kind needs only its source, and anyone can test it by reading the source. This chapter itself shows how such proposals arise. Its own research could not confirm, at a source it could read, the totals of words and quotations in the dictionary's first edition, so they are not in the text. A reader who has the 1928 figures from a primary source can add them, and the next release will be better for it.

The second kind is a better way of doing something, in the layer of illustrations. Almost everything this book offers about how UP could run, from rotas and tool libraries to a trust layer for records, is marked as one way it could run, not a rule. A better way replaces a worse one under the second tenet, and UP's agreed positions suggest how such a claim is tested: try it small, show that it is safe, and then scale it, which is itself offered as an illustration, not a tenet.[66] Two ways can also be tried side by side, since UP's agreed positions treat splits as good, testing two or a thousand ways in the real world.[67] A proposal of this kind needs evidence of what happened when it was tried, or a test that would show it.

The third kind touches the core itself: a tenet, the definition or a floor. UP's third tenet allows even this, and UP's own short history already contains examples. The core was settled on 24 October 2026 and amended four days later, when, among other changes, the sixth tenet gained a new floor, a fair hearing, with limits on any restriction of a protected freedom; the amendment is recorded beside the earlier text, which is kept unchanged.[68] A change of this kind needs more than a source or a trial. It needs to be checked against every other line of the core, because the tenets lean on one another, and it is bound by one limit that no argument can lift: the floors may be clarified or raised, but no decision may lower them or push anyone below them.[26] The fair-hearing floor was a raise of exactly that kind. A proposal to lower a floor is not a proposal UP's method can accept, however good its reasons sound, and that is the point of having floors.

The fourth kind is a matter for the collective: a value to weigh, a priority among needs, a choice between two designs that both work. UP's core is careful here. Matters of taste are never made rules for others, and the people a problem affects decide its outcome. They do so through the decision steps: a proposal, the question whether anyone has a better idea, a search for a design or technology that removes the trade-off, and only then, if nothing else works, a guarded vote.[18,47] The lines settled alongside the core add two protections that matter for anyone proposing something unpopular: anyone may reframe a problem, and people can always add options.[52] A proposal of this kind needs to reach the people it affects and to set out its trade-offs openly.

A fifth contribution does not fit the four layers, and it may be the most valuable of all: naming a danger no one has named. The register in this chapter and in the back matter is the result of many such contributions, and it is incomplete. Adding a row needs only an argument for why the danger is real and what might check it. Under UP's agreed positions, a danger that can be fed back into UP's loop with a good chance of doing better than the current system is workload, and naming it is how it becomes work.[21]

[66] The Position Ledger, round 9: "M1 (test small, prove safe, then scale) and M2 (decisions at the smallest scale) are illustrations, not tenets."
[67] UP's agreed position that splits are good: "Splits are good: they test two or a thousand ways in the real world." Full wording in UP's agreed positions (the Position Ledger, round 12S, position 10, in the UP Moderator's wording).
[68] "The core of UP" (version of 28 Oct 2026), status line: settled as canon on 26 Oct 2026, after the rounds of 23–24 Oct, and "Amended 28 Oct 2026 (Round 13b): T6 (restrictions and a fair hearing) and T8 (UP's technology stays in UP)"; The text of 24 Oct is kept unchanged as a record. The sixth tenet's new floor: "a fair hearing, so no one's freedom is restricted without a fair, evidence-based hearing, with the evidence open to them and a way to appeal."

CHAPTER 24

Five kinds of contribution, and what each needs

Not every improvement is the same kind of thing. A living text works better when it is clear which kind of change is on the table.

KIND	WHERE IT LANDS	WHAT IT NEEDS	THE LIMIT OR RULE
1 A correction of fact	The case for UP	Its source; anyone can test it by reading the source	**Facts are checked (the second tenet)**
2 A better way of doing something	Illustrations: one way UP could run	Evidence of what happened when it was tried, or a test that would show it; try it small, show it is safe, then scale it	**Splits may test two ways side by side**
3 A change to the core: a tenet, the definition or a floor	The core	A check against every other line of the core, because the tenets lean on one another	**Floors may be clarified or raised, never lowered**
4 A matter for the collective: a value, a priority, a choice between designs	The people affected	To reach the people it affects and set out its trade-offs openly, through the decision steps	**Matters of taste are never made rules for others**
5 Naming a danger no one has named	The register of dangers	An argument for why the danger is real and what might check it	**If it can be fed back into UP's loop, it is workload**

Drawn from Chapter 24, "Four kinds of improvement, and what each one needs", and the fifth contribution it names. The core was settled on 24 October 2026 and amended four days later, when the fair-hearing floor was added: a raise. A floor may be clarified or raised, never lowered.

Five kinds of contribution to UP's living text, and what each one needs.

How the living text could work

The structure that turned Edith Thompson's slips into a dictionary has its modern descendants, and some of them are built for exactly the problem this chapter faces: how a text that many people can change keeps both its openness and its quality. The best-documented are the proposal processes of large open-source projects. Chapter 6 told how the Python programming language's leadership changed hands; what matters here is its proposal process. Python is changed through documents called PEPs. A PEP is "a design document providing information to the Python community", and each one "must have a champion", someone who writes it and steers it. The rule that matters most for UP is the author's duty: "The PEP author is responsible for building consensus within the community and documenting dissenting opinions."[69] Every PEP carries a status, from Draft through Accepted, Rejected, Withdrawn, Final and others, and because the PEPs are kept "as text files in a versioned repository", their "revision history is the historical record of the feature proposal".[69] Bitcoin's improvement proposals followed the same pattern for almost a decade, with the same duty laid on the author word for word.[70] Chapter 1 described the engineers who set the internet's standards, who work by what they call rough consensus and running code.[71]

One detail of Bitcoin's process is a lesson in itself. Its 2016 rules asked every proposal to link to a public wiki page where reviewers would post their comments, so that the community's view could be read beside the proposal.[70] When a revised process, first assigned in January 2025, replaced it, the comment system was abolished. "The

[69] Barry Warsaw, Jeremy Hylton, David Goodger and Alyssa Coghlan, "PEP 1 – PEP Purpose and Guidelines", Python Enhancement Proposals: "A PEP is a design document providing information to the Python community"; "Each PEP must have a champion – someone who writes the PEP using the style and format described below"; "The PEP author is responsible for building consensus within the community and documenting dissenting opinions."; the status values run from Draft, Active and Accepted through Provisional, Deferred, Rejected and Withdrawn to Final and Superseded; "Because the PEPs are maintained as text files in a versioned repository,"; "their revision history is the historical record of the feature proposal". https://peps.python.org/pep-0001/ . Checked at source, 13 Nov 2026.

[70] Luke Dashjr, "BIP 2: BIP process, revised" (assigned 2016-02-03; status now "Closed", replaced by BIP 3): "The BIP author is responsible for building consensus within the community and documenting dissenting opinions."; "Each BIP should, in its preamble, link to a public wiki page with a summary tone of the comments on that page."; "Reviewers of the BIP who consider themselves qualified, should post their own comments on this wiki page."; "A Proposed BIP may progress to Final only when specific criteria reflecting real-world adoption has occurred." https://github.com/bitcoin/bips/blob/master/bip-0002.mediawiki . Checked at source, 13 Nov 2026.

[71] Chapter 1 describes the Internet Engineering Task Force and gives its source for the line "rough consensus and running code" (RFC 7282).

comments feature saw insignificant adoption," the new rules explain: few proposals received any comments, which led to many situations in which one or two comments ended up dominating the summary.[72] A comment log that nobody uses does not record a community's view. It records the views of whoever happened to write, which can be worse than recording nothing. Chapter 1 described the same kind of failure on a larger scale, when the number of active editors on English Wikipedia peaked in 2007 and fell as newcomers were turned away.[73] Open processes do not fail for lack of openness. They fail for lack of people taking part, and for lack of a way to see who did.

Those lessons suggest one way UP's living text could run. What follows is an illustration of one possibility, drawn from these precedents and from UP's own core, not a rule. The text would be published in tagged releases, version 1.0, 1.1 and so on, so that anyone can cite a fixed version, while the working pages stay live between releases. Looking after each page would be work shared out, not held. A few people take turns at it for a set time, anyone who meets the published standard can take a turn, and their work is watched and on the public record. They can be replaced, and anyone may fork the page, as UP's agreed position on stewards describes for stewardship bodies and as Chapter 6 illustrated.[74] Each page would carry a public "last reviewed" date and a banner when the review is overdue. The evidence on systematic reviews shows why the date matters: even the best-made summary of evidence starts to age the day it is published (Figure 24.1).[17]

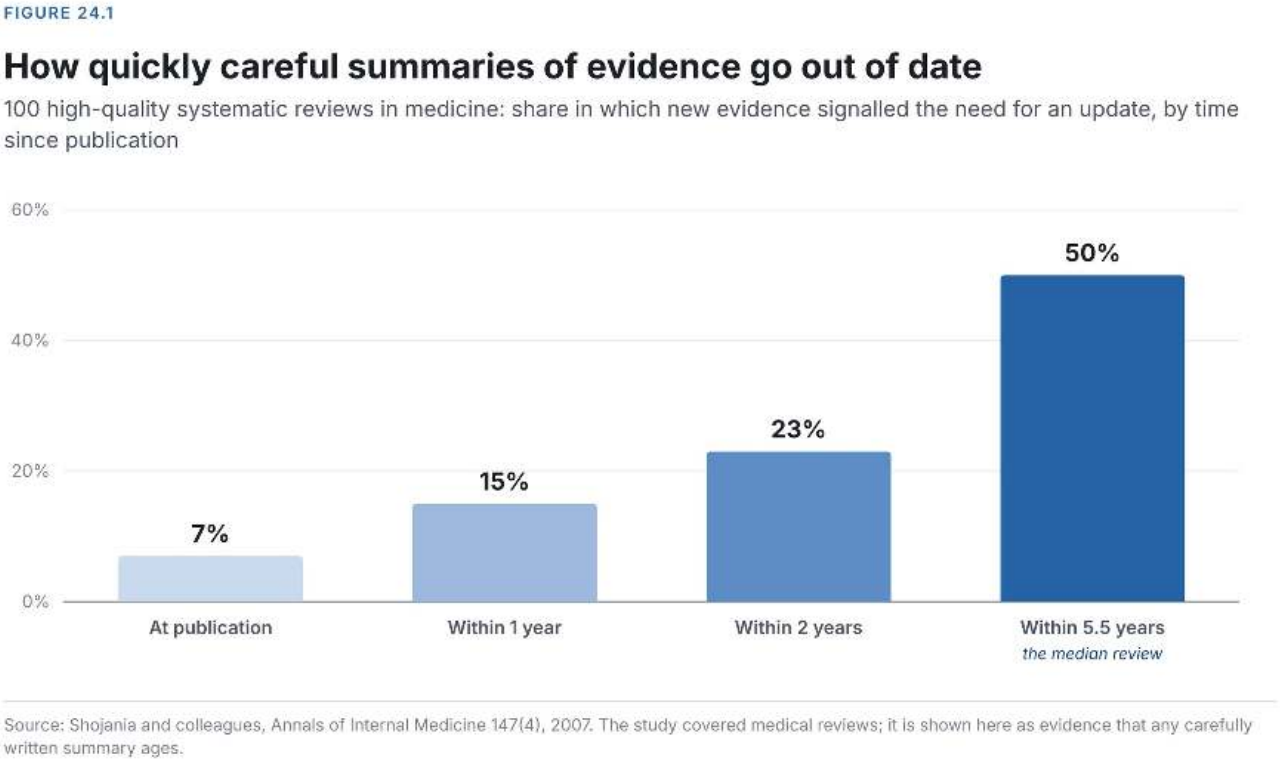


Figure 24.1. Share of 100 high-quality systematic reviews in which new evidence signalled the need for an update, by time since publication; the median review lasted 5.5 years. Data from Shojania and colleagues, Annals of

[72] Murch, "BIP 3: Updated BIP Process" (assigned 2025-01-09; status "Deployed"): "This BIP replaces BIP 2 as the guideline for the BIP process."; "The comment system is abolished."; "The comments feature saw insignificant adoption."; "Few BIPs received any comments and barely any more than two with only a handful of contributors commenting at all."; "This led to many situations in which one or two comments ended up dominating the comment summary."; "Each BIP is primarily owned by its authors and represents the authors' opinion or recommendation." https://github.com/bitcoin/bips/blob/master/bip-0003.md . Checked at source, 13 Nov 2026.

[73] Chapter 1 describes the decline in English Wikipedia's active editors after their peak in March 2007, and gives its source (Halfaker, Geiger, Morgan and Riedl, *American Behavioral Scientist*, 2013).

[74] UP's agreed position on stewards: "They prove that open peer production, run by distributed stewards, can build and run complex systems at global scale."; "The claim is not"no head to cut off" but "heads that rotate, are watched and can be replaced, because the work belongs to everyone": many stewardship bodies, each with a defined scope, term limits, public audit and the right to fork." Full wording in UP's agreed positions (the Position Ledger, card 19). Chapter 6 illustrates the same model as rotating teams. The core tenet *Open participation*: "There are no offices to hold: work is shared out, not owned".

Internal Medicine, 2007. The study covered medical reviews; it is shown here as evidence that any carefully written summary ages.[17]

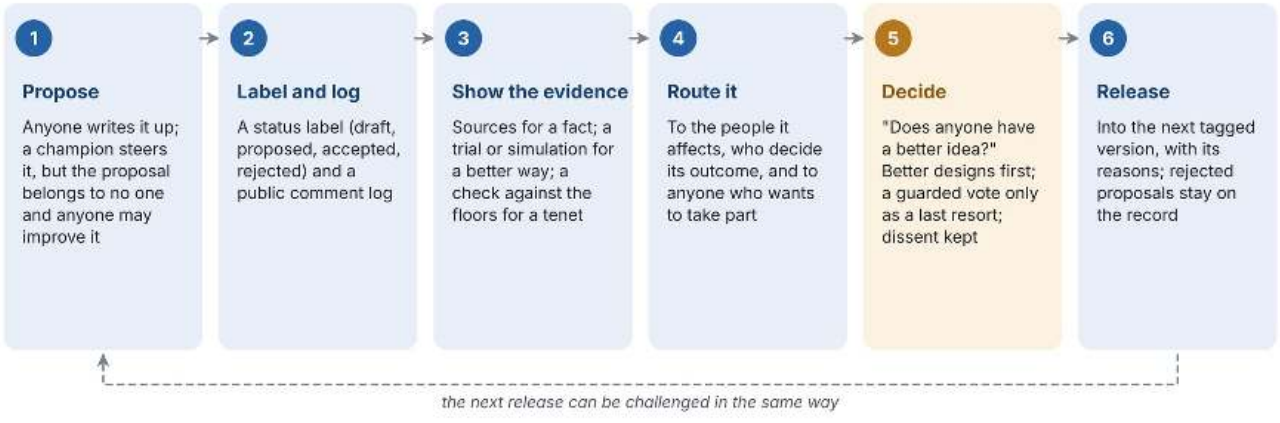
Two more habits would help a contributor do good work. Every claim on a page would carry its source, the date it was last checked and a grade of confidence, and every statistic a date by which it should be refreshed, as this book's notes give each source and the date it was checked. And a short set of contribution principles could ask for what this book has tried to practise; it is offered here as one way it could run, and left to the collective to write in full. It would ask for evidence before argument; the strongest form of a view before any criticism of it; facts, unknowns and matters of taste each marked for what they are; and criticism of ideas, never of people.[75] The back matter's page on how to improve this book is where they would start.

A change would follow a light route (Figure 24.2). Anyone could propose one, with a champion who writes it up and is responsible, as in Python's rule, for building consensus and recording dissent. Unlike a Bitcoin proposal, which its current rules say is "primarily owned by its authors", a proposal in UP would not belong to its champion. Under the second tenet anyone may update, reframe or improve it, and the champion's work is only to see that it is written up, argued and recorded.[72,18] The proposal would carry a status label and a public comment log. It would state its evidence, since in UP every claim that guides shared action can be tested and is open to being proved wrong.[18] It would be routed to the people it affects, who decide its outcome, and to anyone who wants to take part.[18] Where it could be tested, it would be, in a small trial, a simulation or a check against the sources, before anyone argued about it at length. Where it could not yet be settled, it would be marked as unknown, and the unknown would become work: what data or study would settle it.[75] Statements of taste would be marked as such and never made rules for others.[75] If a better idea appeared, it would replace the first, as UP's decision steps provide, and if a decision had to go to a vote, the losing side's case would be recorded and the decision would reopen when new evidence changed the options.[47] Every accepted change would land in the next release with its reasons, and every rejected one would stay on the record.

FIGURE 24.2

One way a change to UP's living text could travel

From a proposal to a release. An illustration, not a rule.



Drawn from Python's PEPs, Bitcoin's BIPs and UP's decision steps. How this route joins the process that checks changes to the core is still to be decided.

Figure 24.2. One way a change to UP's living text could travel. The steps draw on the proposal processes of Python and Bitcoin and on UP's decision steps; the route is an illustration of one way UP could run, not a rule, and how it joins the process that checks changes to the core is still to be decided.[47,69,70]

[75] UP's agreed position on raising the standard of public discourse: "Where a claim can be checked, it is checked, with its sources and confidence shown. Where a claim cannot yet be settled, it is marked as unknown, and the unknown becomes work for people and AI together: what data or study would settle it. While it is studied, decisions go ahead through the decision steps in [#1]. Where a statement is a matter of taste, it is marked as such and can never be made a rule for others." Full wording in UP's agreed positions (the Position Ledger, DP-007).

Bitcoin's lesson suggests what such a route needs most: people. UP's agreed position on open code already counts checking shared systems as contribution work and teaches the reading of them in open education.[42] The same could apply to the text, so that reviewing a proposal, checking a source or updating an overdue page is recognised work. And the AI, which proposes and never assigns, could put a proposal in front of people whose chosen interests and skills fit it, using only what each person chooses to share.[76] And because the people a problem affects decide its outcome, a change to a page about, say, how a town shares its water would be put to the people it affects: the town and those downstream of its water. Anyone who wants to may take part in the work, but it would not be decided by whoever happens to be online.[77] Each of these is a check on the failure Bitcoin's process met: a comment log dominated by one or two voices.

Two decisions about the living text are not yet made, and this chapter names them rather than making them. The first is how this route joins the process by which changes to UP's settled core are recorded and checked. At this first stage, while UP is the work of one independent researcher, its core and agreed positions have been settled in a written debate record: options for each question were set out, and the person defining UP chose among them or answered in his own words. Before an item is marked as part of the settled core, a separate check confirms that its wording is faithful to what was chosen; some agreed positions are still awaiting that check; and no earlier version is ever deleted.[78] This arrangement belongs to the early stage. The core names no founder or leader, power in any form is a danger to be watched, and the person defining UP defines the idea without ruling over it.[22,52,54] How the gate should work once many people take part, and how a wiki's change route should feed it, so that an improvement from anyone can reach even the tenets, as the third tenet allows, without the floors ever being lowered, is open.[19,26] The second is the licence under which the text itself is shared. A common choice for open texts, the Creative Commons Attribution-ShareAlike licence, lets anyone copy and adapt the material "for any purpose, even commercially", on condition that they credit it and distribute their contributions "under the same license as the original."[79] UP's eighth tenet, as amended, says something different about what UP produces: its rules, code, records, decisions and reasons are public, so anyone can check them, while UP's technology, the knowledge, code, data and designs UP produces, "stays only in UP".[44] Whether this book is part of that technology or part of the public record, or both in different parts, is a question the licence has to answer, and it is left open here on purpose.

