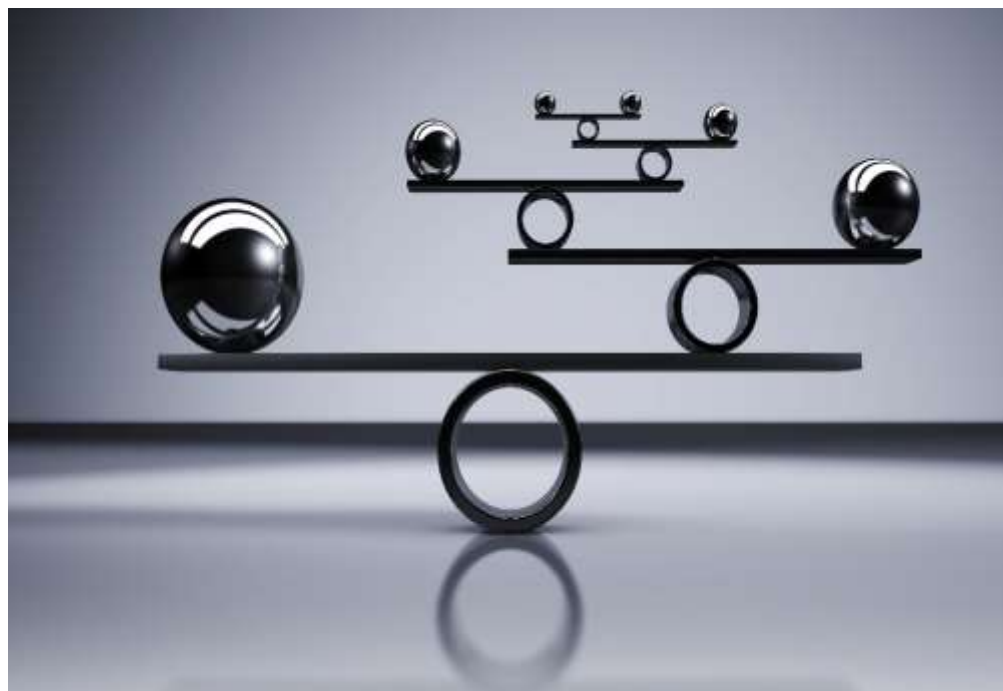


February 2024 (+March)



Public Sector

Brazil's La-bora the public sector lab does not build services, but 'exists solely to [help public servants build trust & foster psychological safety](#)'. Creating public value by improving civil servants' employee experience. (Psychological safety [explained](#)). [Related](#).

A new OECD [report](#) Facts not Fakes: Tackling Disinformation, Strengthening Information Integrity is the first baseline assessment of how governments are upgrading their governance measures and institutional architecture to provide a supportive environment where reliable information can thrive, while ensuring the vigilant protection of fundamental freedoms.

[Blog](#) about Public Sector Capabilities Index defines public sector capacities as three inter-connected layers: state capacities, organisational routines, and dynamic capabilities of public organisations.

A [post](#) about: Will governments ever learn? A study of current provision and the key gaps

Transforming Public Sector Services using Generative AI - Global Case Studies [report](#). New: [Working for Women Strategy overview | Working for Women \(genderequality.gov.au\)](#). Also: Making Sense of AI Benefits: A Mixed-method [Study](#) in Canadian Public Administration

This is an account of the [failures of Big IT to deliver government services](#) in the UK & across the globe. Op-ed on why Big IT fails & how better services can be built.

[Australian context](#): Once upon a bureaucrat: exploring the role of stories in government.

At least 150 Australian Tax Office officials have been implicated in the [TikTok tax fraud](#) where tens of thousands of Australians learned how to game collecting GST. Related - [here](#).

A possible [design](#) for an Australian Whistleblower Protection Authority.

TAKE A LOOK INSIDE

[Public sector](#)

[Agriculture](#)

[Defence+](#)

[Economy](#)

[Environment \(incl climate\)](#)

[Foresight](#)

[Health](#)

[Science and Technology \(incl AI\)](#)

[Society](#)

[Trust](#)

[Resources](#)

Please feel free to send items for the next newsletter to Kate - kate.delaney@jrca.net.au

THANKS TO Dr. Stuart Pearson and Brett Pepler and Alex Roberts

Next Issue: March - April 2024

Australian Public Service commissioner Gordon de Brouwer has laid out a [vision for a public service](#) that takes ethics as seriously as efficiency.

APS: [Integrity Good Practice Guide \(apo.org.au\)](#). Also: [Community perceptions of corruption by public officials](#). Power with purpose: Final [report](#) of the [UK] Commission on the Centre of Government. Article: [Mission Economy: Rethinking the role of the state \(innovationaus.com\)](#). Action: [Reducing friction in public services: Three lessons learned from the first International Sludge Academy - Observatory of Public Sector Innovation \(oecd-opsi.org\)](#) and [Expectations](#): 'It's delusional to think everyone will always be better off under political policy change. We might now be ready to have that conversation.'

The Australian Signals Directorate's (ASD's) [Blueprint for Secure Cloud \(the Blueprint\)](#) is an online tool to support the design, configuration and deployment of collaborative and secure cloud and hybrid workspaces, with a current focus on Microsoft 365.

New [research](#) doubt on the assumption that electoral returns would be substantial when funds are directed to marginal electorates.



A new [report](#) by Nesta UK and Public Digital HQ makes the case for moving from a government of projects and programmes to one of services and missions.

Podcast: [Public Sector Future Podcast | Episode 62: Transforming Public Sector Services with Generative AI](#)

[Article](#): 'Enshittification' is coming for absolutely everything. 'Enshittification' is Doctorow's term for the process where a platform first sets advantageous T&Cs for users only to reverse them later - in short, platform decay. (The American Dialect Society made it its [Word of the Year](#) for 2023.)

Agriculture

Increasing levels of carbon dioxide in the atmosphere will render some major crops less nutritious and leave hundreds of millions of people protein and zinc deficient over the next three decades, [article](#).

Rural lobby groups and farmers have [ramped up their opposition to a project that aims to store carbon dioxide](#) in Australia's biggest underground freshwater reservoir, the Great Artesian Basin.

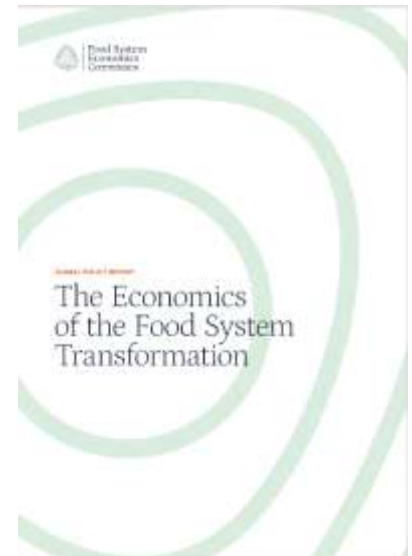
Experts from the [Food System Economics Commission](#) (FSEC) unveiled a new economic model that maps the impacts of two possible futures for the global food system. [FSEC-Executive Summary-Global Policy Report.pdf](#) ([foodsystemeconomics.org](#))

Researchers from the University of Michigan looked at 73 urban agriculture sites in France, Germany, Poland, the UK and the US and found the [community pea-patches had a carbon footprint about 10 times higher than conventional agriculture](#), per serving of food. Individual gardens and urban farms were not as bad, but overall urban agriculture generated six times as much carbon as traditional farms. The source of most of that carbon was infrastructure— such as raised beds, compost sheds, and landscaping.

Getting plants to grow longer, deeper roots lessen vulnerability to drought, massive nitrogen pollution and greenhouse gas emissions. In [Cell Reports](#) one research team thinks they have hit on an especially promising way to achieve this goal (roots) by tweaking the behaviour of a particular plant hormone. An overview of [how urban soil contributes to our living environment and can affect public health](#).

The [Iceland Ocean Cluster](#), a collection of marine-focused startups operating out of Reykjavik, aims to create products out of previously wasted parts of Atlantic cod (i.e. no waste model.)

How to Blend Worldviews for the [Future of Agriculture & Climate](#) (see image this section).



In a new study, scientists from the Royal Botanic Gardens, Kew have, for the first time, [predicted the extinction risk of all 328,565 known species of flowering plants](#). They estimate 45.1% of angiosperm species are potentially threatened with a lower bound of 44.5% and upper bound of 45.7%.

'The use of the word 'should', rather than 'must', denotes a non-regulatory standard which is clearly not mandatory.' On a decision about water use in the NT. [NT Supreme Court dismisses legal challenge over massive groundwater licence at Singleton Station - ABC News](#) Also, the Australian red meat industry says it [doesn't need to meet its self-imposed net zero target](#). Related - [Australian red meat industry's net zero target based on land-clearing data that is 'not reliable.'](#)

[Pressure is ramping up on supermarkets](#) (strong profits) e.g. Woolworths' CEO resigning as the government continues to cast its eye over the grocery industry. Unintended consequence?: [Ozempic Is Making People Buy Less Food, Walmart Says - Bloomberg](#). US: '... cancer-related diseases & deaths are climbing as [contamination from common agricultural chemicals increases](#) in key farm states ... birth defects & paediatric cancers in areas where groundwater is contaminated with nitrates & atrazine, a weed killer'.

[Read](#): The era of the deepfake campaign has already begun. Also, 'We don't yet know the [full impact of deepfakes](#) on misinforming electorates. It may be the narrative that most undermines election integrity.'

A [newsletter](#) explores how materials – from apple waste to artificial spider silk – that are already on the market, offering a glimpse of a plastic-free future for our textiles.

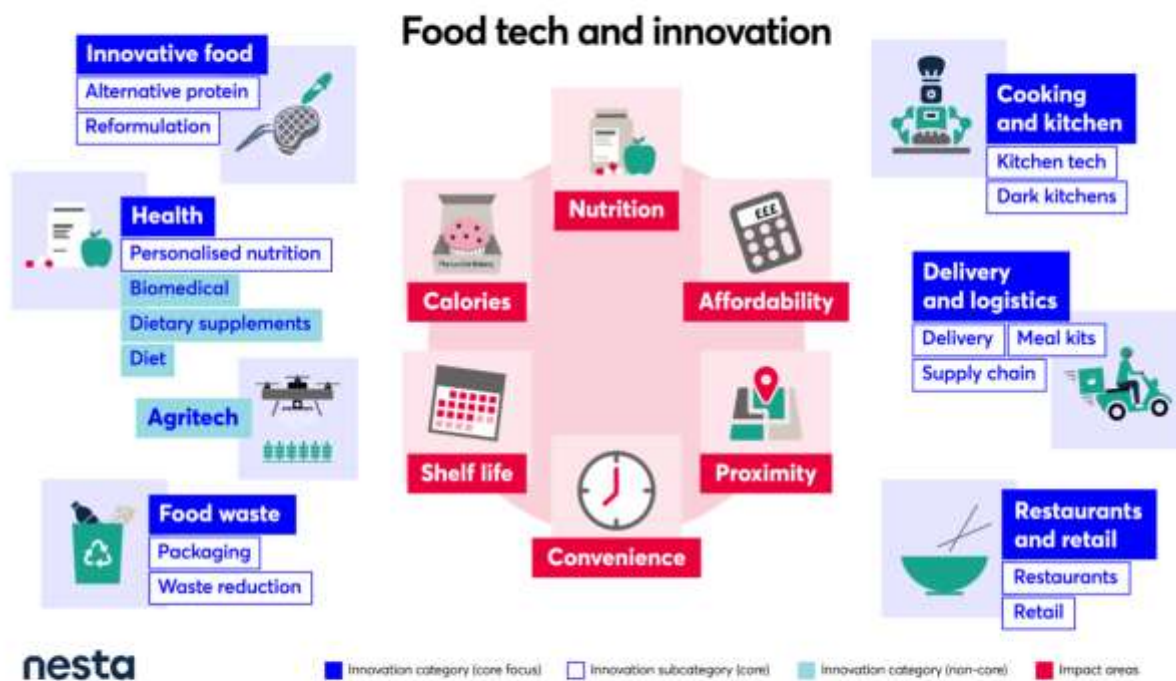
[Paper](#): Enabling transition thinking on complex issues (wicked problems): A framework for future circular economic transitions of plastic management in the Norwegian fisheries and aquaculture sectors.

Think tank view: 'The next government should start the arduous process of showing the British public that the institutions on which we all rely can be trusted. We set out some quick wins, structural changes and legislative options for whichever party wins the election.' [Rebuilding trust in public life](#)

[Provocation](#): ... is the future of food headed in the right direction? The food industry's focus to date has been on commercial success and sustainability - but should we be directing food innovation towards improving our health?

Figure 1. Food technology and innovation landscape

Main innovation categories and subcategories



We used this typology to organise the various data gathered in the project, ranging from venture capital and research funding to patents and news articles (the non-core innovation areas were examined to a more limited extent). Alongside funding and discourse trends, throughout the report we have also considered the potential impact of these trends on health, obesity and food environments via aspects such as nutrition and affordability, shown in red.