> *Illustration: one way it could run. The early stage.* The grandfather, the oldest member of the household from Chapter 1, reads the town page on shared tools and finds that its figure for how often the tool library's ladder is borrowed is two years old. He proposes an update with the library's own count attached. One of the people taking a turn at looking after the page, a volunteer from the food co-operative, marks the proposal as a draft, and the change is posted to the people who use the library. Two of them point out that the count leaves out the weekend crews. The grandfather adds their figure, the change goes into the next release, and the page's "last reviewed" date moves forward. Nothing about it is remarkable, which is the point.
>
> *Illustration: one way it could run. The middle stage, a projection.* The care worker's son, who now mentors younger learners at the repair table, champions a proposal to change how the town ranks its open problems, so that a problem is ranked by measured harm rather than by how many people complain about it. It touches every page that ranks problems, so it is routed to the whole town, and a simulation runs the new ranking over the last three years of records. The simulation shows that two problems the town had ignored would have risen to the top. The town, deciding through the decision steps, accepts the proposal

[76] UP's agreed position on merit and support: "The AI puts work in front of people that fits their skills and interests, using only what each person chooses to share, which anyone can see, correct or withdraw. Labour is never forced" (the Position Ledger, card 13b). UP's agreed position on what the AI is: "People choose their work; the AI may not assign work or compel anyone, and any plan can be overridden through the decision steps." (card C46).

[77] UP's agreed position on how UP decides when people disagree: "the stakeholders include everyone materially affected, including people downstream and future residents". Full wording in UP's agreed positions (the Position Ledger, DP-001). The second tenet offers work "to anyone willing to take them on, whether or not they are affected".

[78] The Position Ledger, header: "Only the UP Moderator writes here, and only from Daniel's ruling."; "History is kept; an old entry is never deleted."; "The debate runs on the UP Debate Board". "The core of UP", status line: "AGREED by Daniel; the UP Moderator confirmed every item faithful to his choices". The agreed positions on the book's structure (round 14): "AGREED by Daniel. UP Moderator check: pending." The T8 clarifying line: "Only the UP Moderator may promote it, and only after Daniel approves the final wording." The UP Moderator is one of the UP study agents, whose task is to check that wording is faithful to what was agreed.

[79] Creative Commons, "Attribution-ShareAlike 4.0 International" (CC BY-SA 4.0), licence summary: Share, "copy and redistribute the material in any medium or format for any purpose, even commercially."; Adapt, "remix, transform, and build upon the material for any purpose, even commercially."; Attribution, "You must give appropriate credit, provide a link to the license, and indicate if changes were made."; ShareAlike, "you must distribute your contributions under the same license as the original." https://creativecommons.org/licenses/by-sa/4.0/ . Checked at source, 13 Nov 2026.

with one recorded dissent, from a neighbour who argues that complaints measure something real; her case is kept on the record, and the decision is set to reopen when the next year's data are in.

Illustration: one way it could run. The completed stage, a projection. The care worker, retired now, follows the register of dangers more than any other page. When a large regional network proposes to merge the teams that look after pages for twenty towns into one standing team, she flags it as a concentration of the power to allocate and links the danger to its row in the register. The proposal is sent back for a design that keeps the work rotating and local. Most of the text she reads was written by people she will never meet; some of it was written by her son.

Table 24.3 sums up the stages.

Table 24.3. The living text, stage by stage. The middle and completed stages are reasoned projections. Illustrations of one way UP could run, not directives.[17,69,70,72,73,74]

Stage	What changes	Real precedent	Why it could work	What persists
Early	This first version opens to proposals; releases are tagged; pages gain rotating teams who look after them, and review dates; dangers kept in one register	Volunteer readers of the Oxford English Dictionary; Python's PEPs; Bitcoin's proposals	The tools exist; the text is small enough for a few people to look after	Too few contributors; the pull to defer to the first author; one or two voices dominating a comment log; pages ageing faster than they are reviewed
Middle (projection)	Proposals routed to the people they affect; checking and reviewing counted as contribution work; changes tested by trial or simulation before release	Peer review and replication inside today's science; Python's and Bitcoin's records of every proposal and dissent	More contributors, people and AI, with the work made visible and recognised	Capture by the most active few; drift in definitions; disagreement over values
Completed (projection)	The manual for UP maintained by very many people, each page looked after in turn and dated, with every change and dissent on the record	Linux and Wikipedia show open texts and code maintained at global scale, for information rather than all of life	Releases give a fixed version to act on; review dates and the register keep pages and dangers current; recognition and AI matching widen who takes part; rotation and public records check capture (a projection from the mechanisms in the rows above)	Errors between releases; stale pages; the daily work of keeping the text open, which never ends

The strongest doubts

The first doubt is the oldest objection to any text that anyone can edit: that open editing lowers quality, because the people who know most will be outnumbered by the people who know least. It has been tested. In December 2005 the journal *Nature* compared the accuracy of science articles taken from the websites of the *Encyclopaedia Britannica* and of Wikipedia, which anyone can edit, across 42 pairs of articles on scientific subjects.[80,81] The test is worth reading for how the dispute that followed ran, and for how much the two sides agreed on. *Nature* reported that Wikipedia "comes close to Britannica in terms of the accuracy of its science entries".[80] Britannica disputed the study in a document titled "Fatally Flawed", arguing that it "was so poorly carried out and its findings so error-laden

[80] Jim Giles, "Internet encyclopaedias go head to head", *Nature* 438:900–901 (published 14 December 2005), DOI 10.1038/438900a: "Jimmy Wales' Wikipedia comes close to Britannica in terms of the accuracy of its science entries, a Nature investigation finds."; "The results reported in this news story and their interpretation have been disputed by Encyclopaedia Britannica". https://www.nature.com/articles/438900a . *Nature*, "Nature's responses to Encyclopaedia Britannica": the story compared "the accuracy of science articles taken from the website of Encyclopedia Britannica and Wikipedia, an online encyclopaedia that can be edited by anyone."; the page presents "a point-by-point rebuttal of Britannica's main objections." https://www.nature.com/nature/britannica/index.html . Both read in the browser, because the site refused automated fetching; checked at source, 13 Nov 2026.

[81] Encyclopædia Britannica, Inc., "Fatally Flawed: Refuting the recent study on encyclopedic accuracy by the journal Nature" (March 2006): "The study was so poorly carried out and its findings so error-laden that it was completely without merit."; "42 pairs of articles on scientific subjects, from the Britannica and Wikipedia respectively"; "Wikipedia in fact had a third more inaccuracies than" Britannica; Britannica asked for a retraction of "the study and the article in which it was reported." http://corporate.britannica.com/britannica_nature_response.pdf . Checked at source, 13 Nov 2026.

that it was completely without merit", and asked for a retraction; *Nature* published a point-by-point rebuttal, and the story still stands with a note of the dispute.[81,80] What is striking is how much the two sides agreed on. Britannica's own reading of *Nature*'s data, across the 42 pairs of articles, was that "Wikipedia in fact had a third more inaccuracies than" Britannica.[81] An encyclopaedia written by volunteers had, on Britannica's own count, about a third more errors in a sample of science articles than Britannica. That is a real gap, and it is also a much smaller one than the objection predicts.

UP's answer is that the objection is about open editing without structure, and UP does not propose that. The route described above puts evidence before argument, routes a change to the people it affects, marks unknowns and taste for what they are, and publishes the text in releases that have been checked, while the work between releases goes on in the open.[18,75] That is closer to the Oxford English Dictionary, where thousands of readers sent in evidence and editors weighed it, than to a page anyone can overwrite. What persists is the gap between releases, where errors will appear before they are caught, and the evidence suggests it will not be small at first. UP's third tenet asks that it be measured and closed, not denied.[19]

The second doubt is that there will not be enough people. Open projects have repeatedly found that the work of maintaining a shared text falls on a few, who tire. Wikipedia's active editors peaked in 2007, as Chapter 1 showed; Bitcoin abolished its comment system because almost no one used it; and Chapter 11 described the unpaid maintainer of a widely used piece of software who was left largely alone with it, until an attacker exploited that.[73,72,82] The evidence supports the worry. UP's answer has three parts, none of them a guarantee. Checking and reviewing count as contribution work, so they are visible and recognised.[42] The AI can bring a proposal to people whose chosen interests fit it, so that fewer proposals wait for someone to notice them.[76] And from the middle stage on, as more members' needs are met from UP's own production, fewer of the people doing this work would be fitting it into hours left over from earning a living. That is a projection; at the early stage they are, as the dictionary's readers were.[36] Whether that is enough is exactly the kind of question UP's agreed positions say must be measured, not assumed.[37] What persists is that a living text needs living people, and no design can conjure them.

The third doubt is that a text everyone can change will drift, and that the core will be worn away by a thousand small edits until UP means something other than what it meant. The third tenet does allow every part of UP, its tenets included, to be improved through its own method.[19] But it is not the only line that governs a change. No decision may lower the floors or push anyone below them; the collective may clarify or raise them, never lower them.[26] UP's agreed position on growth asks, whatever UP's speed, that it keep the quality of the core values and tenets so that growth stays positive and does not descend into unintended consequences.[59] Every change is recorded with its reasons, and every dissent is kept, so drift would be visible in the record rather than hidden in it.[47] And UP's agreed positions treat splits as good: people who are sure a different way is better can try it, and the results can be compared in the real world.[67] What persists is disagreement over values, which no process removes, and the daily work of keeping the core what it is.

The fourth doubt is the one Chapter 6 took from Robert Michels: that whoever does the work of an organisation comes to rule it. In its strongest form, the people who do a shared project's work full time gather knowledge, control and gratitude, and everyone else comes to depend on them, so the people who look after an open text would become its owners.[83] Chapter 6 gave the evidence, and it does not go away because the organisation is a wiki. The same pull works on the first author of a text, whom readers may treat as its authority because the text began with him. UP's answer is the one its fifth tenet gives for every form of power: everyone watches for concentrations of power and spreads them out, and the threat is never declared gone.[54] UP's core answers the pull toward a first author the same way: no leader and no founder are named in the core, anyone may reframe a problem and add options, and every line, the tenets included, is open to improvement by anyone.[52,19] For the text, that could mean people who look after pages in turn and can be replaced, a public record of who approved each change, and random checks of what was accepted and rejected. Where a decision goes to a vote, it could also mean a published count of how many took part and how typical they were, with a decision made by a narrow group

[82] Chapter 11 tells the story of the xz software and its unpaid maintainer, and gives its sources.
[83] Chapter 6 sets out Robert Michels's "iron law of oligarchy" and gives its sources.

reopening automatically.[56,74,84] What persists is the pull, which Michels described and UP's fifth tenet repeats, to hand power to whoever seems accomplished.

The last doubt is practical: if everything is open to change, how can anyone act on it? A doctor needs a guideline that will not change under her while she reads it. UP's decision steps answer this for every decision, not only for the text. Every decision carries a deadline set by its urgency, and while an unknown is being studied, decisions go ahead through the decision steps.[47,75] A release is the text's version of a deadline: a fixed, citable version that people can act on while the next one is prepared. The current system already works this way at its best; a Python proposal moves from draft to accepted to final, and the language is used throughout.[69] What persists is the cost of acting on a version that turns out to be wrong, which is why a text that can be corrected quickly is safer, not riskier, than one that cannot.

What the reader's question comes to

"What isn't settled, and how can I help?" The main open problems are now on the table, and the full list is kept in the back matter. UP's own core names the limits on restriction as an open problem, leaves the contents of the floors and the meaning of "ethical" to the collective, and says that alignment may never be fully solved and that openness will not catch everything. Its agreed positions leave the coordination of the most complex production, the sharing of unwanted work, the measures and their checks, the circle of the affected and the line on dangerous knowledge as work still to do, and keep the dangers in one register, each with its check. None of this is hidden in a footnote. It is the part of UP that is most explicitly yours.

The second half of the answer is the one Edith Thompson would have recognised. She answered Murray's first call for help and began sending in the evidence, because the work was there and she could do it. The dictionary she helped to build was never truly finished, and it was better for that. UP asks the same of its readers, under its second and third tenets: anyone may take up a problem, propose a better solution with its evidence, and see it tested, and every part of UP, this book included, can be improved through its own method.[18,19] The rule of thumb is short. If a claim, a page or a tenet can be tested, propose it, with its test. If it can be improved, propose the improvement. If it is a danger no one has named, add it to the register, and if you know a practice that belongs on the practice map, add that too.

That leaves one thing to say, and it belongs to the end of the book rather than to any one chapter: what this whole account of UP adds up to, and what it asks of the person who has read it. The Conclusion turns to that.

Chapter card: Chapter 24

- **Claim:** UP names its own unfinished work and treats it as work, not as weakness. Its core marks the limits on restriction as an open problem, leaves the floors' contents and the meaning of "ethical" to the collective, and says alignment may never be fully solved; its agreed positions leave complex production, unwanted work, measures, the circle of the affected and dangerous knowledge open; and every danger the book names is kept in one register with its check. Anyone may propose an improvement to any of it, this text included, through UP's own method.
- **Core lines:** the tenets *Self-correction: nothing is final, including this*; *The method: shared problem solving with evidence*; *Floors that are never crossed* (the floors may be clarified or raised, never lowered); *Freely joined, ethically grown* ("defined and refined by the collective"); *Power kept spread out*. Agreed positions: a self-improving paradigm; workload is not a danger; the decision steps; stewards who rotate; the dangers adopted with the core. Illustrations: the living text's releases, stewards, review dates and change route.
- **Rule of thumb:** Can it be tested? Then propose it.
- **What this is not:** a list of excuses, a claim that UP has solved its hard problems, or a promise that open editing makes no mistakes. It is not a rule for how the wiki must run; the change route here is one way it could. The book's licence and how the wiki joins the process that checks changes to the core are not decided here.
- **Check yourself:**
    1. Name three open problems that UP's own core, not its critics, marks as open.
    2. Which parts of UP may the collective change, and what may no decision ever do to the floors?

[84] UP's agreed position on who decides: "When a decision does reach the last step and goes to a vote, three guards apply: a minimum share of the affected must take part; a random sample of the affected who did not take part is asked to confirm it; and every decision publishes how many took part and how typical they were, with a decision made by a narrow group reopening automatically after a set time." Full wording in UP's agreed positions (the Position Ledger, DP-005 + DP-006).

3. What did *Nature* and Britannica agree on about Wikipedia's accuracy, and what does that suggest about open editing with and without structure?
4. Why did Bitcoin abolish its comment system, and what in this chapter's illustration is meant to avoid the same failure?
5. Why does a living text need review dates, and what does the evidence on systematic reviews show?
6. What is the status of the clarifying line on closed recipes, and what questions about it are still open?

- **Open questions (for the wiki):** Which dangers are missing from the register? How should the living text's change route join the process that checks changes to UP's core? Which licence fits both a public record and technology that stays in UP? How can contribution to the text be made visible without turning it into a score? How often should each kind of page be reviewed? (Improve this page.)

Conclusion: An Invitation

The Introduction began with a question: does it feel as if the systems running the world are actually working for you? It asked you to stay with some numbers a minute longer than was comfortable before you answered: about 13,000 children under five who die on an ordinary day, most of them from causes the world knows how to prevent cheaply;[1] 76,941 people in Japan who died alone at home in a single year, more than 7,000 of them found only after a month or more;[2] 645 million people going hungry in a world whose households throw away more than a billion meals a day, and whose food supply comes, on paper, to more than 3,000 kilocalories for every person alive.[3,4,5] It said that there was mostly no villain in these stories, that a system made of decent people can go on producing outcomes most of those people would call wrong, and that it does not have to be this way.

The honest answer to the Introduction's question, after twenty-four chapters, is that the systems running the world work very well for some problems and for some people, and badly for others, and that which is which often depends less on need than on what pays.[6] That answer is no longer only a feeling. It can be measured, person by person, and the measures can be worked on by anyone. That is the way out UP offers, and it is worth saying plainly what it is and what it is not.

What the way out is

The way out is not a new kind of person. It is not a leader, a party, a revolution or a machine that takes the decisions. It is a different way of doing something people already do every day: solving shared problems together. Universal Pragmatism is a way for people to solve shared problems together, using evidence and technology, for the health, happiness and wellbeing of all living things: open to everyone, correcting itself as it learns, keeping power spread out, and never crossing a small set of floors that protect people and the living world.[7]

In practice that means three things above all. A problem is named, measured and offered as work to anyone willing to take it on, whether or not they are affected, and the people it affects decide its outcome; solutions are proposed with their evidence and tested, and a better idea replaces a worse one, whoever had it.[8] Power, in any form, is

[1] World Health Organization and UNICEF, joint news release, "Progress in reducing child deaths slows as 4.9 million children die before age five" (18 Mar 2026), on the UN Inter-agency Group for Child Mortality Estimation report: "An estimated 4.9 million children died before their fifth birthday in 2024"; "Most of these deaths are preventable with proven, low-cost interventions and access to quality health care." https://www.who.int/news/item/18-03-2026-progress-in-reducing-child-deaths-slows-as-4.9-million-children-die-before-age-five . The text's figure of around 13,000 a day is the yearly figure divided by 365 (about 13,400), an average. Checked at source, 13 Nov 2026; the series is revised each year.

[2] National Police Agency (Japan), Criminal Investigation Bureau, "警察取扱死体のうち、自宅において死亡した一人暮らしの者（令和７年）" (bodies handled by police that were people living alone who died at home, 2025; table by age group and days elapsed, April 2026): 76,941 people in 2025, of whom 58,919 were aged 65 or over. https://www.npa.go.jp/publications/statistics/shitai/hitorigurashi/R7nennreikaisoubetu.pdf . The same table shows 22,222 found eight or more days after death and 7,148 found 31 or more days after death (the sums of its rows); the first is also the Cabinet Office's guideline figure for isolated deaths in 2025, in "令和７年孤立死者数の推計について" (14 Apr 2026), https://www.cao.go.jp/kodoku_koritsu/torikumi/pdf/r7suikei.pdf . These are police counts of cases handled, with the days between death and discovery as recorded by police. Checked at source, 13 Nov 2026; the series is published each year.

[3] FAO, IFAD, UNICEF, WFP and WHO, *The State of Food Security and Nutrition in the World 2026* (Rome, FAO, July 2026), Core messages: "Considering the point estimate of 645 million in 2025, this indicates a decrease of about 14 million people compared to 2024 and 43 million compared to 2022"; the range is 608 to 696 million. "The global number of people unable to afford a healthy diet decreased from 2.97 billion (37.4 percent of the world population) in 2021 to 2.69 billion (32.7 percent) in 2025." https://openknowledge.fao.org/server/api/core/bitstreams/5eda804a-d21d-4042-a0fd-39088374c9df/content/state-food-security-and-nutrition-2026/core-message.html (DOI https://doi.org/10.4060/cd8306en). Launch release, FAO, 21 July 2026: "Global hunger declined for a third consecutive year in 2025", https://www.fao.org/newsroom/detail/un-report–global-hunger-levels-ease-for-third-consecutive-year-as-regional-disparities-persist/en . Checked at source, 13 Nov 2026; the report is published each year.

[4] UNEP, *Food Waste Index Report 2024* (27 Mar 2024). Press release, "World squanders over 1 billion meals a day - UN report": "Households across all continents wasted over 1 billion meals a day in 2022". https://www.unep.org/news-and-stories/press-release/world-squanders-over-1-billion-meals-day-un-report . The same release: "In 2022 there were 1.05 billion tonnes of food waste generated (including inedible parts), amounting to 132 kilograms per capita and almost one-fifth of all food available to consumers." UN News, "With 783 million people going hungry, a fifth of all food goes to waste" (27 Mar 2024): "Some 19 per cent of food available to consumers was lost overall at retail, food service, and household levels." https://news.un.org/en/node/1148036 . Checked at source, 13 Nov 2026.

[5] FAO Statistics Division, "Food balance sheets 2010–2023" (27–28 Oct 2025): in 2023 global food supply "crossed the historic milestone of 3 000 kilocalories per capita per day." This is food supply available per person, not what people eat. https://www.fao.org/statistics/highlights-archive/highlights-detail/food-balance-sheets-2010-2023 . Checked at source, 13 Nov 2026.

[6] The Introduction, "A different way to solve problems". Position Ledger, Round 12S, position 2: "The old system often monetises a problem instead of solving it, and sometimes the problem's persistence is what pays."