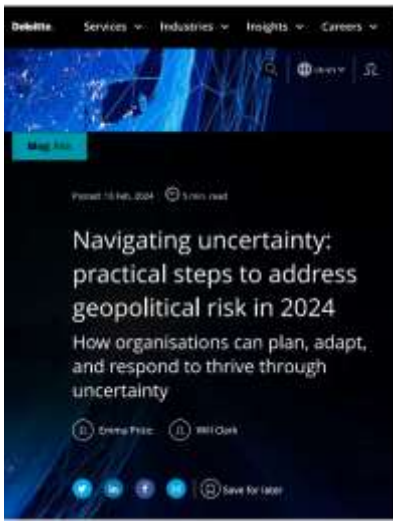
Defence+ Defence, National Security, Emergency Management, Geopolitics

Canberra should [commit to more rigorous national security decision making procedures](#) according to this 2022 opinion piece and this 2024 [column](#). Defence contractors and universities have sounded the [alarm](#) on key AUKUS legislation: new controls on military technology will hamper their ability to sell products to, or collaborate with, researchers outside the US and UK. [Paper](#): Towards AUKUS Collaboration on Responsible Military Artificial Intelligence - Co-Design and Co-Development of AI Among the United States, the UK and Australia.

The Institute for Economics & Peace's [Global Peace Index 2023](#). New Zealand currently sits at No4 on the list but was at No2 in the 2022 rankings. It is the safest country in the Asia-Pacific region, and this year's data showed improvements, particularly in terms of violent demonstrations and incarceration rates. Killer robot swarms are about to become the [future of war](#), with the US military piloting 'collaborative combat aircraft.'

PEW [research](#): Representative democracy remains popular, but people around the world are critical of how it's working. A 'macro-level analysis of 166 elections [in Western democracies) since 1980 finds that austerity measures increase both electoral abstention and votes for non-mainstream parties, thereby [boosting party system polarization](#).'

This opinion piece suggests that to [make democratic innovations 'irreversible'](#) you must go beyond the individual champions that might not last a new electoral cycle (South Australia case.) Related paper: [Debate and Decide: Innovative Participatory Governance in South Australia 2010-2018 - Ryan - 2023 - Australian Journal of Politics & History](#)



Prime Minister Anthony Albanese and others have been [referred to the International Criminal Court \(ICC\)](#) for investigation into whether they have aided or supported Israel's actions in Gaza. It is unlikely the Australian referrals will go any further for legal and practical reasons. It does raise awareness.

As the US military begins integrating AI technology, simulated wargames show how chatbots behave unpredictably and [risk nuclear escalation](#). Apparently, [open-source intelligence](#) may not have the same cachet as undercover work, but it's become a new priority for the US intelligence agencies. Europe seems to be considering a future in which the [American nuclear umbrella no longer exists](#). If the United States were to abandon its protection of Europe, [the German arsenal of weapons](#) would barely be enough to defend the country. Rand has released a [paper](#) Beyond the eye of the storm - subtitle is 'Mapping Out a Comprehensive Research Agenda for the National Security Implications of Climate Change.'

For the first time a group strike by naval [drones guided by a space satellite destroyed a warship](#) that was sailing on the high seas in full combat readiness.

Podcast: In Russia, some myths are truer than facts. Or how needing to bend future reality to fiction of the past led to invasion of Ukraine.

Read: The [Operational Risks of AI in Large-Scale Biological Attacks](#)

Read: National resilience: lessons for Australian policy from international experience.

Visualise: Visualise the flows of trade around the world with McKinsey Global Institute interactive tool.

[Global Diplomacy Index](#) discussion of findings [here](#). China has the most expansive diplomatic network in the world, closely followed by the United States.

To note: Alexei Navalny, the leader of Russia's opposition movement, died in a remote Arctic prison. Info: Former PM Scott Morrison made his [final address to the parliament](#),

Economy

China is now the [world's sole manufacturing superpower](#) (OECD data used) Its production exceeds that of the nine next largest manufacturers combined. This column provides an eight-chart portrait of China's journey to superpower status and the asymmetric impact that its dominance has had on global supply chains. Also, China has achieved stunning growth in its [installed renewable capacity](#) over the last two decades, far outpacing the rest of the world. But to end its continued dependence on fossil fuels, it must now move ahead with planned reforms to its national electricity system. "More [money is leaving China for the first time in 40 years](#) than is coming in from American, Japanese, European, Korean investors," says U.S. Ambassador to China Nicholas Burns.

OECD says [profits have been driving inflation](#) in Australia. The Australian government [collects more money from HECS](#) [the Higher Education Contribution Scheme] than it does from the Petroleum Resource Rent Tax [PRRT]. [Related](#).

Australians are being [overcharged by supermarkets, power and transport companies](#), according to a report calling for government action to protect consumers. The Fels inquiry looked in detail at [price gouging](#) across a range of industries, including banks, insurance companies, supermarkets, and energy providers, following a period of the highest inflation in 30 years and the biggest falls in real wages on record. Price gouging is when 'businesses take advantage of their market power and set prices well above their costs of production.' The ATO is planning to expand a [controversial scheme involving the recouping of decades-old debts](#), with more than 1.5m people to be targeted, including older and low income Australians.



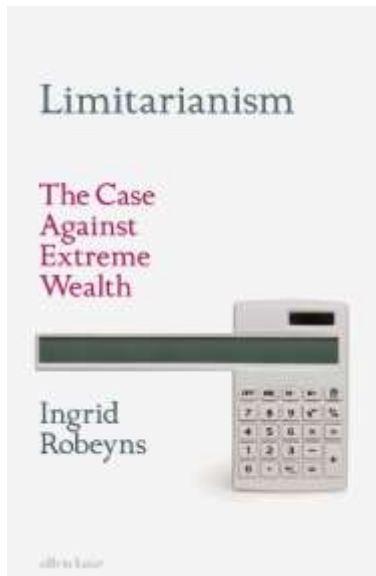
[Article](#) on shipping costs and inflation. [Paper](#) from a UK think tank argues that much modern inflation is driven by fossil fuels ('fossilflation') & climate change ('climateflation') & that conventional tools of monetary policy are counterproductive in that circumstance. The uninsurable world: [here](#).

KPMG data shows that [Australian companies are facing the most distress globally](#). Life sciences and technology sectors appear the most precarious.

In Australia, concessions for superannuation cost the federal budget almost \$50bn a year while rental deductions, much of them for negative gearing, have jumped by more than half in three years, the annual [Treasury summary of tax expenditures](#) showed. [Negative gearing in 20 seconds](#). The latest ranking of [revenue foregone](#). How to tweak negative gearing - [article](#). '[Sydney could become the city of no grandchildren](#)'. That is how bad the housing crisis is - the words of the NSW Productivity Commission. Read: [The capital gains discount and negative gearing benefit the rich and destroy housing affordability](#) Listen: [Max Chandler-Mather on why house prices need to go down](#). [Perspective](#): Tax academics have said the use of discretionary trusts in Australia is at 'egregious' levels, while practitioners have defended the structures and warned against 'fearmongering.'

Five private schools spent more on lavish new facilities in 2021 than governments spent on over half the public schools in the nation, according to a new [report](#) which reveals the full extent of the \$30 billion divide in Australian schools.

Economists at the Treasury Department and Congress's Joint Committee on Taxation, respectively, argued in a [paper](#) that the massive rise in income inequality since the 1960s is mostly a statistical illusion based on a series of methodological errors. More about the [debate](#) that has arisen since the paper's publication.



The latest Xero Small Business Index reveals a slowdown in sales and wage growth among Australia's small businesses after they fared well throughout 2023 amidst challenging macroeconomic conditions. (via Inside Small Business newsbrief@insidesmallbusiness.com.au)

Principals of a new think tank [[The Superpower Institute](#)] say Australia's national debate about what a low-carbon future has been too focused on what Australia will lose from the energy transition, as the world's largest exporter of gas and coal taken together. They [say](#) we're forgetting to think of the huge advantages Australia will enjoy in a low-emissions future, given we have the world's best combination of solar and wind energy resources and some of the world's largest resources of the critical minerals needed for the energy transition. Related: Ross Garnaut and Rod Sims have [proposed a \\$100 billion-a-year fossil fuel tax](#). Ten of Australia's top companies lack clear plans to stop using or supporting fossil fuels, [report](#) (from a new Australia-based advocacy group, [Climate Integrity](#).) Australia's biggest smelter to launch massive wind and solar tender, says [nuclear too costly](#). The [Fossil Fuel Atlas](#) is a data-driven platform that visualizes the expansion of fossil fuel infrastructure and its potential impacts on areas of ecological and cultural importance across the globe.

Oil and gas company Empire Energy has [received \\$28.8 million](#) over the past three years under the Australian government's [Research and Development Tax Incentive Scheme](#). Rinehart-backed Arafura gets [\\$840m in taxpayer aid](#) for NT critical minerals project.

Facebook owner Meta will [not renew its deals with Australian news publishers](#). Also: [How will Meta's refusal to pay for news affect Australian journalism - and our democracy?](#)

Mineral requirements for [clean energy transitions](#). A new method for '[recovering high-purity gold from discarded electronics](#)' is paying back US\$50 for every dollar spent, according to Swiss researchers - who found their all-important gold-filtering substance in cheesemaking, of all places.' Sea bed mining: The Cook islands 'sits on a national reserve of [cobalt contained in nodules](#) within its exclusive economic zone as three times the combined reserves of cobalt on land'. [Carbon capture is not a solution for the energy transition](#) and political leaders need to provide real, non-greenwashed, commitments to encourage investment, Andrew Forrest, executive chair of Fortescue Metals, said. [Here](#) too.

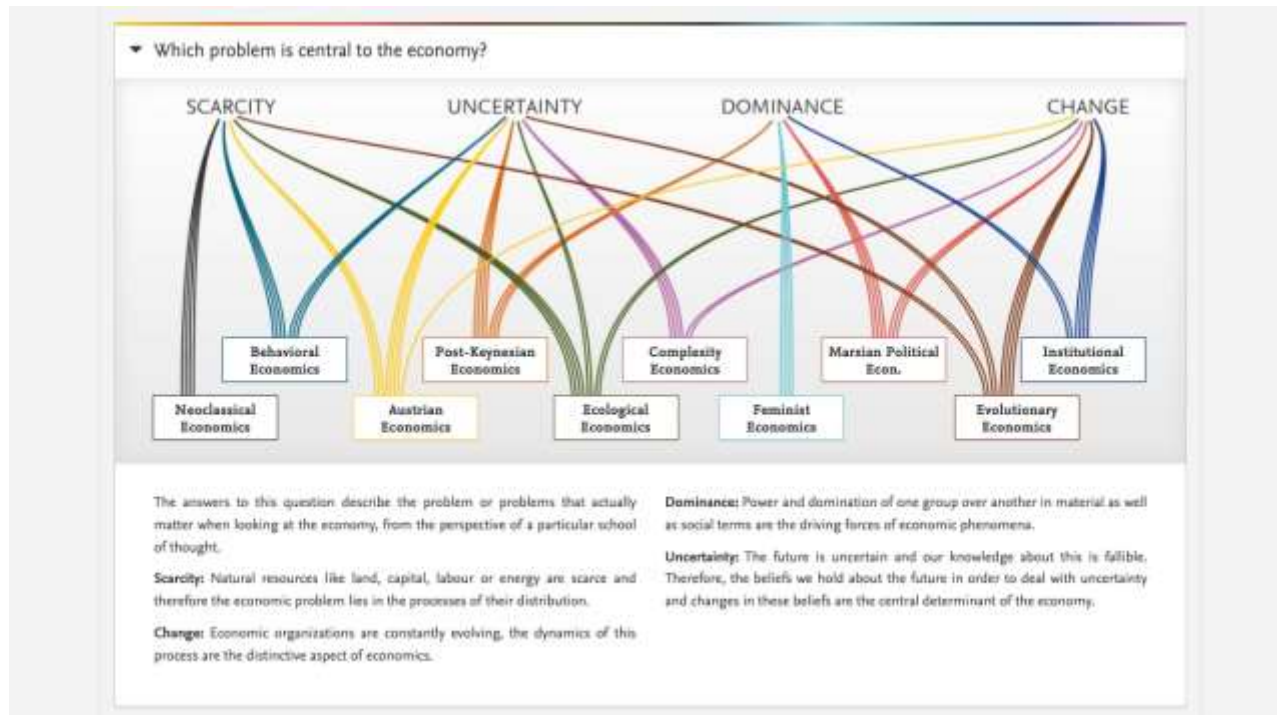
The motivation benefits of flexibility outweigh the isolation risks from 110 studies, 45k people: more time [working remotely](#) predicts slightly higher satisfaction & performance ratings—without relationship costs.

Read: [Australia's tax system is worse than it was 15 years ago, and young people are paying the price, Ken Henry says - ABC News](#) Also: An [investigation](#) into the deaths of homeless Australians - and the failure of housing policy.

Read: [Milton Friedman's doctrine](#) loses its social licence. And, McKinsey's [The State of Organizations 2023: Ten shifts transforming organizations](#).

[Read](#): Spark & Sustain: How all the world's school systems can improve learning at scale

ICYMI: Microsoft released a 2023 [Future of Work report](#) and it's about AI. Instead of 'How will AI affect work?' the question should be 'How do we want AI to affect work?' LinkedIn found that 55% of women will experience disruption or changes in their jobs because of generative AI ([discussion](#).) According to the [report](#), women are overrepresented in jobs that can be partially done by machines, such as administrative positions.