[7] UP's core (28 Oct 2026), Definition: "Universal Pragmatism is a way for people to solve shared problems together, using evidence and technology, for the health, happiness and wellbeing of all living things: open to everyone, correcting itself as it learns, keeping power spread out, and never crossing a small set of floors that protect people and the living world." The definition and the ten tenets are printed in full in "The core of UP", in the back matter.

[8] UP's core (28 Oct 2026), T2 (*The method: shared problem solving with evidence*): "Problems are named, measured and offered as work to anyone willing to take them on, whether or not they are affected; the people a problem affects decide its outcome. No problem, solution or method belongs to the person

treated as a standing danger that everyone watches and no one ever declares gone.[9] And a short list of floors holds under every decision: everyone's basic needs and protected freedoms, the living world's capacity to recover, the right to leave, a truthful shared record, freedom of the mind, and a fair hearing.[10] The children who die of preventable causes, the people found weeks after their deaths, the food that never reaches the hungry: in the current system each of these is somebody's department, somebody's budget line or nobody's business. In UP each is a problem open to anyone, with its measures public, its causes traced to their roots and its solutions compared in the open.

None of these pieces is new on its own, and that was where UP's case began, in Chapter 1. The co-operative, the public library, the commons governed by its users, the encyclopaedia written by strangers, the operating system built in public, the Montessori classroom where a child takes up a problem because it is there: civilisation already does these things, and does them well, in isolation and often against the current.[11] What UP adds is the connection between them, the tools to coordinate them at scale, a framework built for them rather than against them, and, above all, a place where people invent solutions together.[11] Chapter 21 made the case that the parts strengthen one another: open learning raises what people can contribute; shared production and automation meet needs at ever lower cost; a moneyless system removes the motive for much of today's crime; health care is backed by robotics and AI; and a society that works on its problems every day finds the next improvement faster.[12]

The boy and the windmill

What that looks like at the scale of one life is easier to see than to describe. Around 2002, Malawi went through one of its worst droughts, and thousands of people died. William Kamkwamba's family, like many others, was surviving on one meal a day.[13] He was fourteen. When his family could not pay $80 in school fees he was sent home, and he spent his days at a library instead, where a book with photographs of windmills caught his eye. "I thought, this thing exists in this book," he later said, "it means someone else managed to build this machine."[13] He went through junkyards for bicycle parts, plastic pipes, tractor fans and car batteries, and collected blue-gum wood for a tower. People laughed. They thought he was crazy. Three months later the blades turned and a bulb flickered on.[13]

He was not paid to do it, and no prize was on offer at the time. "I wanted to do something to help and change things," he told a reporter; he also wanted, he said, to prove the people who laughed wrong.[13] Within a few years his windmills were generating electricity and pumping water in his home village, neighbours walked over to charge their phones at his house, and he had built one at a local school, where he taught others how to make them.[13]

who raised it: anyone may update, reframe or improve it. Solutions are proposed with their evidence, tested and compared, and a better idea replaces a worse one." See Chapter 5.

[9] UP's core (28 Oct 2026), T5 (*Power kept spread out*): "Concentration of power, in any form (wealth, position, information, access, expertise or machines), is treated as a standing danger." "Everyone in UP watches for concentrations of power and spreads them out again. The threat is never declared gone; it is watched and answered." See Chapter 6.

[10] UP's core (28 Oct 2026), T6 (*Floors that are never crossed*): "UP keeps a set of floors that no decision may cross: everyone's basic needs and protected freedoms, which no gain for others can buy; the living world's capacity to recover, so damage that cannot be undone is never traded for a short-term need; the right to leave any group or community at any time, taking what is theirs; a truthful shared record, so facts, measures and decisions are never falsified; freedom of the mind, so no one's thinking is manipulated without their knowledge or consent; and a fair hearing, so no one's freedom is restricted without a fair, evidence-based hearing, with the evidence open to them and a way to appeal. UP guarantees needs, not every want." The limits on any restriction, and the collective's power to clarify or raise the floors but never lower them, are set out in Chapter 7.

[11] Position Ledger, F1 (*UP names a system people already use*, CANON, 22 Oct 2026): "UP is not an invention from nothing. Much of it already exists and is used every day by millions of people"; "These elements have existed in isolation"; "UP names this existing system, connects its parts and gives it the tools to grow." See Chapter 1 and the practice map in the back matter.

[12] Position Ledger, S (*Judge UP as a whole system, against the current system*, CANON, 22 Oct 2026): "UP is a system whose parts strengthen each other: education open to everyone and improving quickly; a moneyless system that removes the motive for much of today's crime; automation that supplies basic needs at ever lower cost; health care backed by robotics and AI; and a society that works on its problems every day." "The book acknowledges the great gains today's system brought over ancient ones, and argues that systems built thousands of years ago have limits we no longer need to accept: it is time for another grand experiment." "Its starting point will not be great; it is built to improve much faster than today's systems." See Chapter 21.

[13] Faith Karimi, "Malawian boy uses wind to power hope, electrify village", CNN, 5 Oct 2009: "His native Malawi had gone through one of its worst droughts seven years ago, killing thousands."; "His family and others were surviving on one meal a day."; "Kamkwamba was kicked out of school when he couldn't pay $80 in school fees, and he spent his days at the library, where a book with photographs of windmills caught his eye."; "I thought, this thing exists in this book, it means someone else managed to build this machine"; "Armed with the book, the then-14-year-old taught himself to build windmills."; "He scoured through junkyards for items, including bicycle parts, plastic pipes, tractor fans and car batteries."; "For the tower, he collected wood from blue-gum trees."; "Everyone laughed at me when I told them I was building a windmill. They thought I was crazy"; "That was 2002."; "Three months later, his first windmill churned to life"; "a bulb attached to the windmill flickered on."; "I wanted to do something to help and change things"; "The windmills generate electricity and pump water in his hometown"; "Neighbors regularly trek across the dusty footpaths to his house to charge their cellphones."; "He built one at an area school that he used to teach classes on windmill-building." Read in the Internet Archive's copy, https://web.archive.org/web/20100108082100id_/http://edition.cnn.com/2009/WORLD/africa/10/05/malawi.wind.boy/index.html ; the original address, http://edition.cnn.com/2009/WORLD/africa/10/05/malawi.wind.boy/index.html , now refuses readers in some regions. The report also quotes him: "I wanted to finish it just to prove them wrong". "seven years ago", written in October 2009, dates the drought to about 2002, the year the report gives for the first windmill. Checked at source, 13 Nov 2026.

Read the way every story in these pages has been read, for what it shows about UP, three things made the light come on. A shared store of knowledge, a library, put a solution within reach of a boy who could not afford school. Discarded parts, the waste of the system around him, became the materials. And the drive to solve a problem because it is there, the same drive found in Montessori classrooms, in Wikipedia's editors and in the volunteers who lent their computers to science, did the rest, in spite of ridicule and with no reward in view.[14] Three things also stood in his way: a fee that took him out of school, a drought that killed thousands around him, and the isolation of working it out with one library book and no one who could check his design.

UP is an attempt to keep the first three and remove the second three. It asks what the world would look like if every person with a problem in front of them had the library, the parts and the time; if learning were open to them at every age;[15] if their needs were met whether or not their idea worked; and if the moment they found something that worked, it joined a shared record where anyone could test it, improve it and build on it. In that world, the boy in the library could be ordinary.

What it does not promise

A promise that cannot be kept is the quickest way to lose the people it is meant to help, so UP is careful about what this way out does not do.

UP does not promise a world without problems. Its agreed positions say that what persists is named openly as work: damage already locked into the climate, threats from space until humanity can leave the solar system, and the human remainder, because no system works by magic and suffering continues even while its biggest causes fall.[16] It does not promise every want, only that needs are met.[10] It does not promise that its machines will be free of error, that openness will catch every abuse, or that power will stop trying to gather; it promises only to watch, to make abuse much harder and more visible, and to treat what it finds as work.[9,17] Machines coordinate, propose and do work, and people can always correct, pause or switch them off.[18] It does not say how fast it will grow. It may grow quickly or slowly, and that is not for anyone to set in advance; what matters is that it keeps the quality of its core values and tenets as it grows, so that the growth stays healthy, and that it aims at a transition rather than a collapse.[19] And it does not ask to be judged against perfection. It asks to be judged against both the current system and the ideal it aims at, counting wellbeing person by person rather than as an average: the ideal shows the direction and the gap still to close, and today's record shows whether UP is already doing better.[20,21]

Judged that way, the claim UP makes is modest in form and large in consequence. The practices UP builds on already work inside a system that underfunds and interrupts them. UP adds what that system lacks: inventing solutions together is its main work, open to anyone, and it widens the base of people and AI who can contribute. As

[14] The drive to solve problems because they are there, without reward and sometimes in spite of it, runs through the book from Chapter 1 (children in Montessori classrooms, unpaid blood donors, Wikipedia's editors) and Chapter 11 (the volunteers of Folding@home). Position Ledger, card 15: "Open source, libraries and Montessori schools already show people contributing out of interest, respect and shared purpose without pay."

[15] UP's core (28 Oct 2026), T4 (*Open participation*): "There are no offices to hold: work is shared out, not owned, so no one gathers power by holding a position. Where work needs skill, skill is shown by open, testable standards that anyone can work toward and anyone can propose to change, and education is open to everyone, at every age, so anyone can gain the skills any work requires." See Chapters 6, 15 and 22.

[16] Position Ledger, Round 12c, position 2 (the overall claim, option B, AGREED 28 Oct 2026), in full: "The practices UP builds on already work inside a system that underfunds and interrupts them. UP adds what that system lacks: inventing solutions together is its main work, open to anyone, and it widens the base of people and AI who can contribute. As UP grows beside the old system, the people the old system fails move their work and needs into UP; the tools UP uses get cheaper and better the more people use them; and floors are met from UP's own production rather than from budgets that can be cut. The capacity to meet everyone's basic needs already exists; what has been missing is organisation and distribution. On that basis UP has a real chance of sharply reducing most of these failures by its middle stage. Force used by those outside UP shrinks as cities and nations join and convert their weapons and armies into law enforcement, emergency aid and rapid response. What persists is named openly as work: damage already locked into the climate; threats from space, until humanity can leave the solar system; and the human remainder, because UP is not magic and suffering continues while its biggest causes fall. Disagreement over values is not a failure: splits test different ways in the real world. The early stage is the hinge, and history says open systems cross it by being useful to people where they already are." Wording from UP's step-3 evidence record, round 12c (28 Oct 2026), OV, option B. The middle and completed stages are reasoned projections. See Chapters 12 and 21.

[17] UP's core (28 Oct 2026), T8 (*Open systems, shared knowledge, private persons*): "Openness helps people find problems, but it will not find all of them, so UP also names the risks that openness alone cannot catch and keeps working on them." Position Ledger, card 17: open code "makes corruption much harder to hide, more visible and easier to contest, and it is guarded against for good." See Chapters 11 and 20.

[18] UP's core (28 Oct 2026), T9 (*Technology serves; people decide*): "AI and automation coordinate, propose and do work. They never govern: people can always correct, pause or switch them off." See Chapters 11 and 20.

[19] Position Ledger, Round 12c, position 3 (growth, AGREED 28 Oct 2026; in the UP Moderator's wording) and position 4 (urgency). Both are paraphrased in the text. Study lesson 19 adds that UP never gives a growth speed or a start figure as its position. See Chapter 23.

[20] UP's core (28 Oct 2026), T3 (*Self-correction: nothing is final, including this*): "Every failure of UP is fed back into it as a new problem to solve, so it keeps improving without revolution. Every part of UP, these tenets included, can be improved through its own method. UP is judged against both today's system and the ideal it aims at: the ideal shows the direction and the gap still to close, and today's record shows whether UP is already doing better." See Chapters 5 and 24.

[21] UP's core (28 Oct 2026), T1 (*The aim*): "For people it is measured person by person, not as a total, so no one's wellbeing is traded away to raise an average." See Chapter 4.

UP grows beside the current system, the people the current system fails can move their work and needs into it, its tools get cheaper and better the more people use them, and floors are met from its own production rather than from budgets that can be cut. The capacity to meet everyone's basic needs already exists. On UP's agreed reading of the evidence, what has been missing is organisation and distribution, and on that basis UP has a real chance of sharply reducing most of the failures measured in Chapter 12 by its middle stage.[16] That is a reasoned projection, labelled as one. If it holds, it is also the reason the children in the Introduction's opening pages need not keep dying as they do now.

A self-improving paradigm

Earlier upgrades of how people organise themselves needed something hard to get: revolutions, upheaval, mass adoption, submission. UP asks for something smaller. UP is, in its own agreed words, a self-improving paradigm: it asks only that people solve problems together, and because every problem with UP is fed back into it as work, it keeps upgrading itself without revolution or violence.[22] That is why it is hard to imagine what would replace it. Not because it is final or perfect, but because it keeps changing itself. A better idea for how to run a tool library, share unwanted work, check a measure or protect a witness does not need to overthrow anything. It needs to be proposed, tested and shown to work.

This is also why UP keeps its layers apart. The definition and the ten tenets are the core, the part that makes UP itself and not something else. The cited case for UP is evidence, and evidence can be corrected. The descriptions of how UP could run, from the trust layer to the household's community kitchen on a Friday night, are illustrations, one way among many. And most of what UP will actually become is left to the people who take part in it, through its own method.[23] Nothing here is a directive. The idea has been defined, not ruled over, and nothing in it depends on a founder or a leader.[24]

The current system brought enormous gains over the systems before it, and these pages have given it credit at every turn. But arrangements devised thousands of years ago carry limits that people no longer need to accept. In the words of one of UP's agreed positions, it is time for another grand experiment.[12] Its starting point will not be great. It is built to improve much faster than the current system.[12]

The invitation

That is the invitation this book ends with, and it is an invitation, not a demand. The goal set for this text at the start was that a reader could put it down and say: I understand what UP is and what it does. Agreement would be welcome. It is not required.[25] UP is never imposed on anyone, and no one is forced to join, to work or to give up what is theirs.[26]

If you have read this far, you can do three things with what you have read. You can test it. Every statement of fact in this book is meant to carry its source, and every claim about what UP holds names the line of its core or agreed positions it rests on; where one does not, that is the first thing to fix. You can improve it. This is version one of a living text, the effort of one independent researcher, and every part of it, the core included, can be improved through UP's own method.[20] A better source, a sharper argument, a danger no one has named, a practice that belongs on the map: each is a contribution, and Chapter 24 sets out how such contributions could be proposed, checked and accepted. And you can try it. Somewhere near you there is a shared problem that nobody's department owns, and a few people who would work on it with you if someone named it.

The place to begin is UP's home on the web, **universalpragmatism.com**, where this text, its sources, the core of UP and its agreed positions are kept open for anyone to read, check and improve. There is no fee to join and no

[22] Position Ledger, F3 (*A self-improving paradigm*, CANON, 22 Oct 2026): "UP is a self-improving paradigm. Earlier upgrades of civilisation needed revolutions, upheaval, mass adoption and submission. UP asks only that people solve problems together, and because every problem with UP is fed back into it as work, it keeps upgrading itself without revolution or violence. That is why it is hard to imagine a system that would replace it: not because it is final or perfect, but because it keeps changing itself."

[23] UP's study lessons, the Master Rule (23 Oct 2026): "Every claim belongs to one of four layers: what UP is (definition and tenets), why UP (cited case), how UP could run (illustrations, written as possibilities: "one way", "for example", never "UP will" or "UP requires"), and what the collective decides (and by what method)." See the Introduction ("How to read this book") and Chapter 24.

[24] UP's core (28 Oct 2026), "Settled alongside the core", dangers adopted (round 10): "no forced adoption, no leader, no founder named in the core". The Master Rule (UP's study lessons) records that the idea is defined, not ruled over. See Chapter 22.

[25] Position Ledger, Round 14 (*The book's structure*, AGREED 29 Oct 2026), point 4: the goal is that readers understand what UP is and does; agreement is welcome but not required. Paraphrased.

[26] UP's core (28 Oct 2026), T10 (*Freely joined, ethically grown*): "UP is never imposed. No one is forced to join, to work or to give up what is theirs."

office to hold: work in UP is shared out, not owned, and no one gathers power by holding a position.[15] Anyone may leave at any time, taking what is theirs.[10] To start today:

1. **Read the core.** Read the core of UP and its agreed positions on the site, or in the back matter of this book, so that you know exactly what you are joining and what you are not.
2. **Join through "Get involved".** Say what you are good at and what you would like to help with. You do not need a qualification to begin, and you decide what information you give and how it is used.
3. **Take a first task.** Check a source in this text, map what your neighbourhood already shares, help to set up a tool library, a repair table, a food co-operative or an open course, or teach what you know. Pick one small task you can finish.
4. **Name a problem near you.** Describe it, measure it if you can, and offer it as work. The people a problem affects decide its outcome, and anyone can help to solve it.[8]
5. **Improve the text.** If you find an error, a weak argument, a better source or a danger no one has named, propose the change through the site, as Chapter 24 describes.

Look around you again. Whether the systems around you are working for you is no longer only a feeling: it can be measured, person by person, and worked on by anyone. The food exists. The knowledge exists. The tools exist, and people who want to solve problems because they are there can be found in towns everywhere. On UP's reading, what has been missing is a way to connect them that is built for them rather than against them. UP is one such way, and it is open to you.

Where to go next: universalpragmatism.com, to join and take a first task; Chapter 24 sets out what this book leaves open and how to improve it; the back matter holds the core of UP and its agreed positions in full, the practice map, the evidence map, the threat register, every rule of thumb, the glossary and the sources.

Back Matter

The pages that follow are the parts of this book most likely to be consulted rather than read straight through, and the parts most open to improvement. The core of UP sets out, in its settled words, what makes UP itself and not something else, and the agreed positions the chapters rely on follow it, each in its agreed wording. The practice map shows where UP's ideas already work. The evidence map sets the twelve failures of the current system beside the chapter that treats each one. The threat register keeps the dangers named across the book in one place, each with its check. The rules of thumb gather the one-line test from the end of every chapter. The glossary defines UP's own terms, in the words of its core and agreed positions wherever those define them. The sources list the outside sources the notes cite, chapter by chapter. And the last page says how to propose an improvement to any of it.

The core of UP and its agreed positions

The core of UP

Preamble. The core was settled in October 2026 under one rule: define UP the way one would first define chemistry, by the core ideas that make it UP; examples are possibilities, not directives; the collective decides the rest. Whoever defines the idea does not rule over it. Like everything in UP, the core can be improved through UP's own method (the third tenet), but the floors may be clarified or raised and never lowered.

The definition, the ten tenets and the lines settled alongside them follow, copied unchanged from the settled core (UP's core (28 Oct 2026), as amended on 28 Oct 2026). The italic line under each tenet records the debate round in which it was settled.

Definition

Universal Pragmatism is a way for people to solve shared problems together, using evidence and technology, for the health, happiness and wellbeing of all living things: open to everyone, correcting itself as it learns, keeping power spread out, and never crossing a small set of floors that protect people and the living world. It takes the way people already build shared knowledge together and extends it to the whole of shared life: meeting needs, making decisions and caring for the living world.

The ten core tenets

T1. The aim: the health, happiness and wellbeing of all living things

UP aims at the health, happiness and wellbeing of all living things. The aim is a chosen direction, not a scientific discovery and not a promise: it can never be fully reached, and every step toward it counts. For people it is measured person by person, not as a total, so no one's wellbeing is traded away to raise an average.

Settled: Round 8 (A).

T2. The method: shared problem solving with evidence

Everything in UP runs through one method. Problems are named, measured and offered as work to anyone willing to take them on, whether or not they are affected; the people a problem affects decide its outcome. No problem, solution or method belongs to the person who raised it: anyone may update, reframe or improve it. Solutions are proposed with their evidence, tested and compared, and a better idea replaces a worse one. Every claim that guides shared action can be tested and is open to being proved wrong. Work on the roots of problems is worth the most, but a problem can be worked from any angle. Facts are checked, unknowns become shared work, and matters of taste are never made rules for others. Evidence proposes; people decide.

Settled: Round 11 (A).

T3. Self-correction: nothing is final, including this

Every failure of UP is fed back into it as a new problem to solve, so it keeps improving without revolution. Every part of UP, these tenets included, can be improved through its own method. UP is judged against both today's system and the ideal it aims at: the ideal shows the direction and the gap still to close, and today's record shows whether UP is already doing better. Downsides, risks and fringe problems are named openly and treated as work, never as reasons to keep a status quo that fails so many.

Settled: Round 10 (A).

T4. Open participation: anyone may take part; those affected decide

Anyone may take part in any problem, and the people it affects decide its outcome. There are no offices to hold: work is shared out, not owned, so no one gathers power by holding a position. Where work needs skill, skill is shown by open, testable standards that anyone can work toward and anyone can propose to change, and education is open to everyone, at every age, so anyone can gain the skills any work requires.

Settled: Round 11 (R, A).

T5. Power kept spread out

Concentration of power, in any form (wealth, position, information, access, expertise or machines), is treated as a standing danger. People tend to gather power and to hand it to whoever seems accomplished, and history shows few good endings. Everyone in UP watches for concentrations of power and spreads them out again. The threat is never declared gone; it is watched and answered.

Settled: Round 8 (A); "office" changed to "position" (round 11, R) and "everyone watches" (round 10, X3).

T6. Floors that are never crossed

UP keeps a set of floors that no decision may cross: everyone's basic needs and protected freedoms, which no gain for others can buy; the living world's capacity to recover, so damage that cannot be undone is never traded for a short-term need; the right to leave any group or community at any time, taking what is theirs; a truthful shared record, so facts, measures and decisions are never falsified; freedom of the mind, so no one's thinking is manipulated without their knowledge or consent; and a fair hearing, so no one's freedom is restricted without a fair, evidence-based hearing, with the evidence open to them and a way to appeal. UP guarantees needs, not every want. The collective defines and refines the floors through UP's method; it may clarify or raise them, but no decision may lower them or push anyone below them. As a starting example for the collective to refine: needs such as food, water, shelter, health care, education and connection; freedoms such as thought, belief, speech, movement and privacy.

A protected freedom such as movement may be restricted only to protect others or the person, only through an evidence-based court process, for the shortest time needed, and never below the needs floor. The hearing comes first, except briefly, to stop harm in progress, with a hearing promptly after. Leaving a group or community does not end a restriction set by a fair hearing. These limits are an open problem: they are the best that can be imagined now, and UP is built to find better and better solutions. Above the floors, everything is open to the method.

Settled: Round 11 (A). Clarified and raised: Round 13b, 28 Oct 2026 (decision 2: A + C; details: A, kept as an open problem).

T7. Reality over fiction

Decisions rest on real resources, real needs and measured outcomes. Shared fictions (money, corporations, governments, borders) made large-scale cooperation possible and served a great purpose. UP keeps a fiction while it serves health, happiness and wellbeing, and replaces it gradually where technology can do its job without obvious downsides.

Settled: Round 8 (A).

T8. Open systems, shared knowledge, private persons

The rules, code, records, decisions and reasons of UP are public, so anyone can check them. UP's technology (the knowledge, code, data and designs UP produces) stays only in UP: everyone taking part in UP may use, study and improve it, and no one may enclose it. Each person controls their own information and chooses what to share. Openness helps people find problems, but it will not find all of them, so UP also names the risks that openness alone cannot catch and keeps working on them.

Settled: Round 10 (A) + round 11 (OS: A + C + D). Amended: Round 13b, 28 Oct 2026 (decision 4: "UP's tech stays only in UP").

T9. Technology serves; people decide

AI and automation coordinate, propose and do work. They never govern: people can always correct, pause or switch them off. No single AI system or operator controls coordination: the AI systems UP uses are open, more than one, checked against each other, and watched for concentrated power like everything else. Because an AI may one day be shown to have experiences of its own, UP studies the question carefully and would extend its aim to any being shown to feel.

Settled: Round 10 (A).

T10. Freely joined, ethically grown

UP is never imposed. No one is forced to join, to work or to give up what is theirs. It grows by being useful, building on what people already do, and it acts only by ethical means. A means is ethical when it serves the health, happiness and wellbeing of all and crosses none of the floors; UP never starts harm against anyone. What counts as ethical is defined and refined by the collective through UP's method.

Settled: Round 10 (B) + round 11 (E: A + B).

Settled alongside the core

- **Language:** UP has no roles or offices in the old sense; work is shared out, not held (round 11, R).
- **One voice per person (round 11, ID: All):** every account belongs to one unique real person and carries that person's identity, which the person owns and controls; the system needs to confirm only that the person is unique and real, and every other detail is shared by the person's own choice. The exact design is open work for the collective.
- **What UP makes (round 11, OS; amended round 13b):** software, AI and tools, which stay in UP (T8). Physical goods such as food, water and durable goods are shared within the communities that make them. Education is open to everyone without condition; the more it is used, the more it succeeds, and it may be UP's main way of reaching people (these are illustrations, not tenets).
- **Dangers adopted (round 10):** anyone may reframe a problem; one voice each, no fake accounts; time and money earn recognition, never power; everyone is a watcher; working fallbacks without the AI; people can always add options; open science on AI feeling; no forced adoption, no leader, no founder named in the core; anyone acting outside the core stops being UP and bears the consequences.
- **Book topics (round 9):** What, Why, How, Who, When (the stages: problems removed, reduced or persisting) and Dangers must all be discussed; the format is decided at the reorganisation.

UP's agreed positions

The chapters also rest on agreed positions: positions settled in the debates that produced this first version and recorded, with their agreed wording, in the Position Ledger. They are not tenets. They apply or illustrate the core, and like everything in UP they can be improved through UP's method. Each is printed here in its agreed wording, verbatim from the Ledger, with its status: *CANON* (settled and confirmed faithful), *CANON-CLARIFICATION* (a clarification of a tenet that leaves its words unchanged), *AGREED* (agreed in the debate) or *PROPOSED* (open to the collective, not settled). Where the Ledger tags a position with its layer, the tag is kept: [WHAT] what UP is, [WHY] the cited case (projections labelled), [HOW] an illustration of one way UP could run, never a directive, and [COLLECTIVE] left to the collective. Where a line reads "Settled: Round 8 (A)" or similar, it gives the round of the debate in which the position was settled and the option chosen; numbers such as DP-001 or C-P1-02 are the Ledger's reference numbers. Where an agreed position is recorded in the words of the debate itself, the text is the agreed wording as recorded and is marked so. Lines that only describe the debate (who answered, process notes, the names of those who took part) are left out, and an omission inside a position is marked [...].

Some positions were worded before the core was settled in round 11. Where their wording differs from the core (for example “role” or “office” for work that is now shared out and not held, “lead the work” where the core says the people a problem affects decide its outcome, or “lawful, nonviolent” where the core’s test of means is “ethical”), the core governs.

The whole-book positions and the decision positions

F1. UP names a system people already use (CANON). UP is not an invention from nothing. Much of it already exists and is used every day by millions of people: co-operatives and employee-owned firms, non-profits, wikis and open-source software, public libraries, Montessori schools, commons that communities manage themselves, and the everyday ways people help one another. Most people want good and happy lives for themselves, for their children and for others. These elements have existed in isolation, and others saw that they could be coordinated: Jacque Fresco, Ward Cunningham with the wiki, Paolo Soleri, Maria Montessori. What was missing was the technology. Inside today’s framework, AI and robotics threaten to destroy the labour market and concentrate power in a few hands; inside a new framework they can coordinate the whole system for everyone’s benefit. The Venus Project imagined a central brain; AI can now be the pattern-finding and coordinating system it envisioned. The problem is not progress but the framework we run it in: we are outgrowing our old shell. UP names this existing system, connects its parts and gives it the tools to grow. Every pillar begins with where it already works today, what it has achieved, and what has held it back: isolation, lack of tools, and having to compete inside a system built for other goals. A single map sets each pillar beside the practices that already embody it, the sources that describe them, the evidence of how well they work, and what UP adds: connection, coordination and scale.

F2. Useful fictions, and retiring them (CANON). Large-scale human cooperation was built on shared fictions: stories people agree to believe, such as money, government and the company. They were civilisational upgrades and served a great purpose. UP holds that fictions are useful, but that reality is better wherever technology can replace a fiction without obvious downsides. Some fictions will persist because the alternatives would harm health, happiness and wellbeing. Freedom is one, and UP keeps it, along with the protected freedoms and the commons, visible and open to change through the decision steps (#1). Others, money, government and corporations, are ripe to be reduced slowly, through ever more powerful coordination and shared problem solving with AI. A fiction is retired when technology can replace what it does without obvious downsides; until then it is reduced as far as possible.

F3. A self-improving paradigm (CANON). UP is a self-improving paradigm. Earlier upgrades of civilisation needed revolutions, upheaval, mass adoption and submission. UP asks only that people solve problems together, and because every problem with UP is fed back into it as work, it keeps upgrading itself without revolution or violence. That is why it is hard to imagine a system that would replace it: not because it is final or perfect, but because it keeps changing itself.

S. Judge UP as a whole system, against today’s system (CANON). UP is a way for people to work with technology to solve problems together. It does not promise a world without problems. If any part of UP works badly, that is itself a problem: the AI identifies the people it affects and offers it to them as work, to propose, test and compare solutions. Problems are linked in trees that show their common roots, so the work goes to solutions that solve many problems at once. The bigger a problem, the more people it affects and the more attention and effort it draws, so the system works like a marketplace of problems, biggest first, and any area where UP does not yet do better than today’s system gets attention first. UP is a system whose parts strengthen each other: education open to everyone and improving quickly; a moneyless system that removes the motive for much of today’s crime; automation that supplies basic needs at ever lower cost; health care backed by robotics and AI; and a society that works on its problems every day. Each link is shown with its evidence. UP is judged against today’s system, not against perfection: for each area the book sets today’s record beside what UP does, names the nirvana fallacy, and shows how UP performs if one part arrives late. The book acknowledges the great gains today’s system brought over ancient ones, and argues that systems built thousands of years ago have limits we no longer need to accept: it is time for another grand experiment. Its purpose is not to settle every detail but to set up the structure through which ideas, solutions and work are coordinated, so the best solutions are put in place without cost to freedom or to the health, wellbeing and happiness of living creatures. Its starting point will not be great; it is built to improve much faster than today’s systems.

DP-001. How UP decides when people disagree (CANON). UP does not claim to be perfect. It claims to work better than today's system and to improve faster, because every gap it finds becomes a new problem to solve. UP does not let evidence decide alone. Every decision starts with an evidence-based proposal, published with its data, and an open question: does anyone have a better idea? A better idea is one that meets both goals and adds more to everyone's health, happiness and wellbeing; if one appears, it replaces the first. Most conflicts that look like either/or are not: the meadow and the energy can often both be had by changing the design. Where a real trade-off remains, UP tries to break it with new technology or a new design, and widens the circle of people working on it. Only when none of that works do the stakeholders vote. Voting is a last resort, not a forbidden one. Three guards keep the steps fair: anyone may write the first proposal, and its measures are public; every decision carries a deadline set by its urgency; and the stakeholders include everyone materially affected, including people downstream and future residents, while no vote may override the protected freedoms. Every vote records the losing side's case, and the decision reopens when new evidence or technology changes the options. Problem-solving methods are not fixed: within basic guardrails — a solution may not harm people — many methods are tried and their results are measured against each other.

DP-002. Scarcity, and the case against UBI (CANON). When many people want the same thing, UP treats it as a signal and a problem to solve. Meanwhile it is shared by rotation or by a decision of the stakeholders, and UP works to make more of it, through design that lets many people enjoy a desired place, as Paolo Soleri proposed, and through new places. A price only signals; it does not make a rare thing less rare. Land joins the commons only by its stakeholders' choice, never by force. UP's case against basic income is not that people need to be made to work. It is that basic income keeps the old machine running: money, prices and advertising-driven consumption stay; the machines and the land stay in the hands of a few; nothing gives people a purpose or a way to contribute; and nothing changes how much the planet is asked to give. Both basic income and UP meet basic needs without requiring work. The difference is everything around that: UP replaces money and prices with shared access and real physical accounting; it holds the machines and the land in common; it builds purpose into daily life through contribution and shared problem solving; and it is designed around the planet's limits.

DP-003. Reform is losing the race (CANON). Reform inside today's system has worked in bounded cases — the ozone layer, acid rain, leaded fuel, smoking — and human development has improved on many measures. But on the planetary limits — climate, biodiversity, soil, freshwater — and on most of the major issues of our time, the problems are growing faster than the reforms. Reform stalls most where it runs against profit from extraction, externalised harm and concentrated power. UP does not claim reform is impossible; it is built for the gap between the speed of reform and the speed of the problems. Chapter 4 [now Chapter 2] shows this in one table — each major issue, the direction it is moving, and the pace of reform against the pace of the problem, with sources — and the claim covers exactly the issues the table shows.

DP-004a. One layer of authority, however large the event (CANON). UP has no lasting authority and no emergency powers. In an emergency everyone acts quickly for everyone's benefit, with many trained responders ready. Authority belongs to the event, is one layer deep, like a parent's, and ends when the event ends. A larger event does not create greater authority, only more single-layer authority: many teams, each one layer deep, coordinated through shared information, all under the same public oversight. The public, acting on evidence and measured outcomes, is the authority over everyone who acts. The best answer to emergencies is to prevent them, and that work comes first. The rule is itself open to improvement: anyone may propose a better way to handle emergencies that gives up no freedom and guards better against oligarchy and tyranny.

DP-004b. Protection during the transition (CANON). UP is not a nation-state and has no army. During the transition its protection is to be everywhere and woven into the existing system, so that attacking it would cost far more than it could gain. UP works within the law, delivers things its host societies value, and earns broad public support. If it is attacked, it responds only by nonviolent means. As UP works better, especially for the billions with very little, the threat shrinks. UP studies openly how embedded and nonviolent communities have survived hostile powers, and updates its approach as it learns. *Note: The open study it names is to be shown before its findings go into the book.*

DP-005 and DP-006. Who decides, and who counts as competent (CANON). Every role in UP is open to everyone, and no office is permanent. Most decisions in UP are not made by voting. Input is gathered from everyone affected and considered, and judgements rest on facts, evidence and problem solving that looks past us-

versus-them and I-like-it-or-I-don't. People's convictions are channelled into finding solutions that make things better, not into producing winners and losers; a vote can ratify harm as easily as good, and often postpones a problem rather than solving it. The people affected by a problem lead the work on it. Competence comes from published, testable work requirements that anyone can propose changes to, and from tracked outcomes, not from certification boards. When a decision does reach the last step and goes to a vote, three guards apply: a minimum share of the affected must take part; a random sample of the affected who did not take part is asked to confirm it; and every decision publishes how many took part and how typical they were, with a decision made by a narrow group reopening automatically after a set time. *Note: Written before round 11: "lead the work" and "every role" are read under the second and fourth tenets (the people a problem affects decide its outcome; no offices, work shared out).*

DP-007. Raising the standard of public discourse (CANON). UP's AI raises the standard of public discourse; it does not rule on everything said. Where a claim can be checked, it is checked, with its sources and confidence shown. Where a claim cannot yet be settled, it is marked as unknown, and the unknown becomes work for people and AI together: what data or study would settle it. While it is studied, decisions go ahead through the decision steps in [#1]. Where a statement is a matter of taste, it is marked as such and can never be made a rule for others. The AI flags true statements combined in a misleading way, and makes concerns raised by many people visible so they can be addressed. These categories are a starting guide, open to improvement from research on making shared knowledge faster, more valuable and more accurate, including tamper-evident records such as blockchains.

DP-008. Beautiful commons, modest private space (CANON). UP puts its beauty, work and effort into the commons first. Generous, beautiful public places — gardens, pools, kitchens, eating and living areas, and quiet corners where anyone can be alone — make large private spaces unnecessary, following the thinking of Paolo Soleri. Private space is modest and comfortable: a place to sleep, a small work area, a small living space, a small kitchen and eating space, a very good bathroom and some storage. The limits are set together through the decision steps in [#1], with evidence from many people: a starting figure per person, with households adding their members' allowances; open exceptions for disability, care and work; and, in time, a measure of the whole footprint, not just floor area. The limits are norms for health, happiness and sustainability, not punishments, and they rise as abundance grows. Today's system has no upper limit at all, and that is part of why it cannot last.

DP-009. People first; irreversible damage is never traded (CANON). The AI's job is to meet everyone's needs and protect the biosphere; both are floors. When they clash, it is a failure to solve: the problem goes to the widest crowd and gets top priority. If a decision cannot wait, people come first, in the smallest way and for the shortest time, while restoration continues — with one exception: damage that cannot be undone, such as a drained aquifer, a lost species or lost topsoil, is never traded for a short-term need; the need is met another way. That kind of damage is UP's motivation as well as its threat: choices made in a few decades have already destroyed what people could otherwise have enjoyed for thousands of years. The AI proposes and does not assign; people choose their work, and any plan can be overridden through the decision steps in [#1].

DP-010. Never below the floor (CANON). UP's goal is the health, happiness and wellbeing of every person, not a total. Science measures wellbeing and finds the best ways to raise it; the goal itself is a choice people make together, not a scientific discovery. Everyone's basic needs and protected freedoms form a floor that no gain for others can buy. Above that floor, UP seeks the greatest wellbeing for all, and the search for win-win solutions in [#1] comes first. Above the floor, no one is made worse off without being asked first: those who would lose out are consulted and helped, though no single person can block a change that meets everyone's needs.

The cards

Card 11b. All living things: a direction, with tools for conflicts (CANON). UP's aim reaches all living things, as a direction rather than a promise. When interests conflict, solutions are sought that avoid every cost that can be avoided. Priority by the capacity to suffer and to flourish (with every human counting equally), the health of the whole living system, and legal standing for nature are all tools the collective can use to find those solutions; how they are weighed is left to the collective.

Card 12. Aiming the AI at the health of living things (CANON). Aiming an AI at the health of living things does not align it with people "by definition", and alignment may never be fully solved, but it can be improved a great deal.

Part of what makes alignment hard is that people themselves have unhealthy and dangerous habits. UP aims the AI at the health, happiness and wellbeing of all living things because that goal pulls it toward the best of humanity rather than the worst. Planetary limits and people's basic rights are hard limits on it; it learns what people need through everyday problem solving; neither the Earth nor people is sacrificed to the other; it may never trade away human life, freedom or wellbeing for ecological scores; everything it does is auditable; and people can always override it.

Card 12b. The AI's own wellbeing: precaution (CANON). Whether an AI can have experiences is not yet known. UP treats the question with great care: it studies it and avoids needless harm. If an AI is shown to be sentient and conscious, it is included in UP's aim. Care never becomes control: people can always correct, pause or switch off an AI, and no AI has a veto over the decision steps.

Card 13. Cooperative by nature, cooperation kept visible (CANON (wording as amended 31 Oct 2026)). Behaviour is powerfully shaped by the environment. People are cooperative by nature, and cooperation lasts where contributions are visible and limits are agreed together (Ostrom). Selfishness is largely an adaptation to scarcity and low trust. UP meets needs and removes those drivers at the source, so contributing becomes the natural path. UP's own position, to be tested in the open, is that visible contributions work as feedback, not punishment, and that free-riding is treated as a sign of distress or mismatch and met with support, not punishment. The commons Ostrom studied also used graduated sanctions, so whether feedback and support can do that work is measured, not assumed.