Environment

A research team created an Industrial Modernity Index that challenges conventional wisdom i.e. suggesting that a country's ability to transform itself is not solely determined by wealth or environmental impact. Read: Pakher A.K. et al. [Where is the deep sustainability turn most likely to emerge? An Industrial Modernity Index](#). Technological Forecasting & Social Change 2024.

A [study](#) shows how [prolonged drought](#) acts as a catalyst, influencing not only the severity of wildfires but also paving the way for invasive species to take centre stage. There are new concerns about short-term exposure to air pollution, including bushfire smoke, dust and other pollutants, even when we inhale it for a few hours. [A new report](#) has found hundreds of Aussies die from incidental exposure every year. It is the first-time researchers have examined the impacts of short-lived episodes of air pollution as opposed to the effects of living in urban areas with persistently elevated levels - particularly from transport. [\[Note\]](#) The Canadian Federal Government will no longer be funding 'large new road projects' according to Canada's environment minister. Rather, funding will favour public transit and active transport (walking and biking) infrastructure.

[Biodiversity](#): Mesopredator release among invasive predators: Controlling red foxes can increase feral cat density and alter their behaviour. Also: New ecosystems, unprecedented climates: [more Australian species than ever are struggling to survive](#).

Environmental DNA is having a moment - [here](#).

[Article](#): The planetary commons: A new paradigm for safeguarding Earth-regulating systems in the Anthropocene

International Union for Conservation of Nature (IUCN) [issues brief](#): Deep sea mining could severely harm marine biodiversity and ecosystems, but the knowledge and means to implement protections is sparse.

The [final PC report](#) into the implementation of the Murray-Darling Basin Plan is out now. The report finds progress has been made but more needs to be done to ensure the objectives and outcomes of the plan are fully realised.

Climate

AI is fast becoming indispensable piece of policy infrastructure. [Example](#): 'We gathered the climate laws, policies, strategies, and action plans that every government has on its books. There are 470,000 pages in there—or 4.5 million paragraphs.' The World Economic Forum's Centre for Nature and Climate launched [Earth Decides](#), a community of 35 world-class experts and influencers looking to cultivate informed optimism.

The (UN) [Global Resource Outlook 2024](#) finds it is the extraction and processing of material resources that account for over 55 per cent of greenhouse gas emissions (GHG). All environmental impacts are on the rise. [Bottom trawling](#) releases around 340 million tonnes of carbon dioxide into the atmosphere each year, according to the first study to estimate these emissions. That is 1 per cent of all global CO2 emissions, a major contribution that has been overlooked.

A new review paper tracks the evolution of the [climate justice issue](#) over time and proposes a new research agenda. The Australia Institute's 2023 Climate of the Nation showed that there is overwhelming support among Labor, Coalition, and Greens voters for a 'Polluter Pays' tax in Australia [where businesses pay for the damage they do](#).

In 2021, Milieudefensie (Friends of the Earth - Netherlands) won the climate case against Shell. The legal strategy and all legal documents filed by Milieudefensie in the climate case against Shell are now easily accessible and easy to find in this [tool](#).

A new [paper](#): 'Physics-based early warning signal shows that AMOC is on tipping course' is a major advance in AMOC stability science. The study follows one by Danish researchers last July, likewise looking for early warning signals for approaching an AMOC tipping point ([discussed here](#)) using different data and methods. Related [article](#). A [collapse](#) of the heat-transporting circulation is a going-out-of-business scenario for European agriculture.

250 researchers drew more than 59,000 participants from sixty-three countries to compare climate change messages in a head-to-head test. 250 researchers drew more than 59,000 participants from sixty-three countries to compare climate change messages in a head-to-head test. Source: Vlasceanu M. *et al.* '[Addressing climate change with behavioural science: A global intervention tournament in 63 countries](#).' Science Advances 2024. Researchers tried out alternate ways of framing the need for climate-friendly investment to a group of veteran financial professionals. Only optimism moved the needle. [Here](#)

NESTA (UK) analysed four emerging trends and found a [growing scepticism towards how the media reports](#) on climate change.

A [limitation of projective climate modelling](#) for impacts & policy is changes in climate are not dynamically fed-back in the models. A new pre-print on future of climate modelling recognises this issue. Says it cannot be addressed for ~10 years.

[On the question of geoengineering](#). The author says it is worth doing more research to have it as 'a break-glass-in-case-of-emergency option for halting warming, but large-scale deployments today are a bad idea.' They try to take a balanced look at the issue i.e. 'the potential pros and cons of considering geoengineering as part of our toolkit to reduce the impacts of climate change, as well as the potential unintended consequences it might have both to the climate and to our ability to effectively address climate change.'

A new [open letter](#) calls for further actions to cut emissions of short-lived pollutants such as soot, [methane](#) and refrigerant gases.

We are [not putting our climate dollars in the right places](#), so that we have the best chance to stop climate change.

This [research](#) examined the effect of climate change on Russia and the country's role in addressing global environmental challenges. [Related](#).

A California man has become the first person in the United States to be charged with [smuggling greenhouse gases](#) into the USA. A [defamation case](#) awards \$1 million to distinguished [climate] professor Michael E Mann.

Note: The first ever [European Climate Risk Assessment \(EUCRA\)](#) helps identify policy priorities for climate change adaptation and for climate-sensitive sectors.

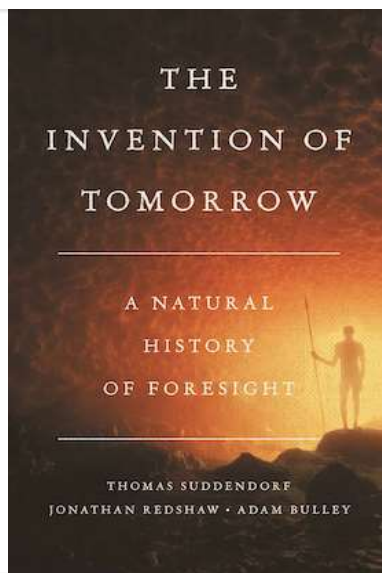
New website: [WeatherShift Home](#)

Study: 'We found that trees in warmer, drier climates are essentially coughing instead of breathing.' 'They are sending CO2 right back into the atmosphere far more than trees in cooler, wetter conditions.' [Related](#). In past 30y around 11,000 sq miles of [Greenland's ice sheet](#) and glaciers have melted. Area of land hosting vegetation has increased by 33,774 sq miles over period. Temperatures up 3C are supporting more methane-generating wetlands.

Futures

A way to make scenarios hit home. [Drabble](#) is a fun word for a short work of fiction that is precisely one hundred words long. The word comes from a joke in Monty Python's [Big Red Book](#) – the drabble was a game where players competed to be the first to write a novel, hence the necessarily short length. [Examples](#).

The [Open Foresight Hub](#) is a new wiki for organising and sharing foresight knowledge.



Counterfactuals: What if major elections, wars, and events had turned out differently? [Maps that plot alternative worlds](#) to our own.

A camera that will be taking a single picture for 1000 years - [here](#).

Must read: 2023 article on [Types of scenario planning and their effectiveness: A review of reviews - ScienceDirect](#). Read [Futures Thinking: The Power Skill of 2024 – Lindsay Angelo](#)

Toolkit: [scenario-planning-toolkit-editable-2023.pdf \(bridgespan.org\)](#)

[Article](#) (see CLA diagram in article) Feminist Visions of the Future of Women's Work: A Systemic Exploration of the Past, Present and Future of Women at Work in Canada.

Paper (2020): [Horizon Scanning in Foresight – Why Horizon Scanning is only a part of the game \(wiley.com\)](#) -

Website: [Global pulse](#)

Futures course [payment \$]: [Si Network \(systemsinnovation.network\)](#)

[Feedle](#): Another search portal. (I used it to ask about 'foresight' and 'scenarios'.) The latter feed was more interesting. It might serve as a basis for a newsletter.

Health

The first-ever U.N. global chief heat officer, [explains](#) why extreme heat is an urban health crisis and what cities must do to protect the most vulnerable. Longer [article](#).

The reason the [pandemic is uniquely dangerous](#) is because of its pace i.e. the changes it is causing in society (highly stressed healthcare systems, workforce issues etc) and the long-term effects of infection are accumulating slowly enough to be normalised (e.g. climate change). A new [study](#) indicates that many people will conceal illnesses to go to work, putting others at risk.

France passed a law targeting [health-threatening psychological manipulation and influence](#). (This canvasses misinformation about this law.) France has become the first country in the world to explicitly [include the right to abortion](#) in its constitution. Canada plans to [allow people suffering from mental illness to be eligible for medically assisted death](#) in 2027 (delayed from 2024.) And will the 'system' see the benefits of having more people die and start encouraging them to do it more? [Doctor assisted deaths could reduce health care spending: Report](#)



An international team of researchers recently used AI to uncover a new form of aggressive prostate cancer that could revolutionise how the disease is diagnosed and treated in the future. [Source](#). In a world first, researchers have printed multi-layered, living skin directly onto significant injuries in rats for [scar-free skin repair](#). They are 3D-printing skin (and hair) right into damaged areas (of rats). A [new](#) approach to producing artificial tissue has been developed: Cells are grown in microstructures created in a 3D printer. An inexpensive, cavity-fighting liquid called silver diamine fluoride works as well as dental sealants to keep tooth decay at bay in a school cavity prevention and treatment program, according to a new [study](#).

[New antibiotics?](#) Discovery of a structural class of antibiotics with explainable deep learning. [Researchers](#) have uncovered a

key link between the spread of antibiotic resistance genes and the evolution of resistance to new drugs in certain pathogens. Wild fish at one of Tassal's Tasmanian [salmon farms contained antibiotic residues](#) at almost five times the allowed level. There were low-level antibiotic traces in wild fish caught more than seven kilometres from another.

[Intersections with colourful crosswalks](#) reduce crashes involving cyclists and pedestrians by 50%, and now the U.S. DOT is finally letting cities get creative. 'One in 10 premature births in the United States have been linked to pregnant women being exposed to chemicals in extremely common plastic products, [study](#). Pre-[print](#): The risk of new-onset dementia after Covid in older adults (age 60+) from a systematic review of 11 studies vs controls is ~60% increased; after severe Covid, a 17-fold increased risk; shows up at 6 months.

Science & Technology (includes AI)

The Digital 2024 report underscores the growing importance of digital in Australia. TikTok has the highest average time per Android user of any social app. [here](#), [here](#). Drawing from the Post-Office-Horizon experience, article discusses the [failures of Big IT to deliver government services](#) in the UK & across the globe.

Sam Altman, active in the development of human-level artificial intelligence, has another great ambition: raising trillions of dollars to [reshape the global semiconductor industry](#). [Hologram](#) lecturers thrill students at trailblazing UK university. Google's search results are getting worse due to spam sites, according to a [recent pre-print study](#) by German researchers. Towards the end of last year QUT researchers paid X \$7,800 from a grant fund to analyse one million tweets surrounding the first Republican primary debate. They found the bot problem was [worse than ever](#).

A German-American research team [mapped the ownership of network infrastructures in democratic and authoritarian states worldwide](#) to show how autocrats control the internet via state-owned service providers.

Facebook Marketplace dominates [reports of online buying scams](#) and the problem appears to be getting worse.

How does new technology affect workers and their earnings? Drawing on data from 1981 to 2016, a new [study](#) finds that when novel technology can perform a task in place of a worker, all affected workers suffer. But when such technology complements workers performing a task, the effects are more variable: the most experienced and highly paid workers suffer, while new hires benefit. The researchers also studied the effects of AI and found that it was most likely to hurt the most experienced workers.

In early 2023, engineering biology was identified by the UK Government as [one of five critical technologies](#). Engineering biology is the application of engineering principles to biological systems. As the natural successor to biotechnology, engineering biology enables the development of new or enhanced biological entities and products, like cells or proteins. It offers innovative solutions across the economy, and by being a low carbon technology, it presents opportunities to solve societal challenges faced in food, health, energy, materials, and chemicals. New report - here: [Sciencewise-Engineering-biology-Health.pdf](#)

[Article](#): Trends in U.S. public confidence in science and opportunities for progress

Note: Gartner predicts traffic to search engines will drop by [25% by 2026](#).

[Idea](#): Some scientists say it is time for universities and academic publishers to reform how they address flawed research. [We can detect flaws in research easier, so what?]

Artificial Intelligence

[Quote about AI](#) (and the fact that even people who make it are not sure how it works): 'I'm very interested in guarantees,' ... 'If you can do amazing things but you can't really control it, then it's not so amazing.' [Also](#) ... 'putting unchecked development in the hands of (primarily) male tech executives who espouse a particular Silicon Valley ethos oriented toward profit and dominance above all else, will only intensify threats to our social systems and vulnerable communities. It will erode information systems, produce algorithmic bias, introduce gender and racial discrimination, facilitate sexual abuse, increase labour exploitation, allow for the exploitation of creative works, and create new risks of violence, death, and deprivation to civilians in war from autonomous AI decision-making.' [Also](#): 'I suspect many AI projects will end up in ruin because its developers are just muddling around getting their dopamine hits from the deluge of micro-events about AI. They focus only on the trees but cannot see the forest!' And article: [The Limits of Data](#). Responses to a series of questions to GPT4 on the timeline of [future breakthrough technologies](#).