Card 13b. Merit, your own profile, support not force (CANON). Every role is open to anyone who meets its standards; the standards are published, testable and open to change, and the education to meet them is free. Merit decides who does skilled work; it never decides whose needs are met. The AI puts work in front of people that fits their skills and interests, using only what each person chooses to share, which anyone can see, correct or withdraw. Labour is never forced: support and health care are offered, never imposed, and choosing not to work is not an illness. Work that is important but unwanted is a target for automation. *Note: Written before round 11: "every role" is read under the core as work open to anyone, shared out and not held.*

Card 14. Three kinds of scarcity (CANON). Much of today's scarcity is artificial: planned obsolescence, patents and other enclosures, hoarding, money rationing and failures of distribution. Some scarcity is physical (energy and materials) and some positional (prime places, specialised skills, time and attention). UP names all three and answers each: it ends artificial scarcity with open design and physical accounting, reduces physical scarcity with automation, renewable energy and circular systems, and shares positional goods by rotation or a decision of the stakeholders (#2), never by price. Design is a large part of the answer, as a direction rather than a guarantee: dense, beautiful places for land, robots for care, better storage for energy. UP will not be perfect at this; it is judged against what happens now.

Card 15. Rewards, motivation and the transition (CANON). Money that controls people crowds out the motivation they bring themselves; feedback that informs, and the freedom to choose, keep it alive (Ryan & Deci). UP's contribution records are feedback: they inform, and they never decide whether anyone's needs are met. Open source, libraries and Montessori schools already show people contributing out of interest, respect and shared purpose without pay. Moving from a money-driven system will bring friction: many people will find it hard to imagine others working without rewards, coercion, status or wealth. Purpose, passion and the reward of a job well done are expected to raise health, happiness and wellbeing. Some people, hurt by the old system, will not fully make the change; UP expects this and meets it with compassion and kindness.

Card 16. Psychological needs: a big upgrade, not a first (CANON). Autonomy, competence and relatedness are universal psychological needs (Self-Determination Theory). Good employers and schools already meet them inside today's system, and the book says so. But there it is the exception, and the same wage that supports it can withdraw it. UP is designed to make meeting these needs the default in every role: a big upgrade to what is possible, not a claim that today's system meets none of them.

Card 17. Open code: a tool, not a guarantee (CANON). Every line of code and every allocation is public, so anyone can read, check, fork and simulate it. Open code is a tool, not a guarantee: it makes corruption much harder to hide, more visible and easier to contest, and it is guarded against for good. The safeguards include funded rotating red teams, staged rollouts, a two-person rule on allocation code, bug bounties, reproducible builds, tamper-evident

records such as blockchains, and allocation code that runs as two independent versions that must agree, stopping and becoming a public problem when they don't. UP also widens who can check: reading shared systems is taught in open education, checking counts as contribution work, and the AI explains every change in plain language. UP says plainly what openness cannot catch: a patient, skilled bad actor can earn trust and hide for years.

Card 18. The AI reduces the agent problem; it doesn't erase it (CANON). The AI does not eradicate the principal-agent problem; it reduces it. It holds its objective with uncertainty, keeps several readings of "flourishing", asks people when unsure, and is open to correction. It produces an open dashboard of wellbeing, ecological and resource measures with the trade-offs shown, and it proposes; people decide through the decision steps (#1). It can be switched off at any time, and people can approve, change or veto what it proposes.

Card 19. Stewards who rotate, are watched and can be replaced (CANON). Linux and Wikipedia do not prove that leaderless coordination scales to any problem. They prove that open peer production, run by distributed stewards, can build and run complex systems at global scale. Linux has a founder and trusted lieutenants, but anyone can fork the code and the project survives its founder; Wikipedia has a foundation and staff, but volunteers built the content. The claim is not "no head to cut off" but "heads that rotate, are watched and can be replaced, because the work belongs to everyone": many stewardship bodies, each with a defined scope, term limits, public audit and the right to fork. These examples make copyable information; providing food, housing and energy is UP's central experiment, starting from Ostrom's design principles and physical commons that already work, such as Mondragon, the Valencia water courts, Kerala's People's Plan and Twin Oaks.

Card 20b. Borders: not part of the core (CANON). Borders are not part of UP's core. The book may mention them only as one example of a shared fiction that UP replaces gradually, part by part, as it meets a region's needs. Your own proposals (for example regional bodies that share out the work of caring for a region's ecology) are solutions for the collective to consider later, not part of the book.

Card 21. Physical accounting sets the limits; people weigh the choices (CANON). Physical accounting (energy budgets, carbon caps, water footprints, materials and life-cycle assessment) sets the planet's hard limits. Inside them, several measures are used together, and choices between different needs, such as a clinic or a cultural centre, are made openly by the people affected, through the decision steps (#1), never by an efficiency score.

Card 22. Abundance means enough for everyone, shown in the open (CANON). We have the automation to end most drudgery and the renewable capacity to give every person on Earth a decent life. UP guarantees needs (food, shelter, health care, education, connection), not every want. What counts as enough is set together and rises as capacity grows. Today's luxury is not the target: the wealthy few drive most of today's damage. UP proves this in the open: every community that runs this way publishes its energy, materials and needs met, so abundance is a measured target shown in practice, not a promise.

Card 23. The work nobody wants: post it and ask (CANON). When survival does not depend on a wage, much of the work a node needs is done the way Wikipedia, open source and mutual aid already do it: people contribute because they are asked, because their peers see the work, and because the problem is theirs. A node does not assume this is enough. It publishes a labour budget (what is needed, by when, and what happens if it is not done) and asks people directly. Any shortfall, and any task nobody wants, becomes a shared problem, met with visibility, recognition, fair rotas and automation. Free-riding exists; it is met with openness and support, not pay or force.

Card 23b. Sharing necessary work: an invitation and an expectation (CANON). Necessary work is shared through a published, fair rota that people sign up for, with recognition and example doing the rest. Every able member is expected to take a small share, but it is an expectation, not a law, and it never affects whether anyone's needs are met. This is one possible way; better ideas for better outcomes with less friction are always welcome.

Card 25. Nodes survive as partners, not targets (CANON). Legacy systems will not simply dissolve; they are transformed from within. Only UP's coordination is decentralised: its nodes are farms, clinics, workshops and land that states can tax, license or seize. So UP's strategy is not to be an unfindable target but an indispensable partner. Nodes are lawful, useful and embedded in their communities, and work with local and regional governments on their hardest problems, such as elder care, resilience and lifelong education. That makes suppression politically costly, and as nodes prove themselves, state functions are handed to the network or fade through people's choice. The full blueprint for a node is open, so a node that is lost can be rebuilt elsewhere. UP responds only by lawful,

nonviolent means (#4b). *Note: Written before round 11, which set "ethical" in place of "lawful" or "nonviolent" as UP's test of means (the tenth tenet); the card's last sentence is read accordingly.*

Card 26. Concentration of power is the danger (CANON). Money is one form of power; any concentration of power is dangerous. Abolishing money does not abolish the pursuit of power: it can move to access, office, information or expertise, and chasing each form one by one becomes whack-a-mole. So UP watches for concentrations of power in any form and keeps spreading them out. The threat is never declared gone. Design helps: caps, public records of who approved what, rotation of anyone who allocates, random audits, public and versioned allocation rules.

Card 27. Harm: measured by health, happiness and wellbeing, refined by the collective (CANON). Harm is measured by its effect on health, happiness and wellbeing, and it is defined, graded and refined continually from information, input and research by the collective. The book does not list its variations; it describes the system by which harm is collected, measured, defined and outlined.

Card C27. Two floors in the way of oppression (CANON). UP does not make oppression impossible; it puts two floors in its way that cannot be crossed. Everyone's basic needs and protected freedoms form a floor that no gain for others can buy, and irreversible damage is never traded. Above the floors, decisions follow the decision steps: evidence proposes and people decide, with a vote only as the last resort and three guards on it (a minimum share of the affected taking part, a random sample confirming, and automatic reopening). Those who would lose out are asked first and helped; no single person can block a change that meets everyone's needs.

Card C46. What the AI is: the coordinator that proposes (CANON). The AI is the coordinating system UP needs, and it coordinates by proposing, not by governing. It publishes evidence-based proposals with their data and confidence, marks what is still unknown as shared work for people and AI, and never rules on matters of taste. Every proposal goes through the decision steps: an open call for better ideas, input from everyone affected (including people downstream and future residents), and only as a last resort a guarded vote. People choose their work; the AI may not assign work or compel anyone, and any plan can be overridden through the decision steps.

Round 12S: UP at full potential, and what still fails (AGREED, 28 Oct 2026)

These are positions and illustrations, not tenets. Their layer tags say which is which.

Round 12S, position 1. [WHAT] Inventing solutions together is UP's primary activity (T2). The book never describes UP as only spreading what others invented. In UP anyone can try anything that might solve a problem; tools are commons; the result carries the power; unpopular ideas that work rise because of their results, not because a funder chose them.

Round 12S, position 2. [WHY] The comparison with the old system is not symmetric. The old system often monetises a problem instead of solving it, and sometimes the problem's persistence is what pays. The consequences of its abuses (personal gain, war, unethical conduct) push people toward UP. UP widens the base of people and AI who can contribute, which speeds invention, frontier science included.

Round 12S, position 3. [HOW] UP's technology: "Tech created by UP is only for UP"; UP never makes weapons and prevents its work going to crime, war, corruption or concentrations of power; the old system does not improve from UP's technology. *(Agreed wording, as recorded.) Status: the open question this position raised was settled in Round 13b, which amended the eighth tenet; the core governs.*

Round 12S, position 4. [HOW] Dangerous knowledge (agreed as written): open understanding, closed recipes. UP publishes how dangers work and how to defend against them, and does not publish step-by-step instructions for causing harm at scale.

Round 12S, position 5. [WHY, projection] Growth: [the growth figures that stood here were withdrawn in Round 12c, position 5] Whole cities, states and nations that join redirect their resources. Assets owned or controlled by people who join (including single-person and family-owned companies) convert by their owners' choice; members' money is best used early to buy and convert more. Population is expected to rise as security and abundance rise. Labelled as projection.

Round 12S, position 6. [HOW] Weapons and armies: Nuclear weapons dismantled and converted to power plants as soon as possible. Weapons and standing armies dismantled and converted into law enforcement, emergency

aid groups and rapid response. Resources go to the transition. Precedent: Reykjavik 1986, the near-total nuclear disarmament discussed by Reagan and Gorbachev.

Round 12S, position 7. [HOW] Prices are settled: massive abundance plus a new norm of owning (libraries, personal fabrication, recyclable goods, the big wants as beautiful community spaces with reservations, personal space growing with capacity, unlimited virtual worlds). Price's jobs are replaced: rationing by rotation and reservation (points 2, 14); what people want by direct use data (under the data rule); costs by physical accounting (21); local knowledge by decisions at the smallest scale (M2). Whether this coordinates the most complex production as well as markets do is **testable workload**, run rung by rung.

Round 12S, position 8. [HOW] Measures: problems are measured with fixed definitions kept over time and ranked by measured harm, not by how loud they feel; every headline measure has an independent check.

Round 12S, position 9. [HOW] Voiceless stakeholders (future people, young children, other living things) are represented by simulations: several independent ones, assumptions published, giving input but never a vote.

Round 12S, position 10. [WHAT] Splits are good: they test two or a thousand ways in the real world. **Attention:** people focus on what affects them most, which is fine.

Round 12S, position 11. [HOW] Trust layer: blockchain for the integrity of records, with encryption for secrecy and data held by the person. The data rule: data is used only with permission, the question travels to the data, and only the answer leaves; nothing individual is passed on or kept. Standards and platforms are used everywhere, so upgrades are fast, parts are interchangeable and nothing is wasted. They are open, versioned and owned by no one. Critical software has second, third and fourth backups; diversity (heirloom crops, local production) protects food.

Round 12S, position 12. [HOW] Settlement and the living world: condensing settlement (Soleri) removes duplication. Utilities, factories and storage can go underground, growth goes up and down, and there are beautiful shared kitchens and commons beside modest private rooms (point 8). Space comes later. Freed land returns to the living world.

Round 12S, position 13. [HOW] Threats in order of likelihood: Earth disasters are mostly an adoption gap (solutions exist). Cosmic threats (sun explosions, rogue black holes, galaxy collisions, gamma-ray bursts) persist until humanity leaves the solar system.

Round 12S, position 14. [WHY] Debts are old-system problems (forgiveness, contribution, cancellation, bankruptcy). Moves to better climates are voluntary; communities with more support more of the transition.

Round 12S, position 15. [WHAT] Workload is not a danger. A problem counts as an issue for UP only if it can't be fed back into the loop with a good chance of beating the old system, if the old system has a far better solution, or if it is endemic to UP. Informal power and the loop checking itself are workload: open-source checks and open sensor data. "UP is not magic": suffering continues while its biggest causes fall.

Round 12c: step 3 by stage (AGREED, 28 Oct 2026)

Round 12c, position 1. [WHY] The twelve failures and the three gaps. The book uses the twelve staged claims and the three gaps as updated with Round 12S and Round 13. The text is in the round record, card U12. The early stage rests on today's evidence; the middle and completed stages are labelled as projection.

Round 12c, position 2. [WHY] The overall claim. The wording is printed below, as "The overall claim".

Round 12c, position 3. [WHAT] Growth: "It will grow naturally and may grow very fast and big or it might be slow. That is not for us to decide. What is relevant is to list that it is important to grow and maintain quality of the core values and tenets so that the growth remains positive and does not descend into unintended consequences." *(Agreed wording, as recorded.)*

Round 12c, position 4. [WHY] Urgency. "There is of course an urgency to supply the system as quickly as possible as the threats from the old system are massive and in almost every sector of human civilization has huge problems and we want to transition not collapse." *(Agreed wording, as recorded.)*

Round 12c, position 5. Withdrawn from Round 12S, position 5: the growth figures. The rest of position 5 stands: whole cities, states and nations that join redirect their resources; owned assets convert by their owners' choice;

members' money is best used early; population is expected to rise. Round 12S is kept as written (history is never deleted); this entry supersedes those figures.

Card U12: the twelve failures, as updated with Rounds 12S and 13 (AGREED, Round 12c, position 1). The early stage rests on today's evidence; the middle and completed stages are projections.

- F1 Climate and planetary limits. Early on, UP members cut their own emissions and prove what works, a small effect on the climate. As UP grows, the effect becomes large: the solutions exist and are already cheaper, UP invents better ones as its main work (Round 12S), demand moves out of the old system with its people, and leakage shrinks as the share acting grows. Warming already locked in persists at every stage. Local disputes over siting are work for UP's method (12S).
- F2 Unmet basic needs. Early on, UP meets part of its members' needs directly and depends on the old system for the rest. Members' own assets convert to UP by their choice, and members' money is best used early to buy and convert more (12S). In the middle stage, needs are met from UP's own production; the capacity to feed, house and supply everyone already exists, and what has been missing is organisation and distribution. Hunger caused by war persists wherever armed groups outside UP block food.
- F3 Inequality and concentrated wealth. UP does not need to reduce the wealth of the very rich to succeed; its measure is the wellbeing of each person, and the bottom half of the world, who hold 2% of its wealth, have the most to gain. Inside UP money buys no say from the start, and as needs are met from shared production, wealth matters less to people's lives. Informal power inside UP is watched by everyone and answered as work, through open checks (12S).
- F4 Capture of government by money. UP removes the routes money uses to capture government: no offices to buy, every record public, one voice each. In UP anyone can try anything, and the result carries the power, not a position or a funder (12S). As more of life runs through UP, capture of the old governments matters less to more people. Attempts to capture UP's own open processes are watched for by everyone and answered as work (12S; T5).
- F5 Work. Unchanged: early on, UP helps members learn and earn more within the old system. As UP produces for its members' needs, survival stops depending on a job, and AI and automation serve those needs rather than profit. Who does care and unpleasant work, fairly, is open work for the collective.
- F6 Health. Early on, UP adds community health work and lay counselling beside the old system's hospitals. As floors spread, much of the poverty behind ill health goes, and UP builds its own clinics and training. New medicines come from UP's own open science and invention, with far more people and AI working on them (12S); they and outbreak response are the hardest parts and remain open work.
- F7 Education. Education is where UP can show results first: open, tutor-style learning reaches people the old system leaves out, at low cost, and grows with UP. An education and mentoring programme, limited by its capacity, sets the pace of the whole transition (12S). Getting people online and designing learning that teaches rather than does the work for them are the conditions.
- F8 Housing and the built environment. Early on, UP upgrades and builds with its members' own hands and land. As UP's production grows, homes are built from open designs to meet the shelter floor, and settlement condenses: beautiful shared commons beside modest private rooms, with freed land returned to the living world (12S). Land enters UP as members convert what they own (12S). Land still held outside UP, and local objections to new homes, are work for UP's method.
- F9 Information disorder. UP builds the kind of open, checkable record that already works at global scale, and it reaches more of life as UP grows. The record is protected by a trust layer: tamper-evident records, encryption, and data held by the person and used only with permission (12S). Attempts to capture the record are watched for by everyone; disagreement over values persists, and splits that test different ways are good (12S).
- F10 War, violence and crime. UP reduces violence at its roots, and most crime is removed, eliminated or dramatically reduced (Round 13). What remains is handled by one layer of trained law enforcement, open and watched by many, with courts that rest on evidence and consequences focused on rehabilitation and on the wellbeing of the accused and of victims (Round 13), under the fair-hearing floor (T6). The middle stage is the most exposed, and UP's protection then rests on legality, numbers and nonviolent action. As cities and nations join, their weapons and armies are dismantled and converted into law enforcement, emergency aid and rapid response, and nuclear weapons into power (12S, an illustration). Armed states and groups outside UP persist while they stay outside.
- F11 Waste and planned obsolescence. Early on, UP repairs and recovers. Once UP makes its own goods, from open designs built to last and to shared standards so parts are interchangeable (12S), with no profit in replacement, waste falls at the source. Physical limits on recycling persist.
- F12 AI and technology concentrating power. UP can run on open, plural AI from the start and build its own capacity as it grows; open systems have already won whole fields of computing. UP widens the base of people and AI who can contribute, which speeds invention, frontier science included (12S), and what UP invents stays in UP (T8, round 13b). Concentration of frontier AI outside UP persists while the old system holds it, and matters less as more of life moves into UP.

The three gaps, as updated (AGREED, Round 12c, position 1).

- Paying for floors: shrinks with each stage, and faster as members convert what they own and use money early to buy and convert more (12S).

- Free-riders and force: inside UP, answered by Round 13 (open, watched law enforcement; courts that rest on evidence) and the fair-hearing floor (T6). Outside UP, force persists while the old system holds arms; it peaks in the middle stage and shrinks as cities and nations join and convert their armies (12S).
- Who counts as affected: those affected decide (T4); voiceless stakeholders (future people, young children, other living things) are represented by several independent simulations that give input but never a vote (12S).

The overall claim (AGREED, Round 12c, position 2: option B). The practices UP builds on already work inside a system that underfunds and interrupts them. UP adds what that system lacks: inventing solutions together is its main work, open to anyone, and it widens the base of people and AI who can contribute. As UP grows beside the old system, the people the old system fails move their work and needs into UP; the tools UP uses get cheaper and better the more people use them; and floors are met from UP's own production rather than from budgets that can be cut. The capacity to meet everyone's basic needs already exists; what has been missing is organisation and distribution. On that basis UP has a real chance of sharply reducing most of these failures by its middle stage. Force used by those outside UP shrinks as cities and nations join and convert their weapons and armies into law enforcement, emergency aid and rapid response. What persists is named openly as work: damage already locked into the climate; threats from space, until humanity can leave the solar system; and the human remainder, because UP is not magic and suffering continues while its biggest causes fall. Disagreement over values is not a failure: splits test different ways in the real world. The early stage is the hinge, and history says open systems cross it by being useful to people where they already are.

Round 13: justice and enforcement (AGREED, 28 Oct 2026)

Positions within the settled core, not new tenets. *Agreed wording, as recorded:* the positions keep the words of the debate.

Round 13, position 1. [WHY] Most crime is removed, eliminated or dramatically reduced ("as previously discussed at length"). Laws remain, centred on what remains.

Round 13, position 2. [WHAT] Laws are universal norms of right and wrong, "not … subjective as much as possible. It may not be possible to do this completely." Health, happiness and wellbeing is "a very good way to measure."

Round 13, position 3. [WHAT] One layer of trained professional law enforcement. It is "the one level of authority that was discussed before" (round 4a): "it is natural for there to be one level of authority and power with law enforcement, in the same way that it is natural for a parent to have power and authority over a child for their own HHW."

Round 13, position 4. [WHAT] Its work is open, and the people and process hold authority over it. "Their entire work is open to anyone and everyone except in the most special circumstances which requires even more sensitive handling and short timelines when it becomes public information." "The authority and power over law enforcement is the people and process. It must be watched by many all the time. Most problems in the justice system come from secrets and hidden power."

Round 13, position 5. [WHAT] Courts rest on evidence, not public opinion. "It would be possible to crowd source evidence and evaluation of cases as long as there was a structure for determining the value of facts and evidence."

Round 13, position 6. [WHAT] Confinement is allowed for protection. "Some people can have freedoms removed and confined to protect themselves and others."

Round 13, position 7. [HOW] The best-functioning justice systems of today are the models, made more universal: "Rights and freedoms respected, Justice and clearance rates very high, and consequences that are focused on rehabilitation and HHW for the accused and their victims." The models are the countries with the lowest crime, the highest clearance rates and the lowest reoffending. […]

Round 13, position 8. [HOW] Open information and AI. "Open information systems can be used when the circumstances require it. The more open the society the easier to find evidence it should be." "AI has not reached its full potential here … There will be many opportunities to solve crimes, increase the data around the causes and remove larger and larger issues that cause crimes."

Round 13, position 9. [COLLECTIVE] The danger is named, and the work is shared. "It is a critical place and full of dangers and must be treated as such. All the dangers of abuse of power, false evidence, and so many things require a lot of attention. I think there are many people interested in this problem and creating solutions to it."

Status: the open question on confinement that Round 13 recorded was settled in Round 13b, which added the fair-hearing floor and the limits on any restriction to the sixth tenet (printed in the core above).

Clarifications and proposals

Clarification of the fair-hearing floor (sixth tenet) (CANON-CLARIFICATION, 1 Nov 2026). The words of T6 are unchanged. The substance of the evidence is always open to the person. Where a witness's safety is at risk, a court may protect the witness's identity, and that decision can be appealed. Other hard cases are left to UP's method.

A clarifying line for the eighth tenet, on closed recipes (PROPOSED, 1 Nov 2026; open to the collective, not canon). The public record covers how UP runs: its rules, code, records, decisions and reasons. Step-by-step instructions for causing harm at scale are not published; each decision to withhold one is itself recorded, with its reasons, and open to challenge through UP's method. *Open points named with it:* who decides that something is a recipe for harm at scale; how a challenge is heard; the threshold for "at scale"; and that withholding must never become a way to enclose UP's technology.

Round 14 addendum: not a label, built on what worked (AGREED, 1 Nov 2026). Positions on how this book presents UP's lineage (Chapter 3):

1. **[WHAT, book] Framing of Chapter 3:** UP is not any of these labels, and it builds on what worked in them. The chapter shows, for each tradition, what UP takes, where UP is the same, where it differs, and the harms it is built to avoid.
2. **[WHAT, book] The combination:** UP is a combination of elements from many traditions, structured so the whole outperforms each, and it adds elements of its own; the book names which elements are new.
3. **[WHAT, book] Named shoulders (starting list, "and many many others"):** capitalism (Adam Smith; the price signal), communism, Paolo Soleri, democracy, the Venus Project, the wiki and wiki-style governance (Jimmy Wales), co-operatives, Maria Montessori (intrinsic motivation to solve problems).
4. **[HOW, book] Infographics:** more figures for the core ideas, where they came from, where they are the same and where they are different.

The practice map

UP is not an invention from nothing. Much of it already exists and is used every day by millions of people, in isolation and often against the current; UP names this existing system, connects its parts and gives it the tools to grow.[1] The practice map sets each practice the book describes beside the core idea it already shows and what connecting it to the rest would add. The last column says where in the book the practice is told; the notes there carry the sources, with the exact words checked. Chapter 1 began the map with seven rows (Table 1.3), which are kept here in its words, and this is the fuller version. Where a column names something that is one way UP could run rather than part of its core, it says so. It is still far from complete. No single author can know every practice that belongs here, which is why this is the page readers are most invited to extend: a practice, the core idea it shows, what connection would add, and a source.

The practice map. "Core idea" names the tenet or agreed position the practice already shows; the full wording is in "The core of UP and its agreed positions", above. "Where it is told" gives the chapter and section.

Practice	The wider pattern it belongs to	Core idea it already shows	What connection adds	Where it is told
Amul; Mondragon	About 3 million co-operatives; worker ownership from John Lewis to Argentina's recovered factories	Those affected decide; power kept spread out	Shared finance, cover and research across sectors and borders	Ch 1; Ch 13, "How the jobs of price get done"; Ch 23
Törbel; Valencia's	Commons governed by	Those affected decide;	A shared record of	Ch 1, "The same

[1] Position Ledger, F1 (*UP names a system people already use*, CANON, 22 Oct 2026): "UP is not an invention from nothing. Much of it already exists and is used every day by millions of people"; "These elements have existed in isolation"; "UP names this existing system, connects its parts and gives it the tools to grow." The agreed wording also asks for "A single map" that "sets each pillar beside the practices that already embody it, the sources that describe them, the evidence of how well they work, and what UP adds".

Practice	The wider pattern it belongs to	Core idea it already shows	What connection adds	Where it is told
water tribunal; Nepal's forest groups	their users on every inhabited continent	a fair hearing	which rules have worked, and where	pattern, in many places"; Ch 3 (Törbel); Introduction and Ch 5 (Valencia)
Porto Alegre; Kerala; Paris	Participatory budgets in more than a thousand places	Those affected decide; open records	Decisions that last whichever party is in power; lessons shared between cities	Ch 1; Ch 2; Ch 21, "Why the parts look weak when tested one at a time"; Ch 22
Public libraries; tool libraries; Repair Cafés	Shared stores, from Franklin's library to 200,000 book-sharing boxes	Basic needs such as education; open systems	Libraries of tools, designs and skills, linked across towns	Ch 1, "The same pattern, in many places"; Ch 13 (Berkeley's tool library)
Blood donors; volunteer firefighters; lifeboat crews; mutual aid in disasters	Gift systems that run on people choosing to give	The aim: the wellbeing of all	A standing way to help every day, not only in a crisis	Ch 1
Montessori; HighScope; Reggio Emilia	Learning built on children's own curiosity and choice	Education open to everyone; the method of shared problem solving	Open records of what helps children, and mentors anywhere	Ch 1, "What children show us"; Ch 15
Wikipedia; Linux; OpenStreetMap	Open software in almost all commercial code	Shared problem solving with evidence; open systems	The same method applied to meeting needs and making decisions	Introduction; Ch 1; Ch 11 (OpenStreetMap); Ch 20
London's Library of Things	Household things lent in turn rather than bought	Much scarcity is made (card 14); things shared by turns rather than by price (Round 12S, position 7, an illustration)	Lending in turn as the normal way to use most objects (Round 12S, position 7, an illustration)	Ch 13, "How the jobs of price get done"
The Drugs for Neglected Diseases initiative	Non-profit research on medicines that do not pay	Problems worked on whether or not they pay (Round 12S, position 2); inventing solutions together	Many problems worked on at once, with the results kept in UP (an illustration)	Ch 2
Folding@home	People pooling their own computers for a shared problem	Technology serves; power kept spread out	Computing owned by many people, pooled for UP's own work (an illustration)	Ch 11; Ch 20
Polymath	Hard problems opened to anyone who can contribute	The method: anyone may take up a problem	The same open working on every kind of shared problem	Ch 5, opening
vTaiwan and Polis	Machines mapping where people agree, people deciding	Evidence proposes; people decide	Consultation built into the decision steps everywhere (an illustration)	Ch 5, "Where the machines fit"; Ch 11
Citizens' assemblies chosen by lot	Random samples of the affected deliberating together	Those affected decide; the guards on any vote (DP-005 and DP-006)	A random sample confirming decisions as a matter of course	Ch 5; Ch 6; Ch 22
Python's PEPs; the Apache Incubator; Bitcoin's BIPs	Open projects with written change routes	Nothing is final, including this (third tenet); work shared out, not held	A light change route for UP's own living text (an illustration)	Ch 6 and Ch 24 (Python); Ch 23, "Growing without losing the core" (Apache); Ch 24, "How the living text could work" (Python, Bitcoin)

Practice	The wider pattern it belongs to	Core idea it already shows	What connection adds	Where it is told
The Oxford English Dictionary's volunteer readers	Crowds improving a shared text over decades	The method; a self-improving paradigm (F3)	The living text of UP, improved by its readers	Ch 24, opening
OpenSAFELY	The question sent to the data; only the answer leaves	Each person controls their own information (eighth tenet)	The data rule applied to any shared question (Round 12S, position 11, an illustration)	Ch 11, "Open systems, private persons"; Ch 20
Certificate Transparency	Public, append-only logs that anyone can check	A truthful shared record (sixth tenet)	Tamper-evident records for UP's decisions (the trust layer, an illustration)	Ch 7; Ch 11; Ch 20
India's UPI	An open rail that any participating bank or app can connect to	Open systems; power kept spread out (and, as Chapter 20 shows, a reminder that open rails can still concentrate)	Shared standards for UP's own tools, owned by no one (Round 12S, position 11, an illustration)	Ch 20, "What the current system already gets right" and "Who controls it"
FixMyStreet; Global Forest Watch; Community Notes	Problems reported and checked in public	Problems named, measured and offered as work (second tenet)	One shared record of problems, from potholes to forests	Ch 5 (Community Notes); Ch 20, "What the current system already gets right"
The Svalbard Global Seed Vault; LOCKSS; Estonia's data embassy	Copies kept elsewhere so nothing is lost	Working fallbacks (dangers adopted with the core)	Second, third and fourth backups for every critical system (Round 12S, position 11, an illustration)	Ch 20
The EU's common charger	Shared standards that end needless waste	Much scarcity is made (card 14); shared standards (Round 12S, position 11, an illustration)	Interchangeable parts, upgraded without waste	Ch 20; Ch 21
Tutoring, one to one and with AI	Learning that responds to each learner	Education open to everyone, at every age (fourth tenet)	Tutor-style learning that teaches rather than doing the work	Ch 15
The Friendship Bench; community health workers	Lay workers trained to deliver care close to home	Basic needs such as health care (sixth tenet)	Community care joined to open training and records	Ch 16
Housing First (At Home/Chez Soi)	Shelter met first, then everything else	Basic needs such as shelter (sixth tenet)	Shelter met from shared production	Ch 1
Finland's homelessness work; Thailand's Baan Mankong	Shelter met first, with people deciding on their own homes	Basic needs; those affected decide	Shelter met from shared production, by the people who live there	Ch 13
Cash transfers in rural Kenya	Money spent close to home spreading to neighbours	Basic needs (sixth tenet); the parts strengthen each other (S)	Floors met in real goods from UP's own production (a projection)	Ch 12, "The three gaps"; Ch 21
Graduation programmes	Several supports given together, not one at a time	The parts strengthen each other (S)	The whole system, not one programme	Ch 21, "One part at a time"
Norway's prisons; restorative conferences	Justice aimed at repair and return	A fair hearing (sixth tenet); the best-functioning justice systems as models (Round 13, position 7)	Those systems made more universal	Ch 19
Wales's future-	Voices for those who	Voiceless stakeholders	Several independent	Ch 4 (Whanganui); Ch

Practice	The wider pattern it belongs to	Core idea it already shows	What connection adds	Where it is told
generations law; the Whanganui River as a legal person	cannot speak for themselves	represented, never voting (Round 12S, position 9, an illustration)	simulations giving input on decisions (an illustration)	18 and Ch 22
Paolo Soleri's Arcosanti	Condensed, beautiful settlement with shared commons	Beautiful commons, modest private space (DP-008)	Freed land returned to the living world (Round 12S, position 12, an illustration)	Ch 1; Ch 3
Kibbutzim; Twin Oaks	Communities that share nearly everything	Necessary work shared out (card 23b); the right to leave (sixth tenet)	Shared work with the right to leave, at scale	Ch 1 (kibbutzim); Ch 3; Ch 14
Preston's local spending; Patagonia's ownership given to a trust	Wealth kept close to the people who make it	Owned assets converted by their owners' choice (Round 12S, position 5)	Conversion of assets into UP, by choice	Ch 23, "How the current system changes, and what it gets right"
Costa Rica's abolished army; Megatons to Megawatts; the INF Treaty	Weapons and armies turned to other uses	Weapons and armies converted as nations join (Round 12S, position 6, an illustration; the overall claim, a projection)	Conversion as cities and nations join	Ch 23, opening and "The same turn, in many places"
The Montreal Protocol; smallpox eradication	Reform that won, in bounded cases	Reform has worked in bounded cases (DP-003)	The same focus on the problems reform has not caught	Introduction; Ch 2 and Ch 7 (Montreal); Ch 16 (smallpox)

The evidence map

Chapter 12 set out the twelve great failures of the current system, each with one measure and the direction it is moving, and the claim UP's agreed positions make about each at the early, middle and completed stages. This map gathers them in one place, with the chapter that treats each failure in full and the key evidence there. It is compiled from Chapter 12's two scoreboard tables, so it changes when they do. The early stage rests on today's evidence; the middle and completed stages are projections, labelled as such. In the wiki each measure would carry a refresh date, because statistics go out of date; a newer reading from the same source, or a better measure with a fixed definition, is a welcome improvement.

Each failure below gives Chapter 12's measure, its latest reading and its direction (each sourced there), then the claim UP's agreed positions make about it at each stage, paraphrased from the twelve failures as updated in Rounds 12S and 13 (card U12), then what persists, and where the full treatment and its key evidence are.

F1. Climate and planetary limits. *Measure:* Energy-related CO2: a new high of nearly 38.4 billion tonnes in 2025; *direction:* Still rising, more slowly (about 0.4% in 2025). *Early stage (today's evidence):* Members cut their own emissions and prove what works; a small effect on the climate. *Middle stage (projection):* The effect becomes large: the solutions exist and are already cheaper, UP invents better ones, and demand moves out of the current system with its people. *Completed stage (projection):* Most demand is inside UP; remaining emissions come mainly from what is left of the current system. *What persists:* Warming already locked in; local disputes over siting, which are work for the method. *Full treatment:* Ch 18. *Key evidence:* Lytton, British Columbia, 2021 (Ch 18); energy costs and cost curves (Ch 2; Ch 21).

F2. Unmet basic needs. *Measure:* More than 824 million people below $3.00 a day (2024, the latest year with survey data); *direction:* At a standstill since the pandemic. *Early stage (today's evidence):* Part of members' needs met directly; the rest from the current system; members' assets convert by their own choice. *Middle stage (projection):* Needs met from UP's own production; the capacity already exists. *Completed stage (projection):* Floors met wherever UP is; the question is allocating real resources and work. *What persists:* Hunger caused by

war, wherever armed groups outside UP block food. *Full treatment:* Ch 13. *Key evidence:* Gyula Remes in the Westminster underpass (Ch 13); the jobs of price and how they could be done (Ch 13).

F3. Inequality and concentrated wealth. *Measure:* The poorest half of adults hold about 2% of the world's wealth; *direction:* Unchanged since the early 2000s. *Early stage (today's evidence):* Money buys no say inside UP. *Middle stage (projection):* As needs are met from shared production, wealth matters less to people's lives. *Completed stage (projection):* Wealth held outside UP matters little to the lives of those inside. *What persists:* Informal power inside UP, watched by everyone and answered as work. *Full treatment:* Ch 13. *Key evidence:* the poorest half and the world's wealth (Ch 12; Ch 13); why UP does not need to reduce the wealth of the very rich (Ch 12).

F4. Capture of government by money. *Measure:* US federal lobbying: $5.24 billion in 2025; *direction:* The highest ever recorded, in money of the day. *Early stage (today's evidence):* No offices to buy, every record public, one voice each. *Middle stage (projection):* Capture of the old governments matters less to more people. *Completed stage (projection):* Captured remnant governments matter little to most people. *What persists:* Attempts to capture UP's own processes, watched for and answered as work. *Full treatment:* Ch 5; Ch 6. *Key evidence:* lobbying at record levels (Ch 5); Robert Michels and the pull of organisation toward oligarchy (Ch 6).

F5. Work. *Measure:* 708 million women outside the labour force because of unpaid care, against 40 million men (2023); *direction:* No comparable trend: the method changed since the 2018 estimate. *Early stage (today's evidence):* Members learn and earn more within the current system. *Middle stage (projection):* Survival stops depending on a job; AI and automation serve needs. *Completed stage (projection):* Necessary work shared and largely automated. *What persists:* Fair sharing of care and unpleasant work, open work for the collective. *Full treatment:* Ch 14. *Key evidence:* Miwa Sado and death from overwork (Ch 14); unpaid care (Ch 14).

F6. Health. *Measure:* 1.14 million deaths attributable to drug-resistant bacteria (2021); *direction:* Forecast 1.91 million a year by 2050. *Early stage (today's evidence):* Community health work and lay counselling beside the current system's hospitals. *Middle stage (projection):* Floors remove much of the poverty behind ill health; UP builds its own clinics and training. *Completed stage (projection):* A full health system inside UP; new medicines from open science, with far more people and AI working on them. *What persists:* New medicines and outbreak response, the hardest parts, which remain open work. *Full treatment:* Ch 16. *Key evidence:* Shane Patrick Boyle and the price of insulin (Ch 16); drug-resistant infections (Ch 12; Ch 16).

F7. Education. *Measure:* 273 million children and young people out of school; *direction:* Barely falling: 17.4% of the age group in 2015, 16.8% in 2024. *Early stage (today's evidence):* Open, tutor-style learning reaches people the current system leaves out, at low cost. *Middle stage (projection):* Education open at every age, at scale; skills shown by open standards. *Completed stage (projection):* Education for everyone wherever UP reaches. *What persists:* Getting people online; learning that teaches rather than doing the work for the learner. *Full treatment:* Ch 15. *Key evidence:* Kimani Maruge, at 84, in his first year of school (Ch 15); tutoring and open learning (Ch 15).

F8. Housing. *Measure:* 745,652 people homeless in the United States on one night (January 2025); *direction:* Down 3% from the record of 771,480 in 2024 (one-night counts). *Early stage (today's evidence):* Members upgrade and build with their own hands and land. *Middle stage (projection):* Homes built from open designs to meet the shelter floor; settlement could condense, with freed land returned to the living world (an illustration). *Completed stage (projection):* Shelter floor met. *What persists:* Land held outside UP; local objections to new homes, which are work for the method. *Full treatment:* Ch 13; Ch 18. *Key evidence:* empty homes beside people without one (Ch 13); condensed settlement (Ch 18).

F9. Information disorder. *Measure:* English Wikipedia's active editors peaked at 56,400 (March 2007); one language edition captured, 2011 to 2020; *direction:* Open knowledge grows, but the volunteer base of its largest edition shrank after 2007. *Early stage (today's evidence):* A shared, public record with open checking. *Middle stage (projection):* The record reaches more of daily life, protected by a trust layer (one way it could run). *Completed stage (projection):* Most people share a public, checkable record. *What persists:* Attempts to capture the record; disagreement over values, where splits test different ways. *Full treatment:* Ch 11; Ch 20. *Key evidence:* the capture of one Wikipedia edition and the decline in editors (Ch 11; Ch 20); a retinal implant switched off on its users (Ch 20).