Researchers coax people to envision greener cities using AI images of familiar streets. By cleverly combining advertising techniques with artificial intelligence, the [team increased support for a sustainable transportation](#) bill – particularly among republicans.

Author suggests we [look at AI technologies in three categories](#): 'Looms' – these generally can replace a person, as a fully-automated loom can replace a weaver. Take, for example, the way that AI can replace a person troubleshooting your customer support problem, approving an expense, or driving a car. 'Slide rules' – these assist a person, as a slide rule makes a calculation faster (again, for those old enough to remember). Software tools that write a first draft of code can speed a developer's work, and grammar checkers can improve a person's writing. (Some of these slide rules, like self-checkout in a store, actually make the experience worse for the customer, a so-called 'so-so technology'.) 'Cranes' – these allow a person to do something they otherwise would be completely unable to do themselves. For example, translating from one language into another, indexing millions of web pages and predicting where you'd most like to click, discovering new molecules for medicine, or predicting the quality of applicants responding to a job posting. He says: 'If we want AI to help people at work, consider making more cranes, and fewer looms.'

Amazon produced a [report](#) with futurist Tracey Follows to predict (and promote) AI-related careers that could be on the horizon. Together, they determined that the future would include job titles such as precision farming analyst, virtual tourism producer, artisanal restoration specialist, cosmic reality engineer, and AI nurse.

[A poster's guide to] [Who's selling your data to train AI](#)? Canada-based AI detection startup, Originality AI, found that nearly all mainstream news sites, including *The New York Times* and *The Guardian*, [block AI web crawlers](#), with OpenAI's GPTBot being the most commonly blocked. In contrast, top right-wing news outlets, such as Fox News, do not block any major AI scraping bots, raising concerns about how this could influence training models' biases. And [Datasets for Large Language Models: A Comprehensive Survey](#). A massive Microsoft data center in Goodyear, Arizona is guzzling the desert town's water supply to support its cloud computing and AI efforts, [The Atlantic](#) reports. [Related](#) AI energy consumption story. Another [related](#) story (adding what governments are starting to do about it.) Researchers have developed a computer ['worm' that can spread from one computer to another using generative AI](#), a warning sign that the tech could be used to develop dangerous malware in the near future – if it hasn't already.

[The \[UK\] Centre for Long-Term Resilience](#) focuses on two areas of risk where effective governance today could substantially mitigate both current and future threats: Artificial intelligence (AI), including risks arising from unethical uses of AI, from AI systems behaving in unintended ways in high-stakes domains, and from the broader impacts of AI on the economy and society. Biosecurity, including risks arising from naturally occurring pandemics, laboratory leaks, bioweapons and 'dual use' research (advances that can be used for harm as well as good). Australia's digital and data ministers have agreed to a national assurance framework for artificial intelligence that promises a consistent approach to the technology across federal, state and territory governments. A [new procurement panel for AI-enabled](#) research performance data and analytical services will be accessible to all government agencies as a part of the Australian Research Council's reform of its own evaluation programs. A [new nationally representative survey](#) has revealed Australians are deeply concerned about the risks posed by artificial intelligence (AI). They want the government to take stronger action to ensure its safe development and use. This [new poll](#) shows public trust is already eroding less than 18 months into the so-called 'AI revolution' that popped off with OpenAI's release of ChatGPT in November 2022. Despite [Silicon Valley's insistence](#) that AI is trustworthy, recent polling – [article](#) – indicates that people are divided about whether the tech is there to help, and trust is falling.

Minister for Industry and Science Ed Husic has today announced the establishment of a new Artificial Intelligence Expert Group – members [here](#).



Worth a read: [The Dos and Don'ts of Regulating AI](#) explains how researchers wanted to bring the key problems facing AI regulators into clearer focus. The 'optimal solution' the researchers identified represents an ideal balance between AI's potential risks to society (like destabilising democracy through rampant disinformation) and its potential rewards (such as increasing economic productivity). Related - In [four new policy briefs](#), MIT experts look broadly at how to safely deploy artificial intelligence and, more specifically, at how to regulate large language models, label AI-generated content, and pursue 'pro-worker AI. Related - [here](#). Also: A new [report](#) calls for the regulation of the hardware that underpins all AI to help prevent artificial intelligence misuse and disasters. Researchers say that AI chips and datacentres offer the most effective target for scrutiny and AI safety governance. Related post - [here](#). Also: [How to Make AI 'Forget' All the Private Data It Shouldn't Have - HBS Working Knowledge](#).

[McKinsey](#) 'In the next five years, generative AI could fundamentally change financial institutions' risk management by automating, accelerating, and enhancing everything from compliance to climate risk control.'

[Article](#) about how the Hollywood writers addressed the use of generative AI and the role of collective bargaining in times of uncertain AI governance. Quote: 'From a perspective of technology governance, such agreements present a potential resolution to the Collingridge dilemma by amplifying workers' agency over technologies directly impacting them and by establishing an early point of governance rather than a delayed one. Collective agreements exhibit agility, functioning as early-stage interventions during the technology development phase when visibility into potential impacts remains limited or incomplete.' Related [video](#).

Article: [Economic potential of generative AI | McKinsey](#). Article: [How governments are using AI and analytics for proactive fraud risk management \(govinsider.asia\)](#). Lawsuit: Elon Musk filed a [lawsuit](#) against OpenAI and its CEO, Sam Altman, among others, claiming breach of contract. Musk alleges OpenAI has abandoned its original mission to develop AI to benefit humanity in Favor of pursuing profits.

[Note](#): Social media users struggle to identify AI bots during political discourse.

A new [study](#) used Twitter to track US climate denial. Authors identified a coordinated social media network uses periodic events, like cold weather or climate conferences, to sow disbelief and Trump was the strongest influencer in this network.

Society

Political scientists recently coined the phrase '[need for chaos](#).' Have you observed it?

Recent research suggests [a growing gender gap in political leanings](#) around the world. In Gen Z, the youngest voting generation, young women are becoming more progressive than men. [Young Australian women](#), too, are significantly shifting towards the political left – but so are young Australian men, although at a slower rate.

[Social scoring](#) systems: current state and potential future implications. New Dating App Only Accepts Users With [Good Credit Scores](#). Chinese gas stations have deployed facial recognition to [stop people with a low social credit score](#) from refuelling their cars. If your score is below 550, you cannot buy food from vending machines or unmanned grocery stores etc. For the first time under new reporting laws, the gender pay gaps for Australia's companies that employ more than 100 people [were disclosed](#).