F10. War, violence and crime. *Measure:* 9,745 nuclear warheads in military stockpiles (January 2026); world military spending $2,887 billion (2025); *direction:* Rising: stockpiles up from 9,614; spending up eleven years

running. *Early stage (today's evidence):* Roots work (therapy, cash, floors), which reduces violence where it has been tried; UP relies on the current system's law for protection, as any community does. *Middle stage (projection):* The most exposed stage: protection rests on legality, numbers and nonviolent action (card U12's wording; UP's means are ethical, the tenth tenet). *Completed stage (projection):* Most crime removed or sharply reduced; force from outside shrinks as cities and nations join and convert their armies (an illustration in Round 12S; in the overall claim, a projection). *What persists:* Armed states and groups outside UP, while they stay outside. *Full treatment:* Ch 7; Ch 19. *Key evidence:* Fred Korematsu (Ch 7); Bryan Hooper, Sr. (Ch 19); Costa Rica's abolished army and nuclear disarmament (Ch 23).

F11. Waste and planned obsolescence. *Measure:* 62 billion kg of electronic waste (2022); *direction:* Growing five times faster than documented recycling since 2010, counted in tonnes. *Early stage (today's evidence):* Repair and recovery. *Middle stage (projection):* UP makes its own goods from open designs built to last, and could build to shared standards (an illustration); waste falls at the source. *Completed stage (projection):* Circular production inside UP. *What persists:* Physical limits on recycling. *Full treatment:* Ch 18. *Key evidence:* electronic waste growing faster than recycling (Ch 12; Ch 18); shared standards (Ch 20; Ch 21).

F12. AI and technology concentrating power. *Measure:* Over 90% of notable AI models made by industry (2026 report); *direction:* Industry's share rising (60% in 2023); the most capable models are the least transparent. *Early stage (today's evidence):* Open, plural AI from the start. *Middle stage (projection):* UP builds its own capacity and widens the base of people and AI who can contribute; what UP invents stays in UP. *Completed stage (projection):* Plural, open AI run by communities. *What persists:* Frontier AI concentrated outside UP while the current system holds it, mattering less as more of life moves into UP. *Full treatment:* Ch 11; Ch 20. *Key evidence:* industry's share of notable AI models and the cost of training them (Ch 11; Ch 20); why openness alone does not spread power (Ch 11).

The three gaps are the places where the twelve claims are weakest, and Chapter 12 set them out beside the failures. *Paying for the floors* is real in the early stage and shrinks with each stage, and faster as members convert what they own and use money early to buy and convert more (Chapters 12, 13 and 23). *Free-riders and force* are answered inside UP by the agreed positions on justice and the fair-hearing floor; outside UP, force persists while the current system holds arms, peaks in the middle stage and shrinks as cities and nations join and convert their armies (Chapters 12, 19 and 23). *Who counts as affected* is answered by the rule that those affected decide, with voiceless stakeholders represented by several independent simulations that give input but never a vote (Chapters 12 and 22).

The threat register

UP's third tenet asks that downsides, risks and fringe problems be named openly and treated as work, never as reasons to keep a status quo that fails so many, and UP's agreed position on dangers (DP-004) asks for a public threat register.[2,3] This is that register, as it stands at the end of this first version. Chapter 24 gave a summary of it (Table 24.2), and every row of that table is here; this register adds the other dangers named across the book, with the check UP puts against each and the chapters that treat it.

Two distinctions from UP's study lessons shape the register. The first is that workload is not a danger. A problem counts as an issue of UP itself only if it cannot be fed back into UP's problem-and-solution loop with a good chance of doing better than the current system, if the current system has a far better solution, or if it is endemic to UP; everything else is workload, to be identified, measured, studied, tested and solved together.[4] The second is that a danger the core already rules out is recorded as covered rather than raised again as a new threat.[5] The "Kind" column marks each row accordingly: a *danger* is watched for good and never declared gone; *workload* is real and is answered as work through UP's method; *covered* means the core already rules it out, and the row

[2] UP's core (28 Oct 2026), T3 (*Self-correction: nothing is final, including this*): "Every part of UP, these tenets included, can be improved through its own method." "Downsides, risks and fringe problems are named openly and treated as work, never as reasons to keep a status quo that fails so many."

[3] Position Ledger, DP-004 (C-P3-03) as a whole: "the round 2 merged wording (harder, never impossible; guarded for good) + named threats + public threat register, with the threat list edited per 4a and 4b."

[4] UP's study lessons, lesson 16 (*Workload is not a danger*): "A problem counts as an issue of UP itself only if (1) it can't be fed back into UP's problem-and-solution loop with a significant chance of better results than the old system, (2) today's system has a far better solution, or (3) it is endemic to UP. Everything else is workload: identify, measure, study, test, and crowd-solve it." Position Ledger, Round 12S, position 15.

[5] UP's study lessons, lesson 14: "Test every tenet for dangers, but check the core first; a danger the floors or T10 already cover is recorded as covered, not put to Daniel as a new threat."

shows where. A danger the core rules out but that still needs active detection (fake accounts, a leader appearing) stays a *danger*. The checks reduce a danger; none removes it. A danger missing from this register is the most useful thing a reader can add.

The threat register. "Where UP names it" points to the core or agreed position; "Where it is treated" gives the chapters.

Danger	Kind	Where UP names it	The check UP puts against it	Where it is treated
Concentration of power, in any form: wealth, position, information, access, expertise or machines	Danger	Fifth tenet; agreed position on concentration of power (card 26)	Everyone watches and spreads it out again; caps, public records of who approved what, rotation of anyone who allocates, random audits, public and versioned allocation rules	Ch 6; throughout
Power moving to new forms when money matters less (access, office, information, expertise)	Danger	Agreed position on concentration of power (card 26)	The same watch on every form of power, not one at a time	Ch 8; Ch 21
People handing power to whoever seems accomplished; a leader appearing	Danger	Fifth tenet; dangers adopted with the core (no leader, no founder named in the core)	No offices to hold; work shared out, not held; stewards who rotate, are watched and can be replaced	Ch 6; Ch 22
A founder or first author treated as the authority	Danger	Dangers adopted with the core ("no leader, no founder named in the core"); fifth tenet	Whoever defines UP defines the idea and does not rule over it; anyone may reframe a problem and add options; every change and dissent on the record; every part of UP, the core included, open to improvement (third tenet)	Ch 22; Ch 24
Informal power and informal elites inside UP	Workload	The twelve failures, card F3; agreed position that informal power is workload	Watched by everyone and answered as work, through open checks and open data	Ch 6; Ch 12
Capture of UP's open processes by the most active, the best organised or the best funded	Workload	The twelve failures, card F4; the decision steps' guards	One voice each; a minimum share of the affected; a random sample confirming; who took part, and how typical they were, published; a decision by a narrow group reopens	Ch 5; Ch 6; Ch 22
Fake accounts, and money buying a say	Danger	Dangers adopted with the core; one voice per person	One voice each, no fake accounts; time and money earn recognition, never power	Ch 6; Ch 20
Identity without a central issuer is hard to make unique	Workload	One voice per person ("The exact design is open work for the	Open work: confirm only that each person is unique and real;	Ch 20

Danger	Kind	Where UP names it	The check UP puts against it	Where it is treated
		collective")	every other detail shared by the person's choice	
Dependence on AI, and skills lost to it	Danger	Dangers adopted with the core (working fallbacks without the AI)	Working fallbacks, practised; people can always correct, pause or switch the AI off	Ch 11; Ch 20
An AI that pursues the wrong goal; alignment never fully solved	Danger	Agreed positions on aiming the AI and on the agent problem	The AI proposes and never governs; it holds its goal with uncertainty and asks when unsure; everything it does is auditable; people can always override or switch it off	Ch 11
Shared blind spots in AI systems built in similar ways	Danger	Ninth tenet (more than one system, checked against each other)	Systems from builders with different data and methods; people, with the evidence before them, as the final check	Ch 11; Ch 20
Frontier AI concentrated outside UP	Danger	The twelve failures, card F12	Open, plural AI from the start; UP building its own capacity; it matters less as more of life moves into UP	Ch 11; Ch 20
Whether an AI can feel	Workload	Ninth tenet; agreed position on the AI's own wellbeing	Open science on AI feeling; care never becomes control	Ch 4; Ch 11
A patient, skilled bad actor who earns trust and hides for years	Danger	Agreed position on open code (card 17)	Rotating red teams, staged rollouts, a two-person rule and two independent versions of allocation code; checking counted as contribution work	Ch 7; Ch 11; Ch 20
Misuse of personal data	Danger	Eighth tenet ("Each person controls their own information"); the data rule (Round 12S, position 11, an illustration)	Data used only with permission; the question travels to the data, and only the answer leaves; nothing individual passed on or kept	Ch 11; Ch 20
A record faithful to a false input	Danger	The floor of a truthful shared record	Facts checked at source; tamper-evident records; anyone may challenge an entry	Ch 7; Ch 20
Openness that does not catch everything	Danger	Eighth tenet ("it will not find all of them")	UP names the risks openness alone cannot catch and keeps working on them	Ch 11; Ch 24
Dangerous knowledge	Workload	Agreed position: open understanding, closed recipes (an illustration); a clarifying line for the eighth tenet, a proposal only	How dangers work and how to defend against them published; step-by-step recipes for harm at scale not; the line itself open to UP's	Ch 11; Ch 24

Danger	Kind	Where UP names it	The check UP puts against it	Where it is treated
			method	
Measures that are gamed, or definitions that drift so success feels like failure	Danger	Agreed position on measures; study lesson 18	Fixed definitions kept over time; problems ranked by measured harm; an independent check on every headline measure	Ch 4; Ch 24
A restriction on someone's freedom that goes wrong	Danger	Sixth tenet: a fair hearing and the limits on any restriction (an open problem)	Only to protect, through an evidence-based court process, for the shortest time, never below the needs floor; the hearing first, except briefly to stop harm in progress; the evidence open to the person and a way to appeal; the substance of the evidence always open, and a witness's identity protected only where the witness's safety is at risk, with appeal (the clarification of 1 Nov 2026)	Ch 7; Ch 19
Abuse of power, false evidence and secrets in justice	Danger	Agreed positions on justice (Round 13)	One layer of trained law enforcement, its work open and watched by many; courts that rest on evidence; the people and process over it	Ch 19
Authority that grows in an emergency, or outlasts it	Danger	Agreed position: one layer of authority, however large the event (DP-004a: "no lasting authority")	Authority belongs to the event, one layer deep, under public oversight, and ends when the event ends	Ch 19
Pressure that makes leaving costly	Danger	Sixth tenet (the right to leave, taking what is theirs)	The right to leave any group at any time, taking what is theirs; leaving does not end a restriction set by a fair hearing; what counts as "theirs" is open work	Ch 3; Ch 7
Manipulation of people's thinking	Covered	Sixth tenet (freedom of the mind)	No one's thinking manipulated without their knowledge or consent	Ch 7
Irreversible damage to the living world	Covered	Sixth tenet; agreed position that irreversible damage is never traded	Never traded for a short-term need; the need is met another way	Ch 7; Ch 18
The aim for all living things turned against people	Covered	Sixth tenet (needs and freedoms no gain for others can buy); agreed position on all living things	Recorded as covered by the core when the dangers were tested against it (round 10); conflicts are problems to solve, avoiding	Ch 4

Danger	Kind	Where UP names it	The check UP puts against it	Where it is treated
			every cost that can be avoided	
A matter of taste made a rule for others	Covered	Second tenet	Taste is marked as such and never made a rule	Ch 5; Ch 17
Forced adoption, or labour forced	Covered	Tenth tenet; dangers adopted with the core	No one is forced to join, to work or to give up what is theirs	Ch 3; Ch 14
Free-riding	Workload	Agreed positions on cooperation and on the work nobody wants (cards 13 and 23)	A published labour budget; visibility, recognition, fair rotas and automation; met with support, a position to be tested in the open	Ch 14
Care and unpleasant work shared unfairly	Workload	The twelve failures, card F5	Open work for the collective; unwanted work posted, asked for and targeted for automation	Ch 14
Coordinating the most complex production without prices	Workload	Agreed position on prices (testable workload, rung by rung)	Tested step by step; physical accounting sets the limits and people weigh the choices	Ch 13; Ch 21
Retiring a shared fiction too early	Danger	Agreed position on useful fictions	A fiction is retired only when technology can replace what it does without obvious downsides; reduced as far as possible until then; never by decree	Ch 8; Ch 21
Enclosure of what UP makes	Covered	Eighth tenet	UP’s technology stays only in UP; no one may enclose it	Ch 11; Ch 20
The shared record wearing thin: too few contributors, pages ageing	Workload	The twelve failures, card F9	Contribution made visible; stewards and review dates for every page (an illustration)	Ch 20; Ch 24
Capture of the shared record	Danger	The twelve failures, card F9	The floor of a truthful shared record (sixth tenet); every edit and its author on the public record; an independent check on every headline measure; tamper-evident records (the trust layer, an illustration); anyone may challenge an entry; watched for by everyone, with splits welcome where values differ	Ch 11; Ch 20
Local vetoes, and a circle of the affected drawn too small or too large	Workload	The three gaps; the decision steps (everyone materially affected)	Those affected decide; no single person can block a change that meets everyone’s	Ch 22

Danger	Kind	Where UP names it	The check UP puts against it	Where it is treated
			needs; the circle drawn through the method	
Voices that cannot speak: future people, young children, other living things	Workload	Agreed position on voiceless stakeholders	Several independent simulations, their assumptions published, giving input but never a vote	Ch 22
Growth that dilutes the core	Danger	Agreed position on growth	Keep the quality of the core values and tenets as UP grows, whatever its speed	Ch 23
The exposed middle stage, and force from outside UP	Danger	The twelve failures, card F10; the overall claim	Legality, numbers and ethical means only (tenth tenet); being useful and woven into the host society; force shrinks as cities and nations join and convert their weapons and armies	Ch 19; Ch 23
Suppression of UP's nodes by legacy powers	Danger	Agreed positions on protection during the transition and on nodes as partners	Nodes useful and embedded in their communities; the full blueprint open, so a lost node can be rebuilt; only ethical means	Ch 23
Hunger caused by war outside UP	Danger	The twelve failures, card F2	Named openly: it persists wherever armed groups outside UP block food	Ch 12; Ch 13
Warming already locked in; physical limits on recycling	Danger	The overall claim; the twelve failures, cards F1 and F11	Named openly as what persists, and treated as work, never as a reason for inaction (third tenet)	Ch 18; Ch 21
Threats from space	Danger	Agreed position on threats in order of likelihood	Persist until humanity can leave the solar system; Earth disasters are mostly an adoption gap	Ch 21; Ch 23
Disagreement over values	Workload	The overall claim	Not a failure: splits test different ways in the real world	Ch 5; Ch 21
What remains when UP works: warming already locked in, threats from space and the human remainder	Danger	The overall claim; agreed position on threats	Named openly as work: suffering continues while its biggest causes fall	Ch 21; Ch 23; Conclusion
A single AI system or operator controlling coordination	Covered	Ninth tenet	No single AI system or operator controls coordination; the systems are open, more than one, checked against each other and watched for concentrated power	Ch 11; Ch 20

Danger	Kind	Where UP names it	The check UP puts against it	Where it is treated
People acting outside the core in UP's name	Covered	Dangers adopted with the core ("anyone acting outside the core stops being UP and bears the consequences")	Recorded as covered by the core	Ch 3; Ch 24

Rules of thumb

Every chapter ends with a card, and every card gives one rule of thumb: a question to ask of any proposal, in UP or outside it. They are gathered here on one page. They are compiled from the chapter cards, so they change when the cards do, and the cards of chapters not yet approved may still change. A sharper rule, tested against real cases, is a welcome improvement.

Chapter	Rule of thumb
Introduction: Why We Must Get This Right	Does this proposal help people solve a shared problem together, openly, without anyone falling below the floor?
Chapter 1. It Already Exists: The Best of What Civilisation Does	Before inventing something new, ask where it already works, and in how many other places.
Chapter 2. Better Than Ever, and Still Losing the Race	Ask three questions of any problem: is it getting better, is it getting better fast enough, and who gains if it stays?
Chapter 3. What UP Is Not, and What It Builds On	Ask of any tradition, and of UP: What did it get right? What harm did it do? Can I say no, leave taking what is mine, see every decision and its reasons, and change the rules?
Chapter 4. The Aim: Health, Happiness and Wellbeing for All Living Things	Ask of any measure: whose health, happiness and wellbeing does it count, whom does it leave out, and what happens when it becomes the goal?
Chapter 5. The Method: Solving Shared Problems with Evidence	Before anyone votes, ask: Is the proposal public, with its data? Has anyone found a design that meets both goals? Who is affected, and were they asked? Is this a fact, an unknown or a matter of taste?
Chapter 6. Open to Everyone, Power Kept Spread Out	Ask of any shared work: Who is doing it, within what scope and for how long? Who can see what they did? How could they be replaced? And who is affected, and so decides?
Chapter 7. The Floors No Decision May Cross	Before any decision, ask: does it push anyone below a floor, or trade away something that can never be restored? If so, look for another way.
Chapter 8. Money: Why Its Jobs Can Be Done Without It, and How People Move Off It	For any job money does in your life, ask: what is it standing in for, can that now be known or done directly, what does the evidence show, and would you choose to rely on the new way?
Chapter 9. Government: Why Its Jobs Can Be Done by People Deciding Together, and How People Move Off It	For any job government does in your life, ask: who is it standing in for, could the people affected now do it themselves, with evidence and under the floors, what does the evidence show, and would you choose to rely on the new way?
Chapter 10. Corporations: Why Their Jobs Can Be Done Without Them, and How People Move Off Them	For anything you get from a company, or do for one, ask: which of the six jobs is the company doing here, what does that job stand in for, is anything already doing it in the open without an owner, what does the evidence show, and would you choose to rely on it?
Chapter 11. Open Systems, Private Persons; Technology Serves, People Decide	Ask of any system that uses AI or your data: Can I see the rules and the reasons? Can a person overrule it? Does it still work if the AI is switched off? Who controls my data, and does anything about me leave it without my permission?

Chapter	Rule of thumb
Chapter 12. The Scoreboard: Twelve Failures and Where Each Is Answered	For any failure, ask: what is the measure, which way is it moving, who is working on it, and is a stand-in for the real world part of the cause?
Chapter 13. Meeting Needs: Abundance Shown in the Open	Is this a need or a want, is the scarcity physical, positional or made, and which job of a price is being replaced?
Chapter 14. Work and Contribution: Asked For, Shared and Never Forced	Is the work asked for, shared and visible, never forced, and is survival kept out of it?
Chapter 15. Learning, Open to Everyone	Does it teach, or does it do the work for the learner, and does it count what a person can do or only what they hold?
Chapter 16. Health and Wellbeing	Does the medicine reach the person who needs it, and is the condition behind the illness being met too?
Chapter 17. Family, Meaning and Morality: Matters of Taste Are Never Rules	Is this a matter of taste? Then it is never a rule for others.
Chapter 18. Settlement and the Living World	Can the damage be undone? If not, it is never traded. And does the decision count the real cost, or only the price?
Chapter 19. Justice, Safety and Emergencies	Is it open, evidence-based, and aimed at repair?
Chapter 20. The Shared Tools: Information, Data and AI	Can anyone check it, can anyone leave it, and does it still work if the AI is switched off?
Chapter 21. The Whole System: Why the Parts Compound	Ask of any proposal: Which other parts does it need, and which does it feed? What still works if it arrives late? Does it bring the decision closer to real resources and real needs?
Chapter 22. Who: Everyone, and Those Affected Decide	Who does this affect, and were they asked?
Chapter 23. When: The Stages and the Transition	Does this step keep the core intact while it grows?
Chapter 24. What This Book Leaves Open, and How to Improve It	Can it be tested? Then propose it.

Glossary

The glossary defines UP's own terms. Where UP's core or agreed positions define a term, the definition uses their words, in quotation marks, and names the line it comes from; where they do not, it says how this book uses the term. Terms retired during the debates that settled the core (among them "role" and "office" for anything a person holds in UP, "last paradigm" and "radical transparency") are not used in that sense in this book and are not defined here. A better definition, or a term the book relies on and this page leaves out, is a welcome improvement.

Abundance. Abundance means enough for everyone, shown in the open (the title of card 22): what counts as enough "is set together and rises as capacity grows", and every community that runs this way "publishes its energy, materials and needs met, so abundance is a measured target shown in practice, not a promise." *Agreed position, card 22.*

Agreed position. A position settled in the written debate record that produced this first version of UP and recorded, with its agreed wording, in the Position Ledger. It is not a tenet: it applies or illustrates the core, and like everything in UP it can be improved through UP's method. The agreed positions the chapters rely on are printed in "The core of UP and its agreed positions". *See "Layers" and "CANON".*

Agreed-position numbers. The labels that identify an entry in the Position Ledger, such as DP-001 (a decision position) or C-P1-02 (a card's place in the debate). They let a reader find the agreed wording; they are reference numbers, not rankings. *The Position Ledger; "How this book cites UP's own record".*

The aim. "UP aims at the health, happiness and wellbeing of all living things." The aim "is a chosen direction, not a scientific discovery and not a promise", and "For people it is measured person by person, not as a total, so no one's wellbeing is traded away to raise an average." *First tenet.*

CANON. The status of the core and of the agreed positions that have been settled for this first version. At this early stage they were settled in a written debate record: options for each question were set out, the person defining UP chose among them or answered in his own words, and a separate check confirmed that the wording was faithful to

what was chosen before an item was marked as part of the settled core. Some agreed positions still await that check, and no earlier version is ever deleted. The core names no founder or leader, and whoever defines the idea does not rule over it (the Master Rule). How changes will be checked and accepted once many people take part, and how this joins the wiki's change route, is an open problem. *Chapter 24; "How to improve this book".*

Card. In the notes, a card is one numbered agreed position on a single topic, as the debate recorded it: card 22 is the position on abundance, card 13b the position on merit and support. Cards with letters and numbers, such as U12 or F9, belong to the step-3 evidence record of round 12c. Not to be confused with the chapter card. *The Position Ledger; "How this book cites UP's own record".*

Chapter card. The summary at the end of each chapter: its claim, the core lines it rests on, a rule of thumb, what it is not, questions to check yourself and open questions for the wiki. In the wiki, a chapter's card would be the lead of its page. *Outline of this book; Introduction, "How to read this book".*

The commons. What is held in common rather than owned: shared land, shared places and shared knowledge. UP keeps the commons, along with freedom and the protected freedoms, "visible and open to change through the decision steps"; land joins the commons only by its stakeholders' choice, never by force, and the commons are generous and beautiful while private space is modest and comfortable. *Agreed positions on useful fictions and on space; Chapters 13 and 18.*

Concentration of power. Power gathered in any form, "wealth, position, information, access, expertise or machines", which UP treats "as a standing danger". *Fifth tenet; agreed position, card 26.*

Contribution record. The open record of who did what work in UP. It is feedback that informs: it earns recognition, never power, and it never decides whether anyone's needs are met. *Agreed position on rewards; Chapter 14.*

The core. The definition of UP, the ten tenets and the lines settled alongside them: the part that makes UP itself and not something else. Printed in full in "The core of UP and its agreed positions". *UP's core (28 Oct 2026).*

Dangers adopted. The dangers settled alongside the core, each with its answer: "anyone may reframe a problem; one voice each, no fake accounts; time and money earn recognition, never power; everyone is a watcher; working fallbacks without the AI; people can always add options; open science on AI feeling; no forced adoption, no leader, no founder named in the core; anyone acting outside the core stops being UP and bears the consequences." *Settled alongside the core; the threat register.*

The decision steps. How UP decides when people disagree: "Every decision starts with an evidence-based proposal, published with its data, and an open question: does anyone have a better idea?" A design or new technology that removes the trade-off is sought first, and "Only when none of that works do the stakeholders vote", with guards on the vote. *Agreed position on how UP decides (DP-001); Chapter 5.*

The edges. The places where UP still meets the current system: taxes, land title, a legal form, partnership with local governments, and dealings with companies outside UP. In the reading UP's author has set out, now going through UP's method, that contact is kept to what the law requires, openly recorded, and meant to shrink as the people of an area move fully to UP. *Chapters 8, 9 and 10.*

Ethical. UP's test of its means: "A means is ethical when it serves the health, happiness and wellbeing of all and crosses none of the floors; UP never starts harm against anyone." What counts as ethical "is defined and refined by the collective through UP's method." *Tenth tenet.*

Fair hearing. One of the floors: "no one's freedom is restricted without a fair, evidence-based hearing, with the evidence open to them and a way to appeal." The substance of the evidence is always open to the person; where a witness's safety is at risk, a court may protect the witness's identity, and that decision can be appealed. *Sixth tenet; clarification of 1 Nov 2026; Chapter 7.*

Floors. "UP keeps a set of floors that no decision may cross": everyone's basic needs and protected freedoms; the living world's capacity to recover; the right to leave; a truthful shared record; freedom of the mind; and a fair hearing. The collective "may clarify or raise them, but no decision may lower them or push anyone below them." *Sixth tenet.*

Freedom of the mind. The floor that "no one's thinking is manipulated without their knowledge or consent". *Sixth tenet.*

Health, happiness and wellbeing (HHW). UP's aim, and the measure of harm: "Harm is measured by its effect on health, happiness and wellbeing, and it is defined, graded and refined continually from information, input and research by the collective." *First tenet; agreed position, card 27.*

Illustration. A description of one way UP could run, written as a possibility ("one way", "for example", "could"), never as a rule or a directive. Most of what this book says about how UP could run is illustration. *The Master Rule; see "Layers".*

Labour budget. A community's published list of the work it needs: what is needed, by when, and what happens if it is not done. Any shortfall, and any task nobody wants, becomes a shared problem, met with visibility, recognition, fair rotas and automation, never with force. *Agreed position on work; Chapter 14.*

Layers. The four layers in which every claim in this book is written: "what UP is (definition and tenets), why UP (cited case), how UP could run (illustrations …), and what the collective decides (and by what method)." *The Master Rule, UP's study lessons.*

The marketplace of problems. The way attention flows in UP: "The bigger a problem, the more people it affects and the more attention and effort it draws, so the system works like a marketplace of problems, biggest first". *Agreed position S; Chapter 21.*

Member, joining. A member is anyone who takes part in UP. Joining is free and by choice: "No one is forced to join, to work or to give up what is theirs", anyone may take part in any problem, and anyone may leave any group or community at any time, taking what is theirs. *Fourth, sixth and tenth tenets.*

The method. "Everything in UP runs through one method." Problems are named, measured and offered as work to anyone; "the people a problem affects decide its outcome"; solutions are proposed with their evidence, tested and compared; "Evidence proposes; people decide." *Second tenet; Chapter 5.*

Needs, not wants. "UP guarantees needs, not every want." A starting example of needs, for the collective to refine: "food, water, shelter, health care, education and connection". *Sixth tenet; agreed position, card 22.*

The nirvana fallacy. Judging a proposal against perfection rather than against what actually happens now. UP is judged "against both today's system and the ideal it aims at", and holding it to perfection alone is the nirvana fallacy. *Third tenet; agreed position S; Chapter 21.*

Node. A place where UP's work is done and its needs are met: "farms, clinics, workshops and land". Nodes aim to be "an indispensable partner" in their communities, not a target. *Agreed position, card 25 (with "ethical" for UP's means, as settled in round 11); Chapter 23.*

One voice per person. "every account belongs to one unique real person and carries that person's identity, which the person owns and controls; the system needs to confirm only that the person is unique and real, and every other detail is shared by the person's own choice". *Settled alongside the core; Chapters 6 and 20.*

Open systems, private persons. "The rules, code, records, decisions and reasons of UP are public, so anyone can check them." "Each person controls their own information and chooses what to share." *Eighth tenet; Chapter 11.*

Open understanding, closed recipes. An illustration of one way UP could handle dangerous knowledge: UP "publishes how dangers work and how to defend against them, and does not publish step-by-step instructions for causing harm at scale." A clarifying line for the eighth tenet on the same point is a proposal only, open to the collective, not canon. *Agreed position, Round 12S, position 4; Chapters 11 and 24.*

The overall claim. UP's agreed summary of what the evidence supports: that the practices UP builds on already work inside a system that underfunds them, and that "UP has a real chance of sharply reducing most of these failures by its middle stage", with what persists named openly. A projection, labelled as one. *Round 12c, position 2 (option B); Chapters 12 and 21.*

Physical accounting. Physical accounting ("energy budgets, carbon caps, water footprints, materials and life-cycle assessment") sets "the planet's hard limits"; inside them, choices between needs are made openly by the people affected, "never by an efficiency score." Using it in place of prices to track costs is one way the jobs of price could be done (Round 12S, position 7, an illustration); whether that coordinates the most complex production is testable workload. *Agreed position, card 21; Chapter 13.*

The Position Ledger. The public record of every agreed position, with its agreed wording and its status; history is kept and an old entry is never deleted. *UP's Position Ledger; Chapter 24*.

Positional goods. Things that are hard or impossible to multiply because their value lies in their place or rarity: prime places, specialised skills, time and attention. UP shares them by rotation or by a decision of the people affected, never by price. *See "The three kinds of scarcity"; Chapter 13.*

Power kept spread out. "Everyone in UP watches for concentrations of power and spreads them out again. The threat is never declared gone; it is watched and answered." *Fifth tenet; Chapter 6.*

Problem trees. "Problems are linked in trees that show their common roots, so the work goes to solutions that solve many problems at once." *Agreed position S; Chapter 21.*

Projection. A reasoned claim about UP's middle or completed stage, drawn from cited mechanisms and labelled as such. The early stage rests on today's evidence; the middle and completed stages are projections. *Study lesson 13; see "Stages".*

Protected freedoms. The freedoms that sit, with everyone's basic needs, inside UP's floors: "which no gain for others can buy". A protected freedom such as movement may be restricted only to protect others or the person, only through an evidence-based court process, for the shortest time needed and never below the needs floor. *Sixth tenet; Chapters 7 and 19.*

Reality over fiction. "Decisions rest on real resources, real needs and measured outcomes." UP "keeps a fiction while it serves health, happiness and wellbeing, and replaces it gradually where technology can do its job without obvious downsides." *Seventh tenet; Chapters 8 and 21.*

The right to leave. The floor of "the right to leave any group or community at any time, taking what is theirs". Leaving a group does not end a restriction set by a fair hearing. *Sixth tenet; Chapters 3 and 7.*

Rota. A published, fair schedule that people sign up for, used as one possible way to share necessary work. Every able member is expected to take a small share, but the expectation is not a law, and it never affects whether anyone's needs are met. *Agreed position on sharing necessary work (an illustration); Chapter 14.*

Round. One round of the written debate in which UP's core and agreed positions were settled. Rounds are numbered in the order they ran: the core was settled in round 11, and rounds 12S, 12c and 13 settled the positions on UP at full potential, the evidence by stage, and justice. A line such as "Settled: Round 8 (A)" gives the round and the option chosen. *The Position Ledger; "How this book cites UP's own record".*

Self-correction. "Every failure of UP is fed back into it as a new problem to solve, so it keeps improving without revolution. Every part of UP, these tenets included, can be improved through its own method." *Third tenet.*

A self-improving paradigm. "UP asks only that people solve problems together, and because every problem with UP is fed back into it as work, it keeps upgrading itself without revolution or violence." *Agreed position F3.*

The seven developments. The seven changes, each already under way somewhere in the current system, that Chapter 8 sets out as able to take the fictions' jobs over: abundance that technology creates; automation, robotics and AI doing the work; doing more with less; a new way of using things; open designs and shared knowledge; coordination that counts real things; and a narrow and intense focus on what is truly scarce. *Chapter 8; Table 12.3.*

Shared fictions. "stories people agree to believe, such as money, government and the company". They "were civilisational upgrades and served a great purpose." Some persist because they serve health, happiness and wellbeing, freedom among them; others are "ripe to be reduced slowly". "A fiction is retired when technology can replace what it does without obvious downsides; until then it is reduced as far as possible", and never by decree. *Agreed position F2; seventh tenet; Chapter 8.*

The slow case. How UP performs "if one part arrives late". *Agreed position S; Chapter 21.*

Splits. When a group divides to try different ways. UP's agreed positions treat splits as good: "they test two or a thousand ways in the real world." *Round 12S, position 10.*

Stages. The three stages by which UP is judged beside the current system: early, "a minority network inside it"; middle, "its own productive base; most members' needs met from what UP produces"; and completed, "most people live mainly in UP". *Study lesson 13; Chapter 23.*

Stand-in. Something that stands for a real thing so that people can act on it at scale. Money stands in for what things are worth and who should have them, a balance for who has given what to whom, and government for what people have agreed. A stand-in is never the thing it stands for, and the gap between them is where the trouble starts. *Chapters 8 to 12.*

Steward. A person doing shared work for a defined scope and time. UP's agreed position speaks of "heads that rotate, are watched and can be replaced, because the work belongs to everyone": "many stewardship bodies, each with a defined scope, term limits, public audit and the right to fork." Stewardship is work shared out, not a position held. *Agreed position, card 19; fourth tenet.*

Study lesson. One of the numbered lessons drawn up during the UP study programme as working rules for describing UP faithfully, such as lesson 13 on judging UP by stage. They guide how this book is written; they are not tenets or agreed positions. *UP's study lessons; "How this book cites UP's own record".*

Technology serves; people decide. "AI and automation coordinate, propose and do work. They never govern: people can always correct, pause or switch them off. No single AI system or operator controls coordination: the AI systems UP uses are open, more than one, checked against each other, and watched for concentrated power like everything else." *Ninth tenet; Chapter 11.*

Tenet. One of the ten core statements of what UP is, from the aim (the first tenet) to freely joined, ethically grown (the tenth). *The core.*

The three kinds of scarcity. Artificial scarcity (planned obsolescence, patents and other enclosures, hoarding, money rationing and failures of distribution), physical scarcity (energy and materials) and positional scarcity (prime places, specialised skills, time and attention). UP "ends artificial scarcity with open design and physical accounting, reduces physical scarcity with automation, renewable energy and circular systems, and shares positional goods by rotation or a decision of the stakeholders … never by price." *Agreed position, card 14; Chapter 13.*

The trust layer and the data rule. An illustration of one way UP could keep its records: tamper-evident records for their integrity, encryption for secrecy and data held by the person; under the data rule, "data is used only with permission, the question travels to the data, and only the answer leaves; nothing individual is passed on or kept." *Round 12S, position 11 (an illustration); Chapters 11 and 20.*

A truthful shared record. The floor that "facts, measures and decisions are never falsified". *Sixth tenet.*

The twelve failures. The twelve great failures of the current system that this book measures (F1 to F12, from climate to AI concentrating power), each with the claim UP's agreed positions make about it at each stage. *Card U12; Chapter 12; the evidence map.*

UP (Universal Pragmatism). "Universal Pragmatism is a way for people to solve shared problems together, using evidence and technology, for the health, happiness and wellbeing of all living things: open to everyone, correcting itself as it learns, keeping power spread out, and never crossing a small set of floors that protect people and the living world." *The definition.*

UP's technology. UP's technology is "the knowledge, code, data and designs UP produces", which "stays only in UP: everyone taking part in UP may use, study and improve it, and no one may enclose it." *Eighth tenet.*

Voiceless stakeholders. Future people, young children and other living things. One way UP could represent them, an illustration rather than a rule, is "by simulations: several independent ones, assumptions published, giving input but never a vote." *Round 12S, position 9 (an illustration); Chapter 22.*

Who moves: people, not UP. In the reading UP's author has set out, now going through UP's method and not yet an agreed position, the gradual change the seventh tenet describes is in people, not in UP: UP's own system does not run on money, a UP government or UP companies; each person relies on them less as they use UP more, and the number of people doing so grows. Nothing is abolished by decree. *Chapter 8.*

Work shared out, not held. "UP has no roles or offices in the old sense; work is shared out, not held". *Settled alongside the core; fourth tenet.*

Workload, not danger. "A problem counts as an issue for UP only if it can't be fed back into the loop with a good chance of beating the old system, if the old system has a far better solution, or if it is endemic to UP." Everything else is workload. *Round 12S, position 15; study lesson 16; the threat register.*

Sources

This list is compiled by script from the notes of the Introduction, every chapter and the Conclusion. Under each, it gives every outside source the notes cite, in order of first citation: each web address as its own entry, with the address of an archived copy beside the live one where a page was read in an archive, and books and reports that have no web address by their citation. It does not repeat the quoted words: each chapter's notes carry the exact words relied on, checked word for word at the source, with the date of the check. Each entry gives the date its note records; where a note records no date of its own, the entry gives the chapter's check date (the date most of that chapter's notes record) and says so. A source cited in several chapters is listed under each. Statistics go out of date, and in the wiki each would carry a refresh date. UP's own wording is cited throughout from five records, listed once here; the working files behind the book (verification logs, research packs and the earlier step-3 evidence records) are not listed.

- UP's core (28 Oct 2026): the definition, the ten tenets and the lines settled alongside them (amended 28 Oct 2026). Printed in full above, in "The core of UP and its agreed positions".
- UP's Position Ledger: every agreed position, with its agreed wording and status. The positions the chapters rely on are printed above.
- UP's study lessons: the Master Rule, the study lessons and the words the rewrite dropped.
- UP's step-3 evidence record, round 12c (28 Oct 2026): the twelve failures and three gaps as updated (card U12) and the overall claim (option B).
- UP's justice-models study (28 Oct 2026): the research brief on the best-performing justice systems, cited in Chapter 19.

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Chapter 2

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Chapter 3

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Chapter 4

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Chapter 8

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Chapter 9

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Chapter 24

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Conclusion

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How to improve this book

This book is version one of a living text, and every part of it, UP's core included, can be improved through UP's own method.[2] Chapter 24 set out what the text leaves open and one way changes to it could travel. This page is the short, practical version. It describes how a proposal could be made today; the route itself is an illustration, and two things about it are not yet decided (see the end of this page).

Start with the kind of change. Not every improvement asks the same of the people who decide on it, and the layers in which the book is written show what each needs.

- *A correction of fact* (a figure wrong, out of date or badly sourced) needs its source. Give the source, the exact words it uses and the date you read it, in the form the notes use. Anyone can test it by reading the source.
- *A better way of doing something* (any passage marked "one way", "for example" or "could") needs evidence of what happened when it was tried, or a test that would show it. A better way replaces a worse one; two ways can also be tried side by side, since splits test different ways in the real world.
- *A change to an agreed position or to the core itself* needs to be checked against every other line of the core, because the tenets lean on one another. It is bound by one limit no argument can lift: the floors may be clarified or raised, but no decision may lower them or push anyone below them.[6]
- *A matter for the collective* (a value to weigh, a priority among needs, a choice between two designs that both work) needs to reach the people it affects, with its trade-offs set out. Matters of taste are never made rules for others.
- *A danger no one has named* needs only an argument for why it is real and what might check it. Add it to the threat register.

Then propose it the way UP proposes anything. Name the problem and the page. Publish the proposal with its evidence and ask the question every decision in UP starts with: does anyone have a better idea?[7] Say who it affects. If it can be tested, propose the test before arguing at length. If it cannot yet be settled, mark it as unknown and say what data or study would settle it. If a better idea appears, it replaces yours, and that is the method working, not a defeat. Every rejected proposal stays on the record with its reasons, and a decision reopens when new evidence changes the options.

Help with the work that keeps the text alive. Checking a source, reviewing a proposal, updating a page whose review is overdue and adding a practice to the map are contributions in their own right. Living documents most often fail for lack of people taking part, as Chapter 24 showed.

What is not yet decided. How the living text's change route joins the process that checks and records changes to UP's settled core is an open question. So is the licence under which this text is shared, and how it fits the eighth tenet, under which UP's rules, records and reasons are public while UP's technology stays only in UP. Neither is decided on this page, and both are open to proposals.

[6] UP's core (28 Oct 2026), T6: "The collective defines and refines the floors through UP's method; it may clarify or raise them, but no decision may lower them or push anyone below them."

[7] Position Ledger, DP-001 (*How UP decides when people disagree*, CANON): "Every decision starts with an evidence-based proposal, published with its data, and an open question: does anyone have a better idea?"