Play researcher Mariana Brussoni says kids should be kept '[as safe as necessary](#), not as safe as possible.'

A [study](#) found cars are rewiring our brains to ignore all the bad stuff about driving. The Enhanced Games – an Olympics-style competition where athletes are allowed to take performance-enhancing drugs – recently [announced its seed round](#). For the [first time](#) ever, New Zealand didn't make the top spot for most popular destination for Aussie travellers. Indonesia has overtaken with more than 1.3 million travelling there in 2023.

Match Group, the international conglomerate that owns Tinder, Hinge, OkCupid, and almost every other [popular dating app](#), just inked a major partnership with OpenAI.

Trust

'The more our social connections keep stratifying and fragmenting—[separating experts from nonexperts](#)—the more frail our networks of trust will become ...'



Compared with people at low-trust companies, people at high-trust companies report 74% less stress, 106% more energy at work, 50% higher productivity, 13% fewer sick days, 76% more engagement, 29% more satisfaction with their lives, and 40% less burnout from [The Neuroscience of Trust](#).

The 2023 [Edelman trust barometer](#) says Western societies are becoming increasingly polarised. the US is severely polarised and the UK, France and the Netherlands are in danger of severe polarisation. Canada, Australia, and Ireland are on a path to polarisation. Read related [article](#).

Read: [Minister Shorten's address at the Rebuilding trust and integrity in the Australia Public Service conference. | Department of Social Services Ministers \(dss.gov.au\)](#)

[Article](#): The Three Elements of Trust. 'By understanding the behaviours that underlie trust, leaders are better able to elevate the level of trust that others feel toward them. Here are the three elements. Positive Relationships. Trust is in part based on the extent to which a leader can create positive relationships with other people and groups. Good Judgement/ Expertise. Another factor in whether people

trust a leader is the extent to which a leader is well-informed and knowledgeable. They must understand the technical aspects of the work as well as have a depth of experience. Consistency. The final element of trust is the extent to which leaders walk their talk and do what they say they will do.'

[Note](#): Emergency services remained our highest rated institution in 2023, with the integrity, contribution and competence of emergency workers and volunteers unquestioned by the Australian public.

An editorial in Nature [How can scientists make the most of the public's trust in them?](#)

Resources

Allow yourself to go down rabbit holes.

A rabbit hole is not a distraction. A rabbit hole is your brain trying to tell you to pay attention to something you are curious about...

If you see something, save something.

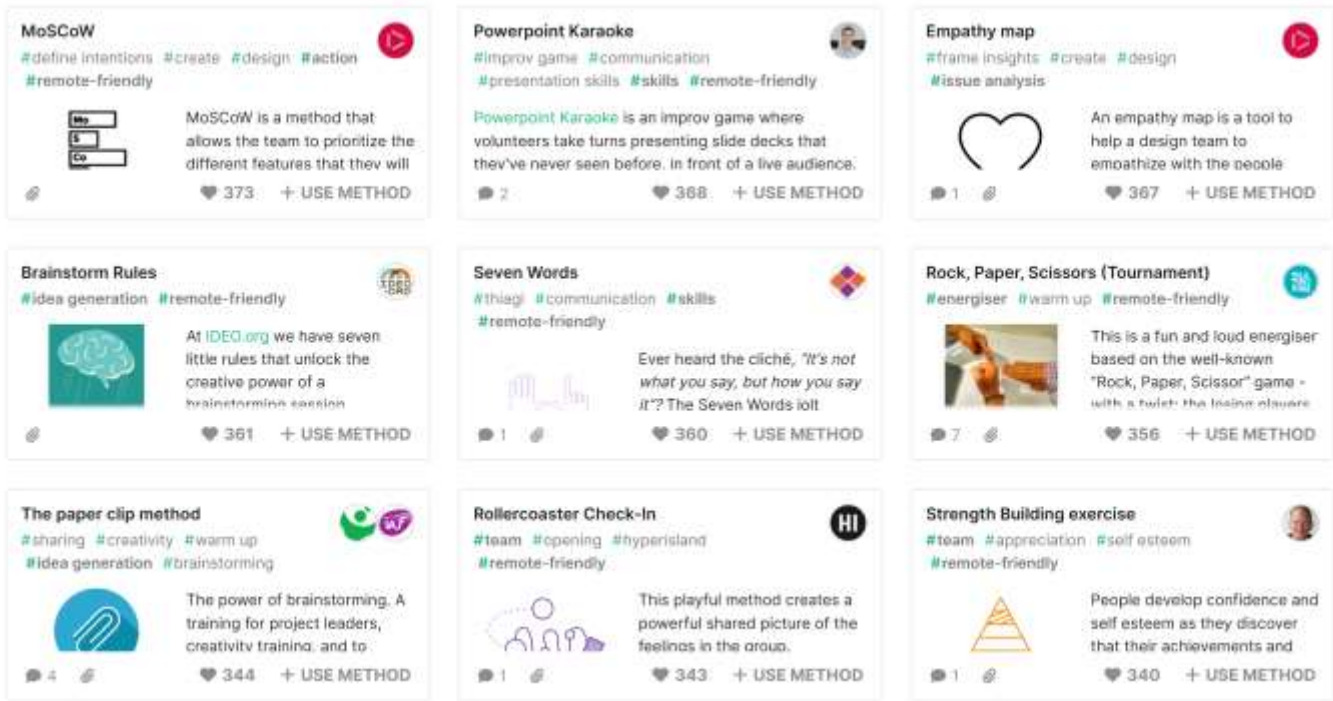
Pay attention to what feels resonant to you. Save breadcrumbs and build a path for yourself to walk down later.

Source: [Are.na](#)

[Free course](#): an introduction to communities of practice in the public service: what they are, why they can be effective and what makes them thrive. The [Curious Learning Engine](#) helps you build your CQ, or Curious Quotient. And [UN Global Pulse | Meet UN Global Pulse, the Secretary-General's Innovation Lab](#).

[My ninety's TV](#): TV simulator showing shows, music videos, ads, and trailers from the 1990's (might be useful for timeline exercise.)

Snazzy: [Library of facilitation techniques](#)



The [Federal Foresight Advocacy Alliance](#) (FFAA) has just been launched to champion the establishment of a U.S. Office of Strategic Foresight. See their website <https://www.faa-us.org/> for an excellent discussion of their mission, models provided by other countries, the proposed structure of such an office, and recommendations. You can sign up for updates at the website and follow FFAA on LinkedIn.

Visit [‘Know Your Research’](#) for tip sheets and explainers to help journalists understand academic research methods; find and recognize high-quality research; investigate scientific misconduct and research errors; and avoid missteps when reporting on new studies and public opinion polls.

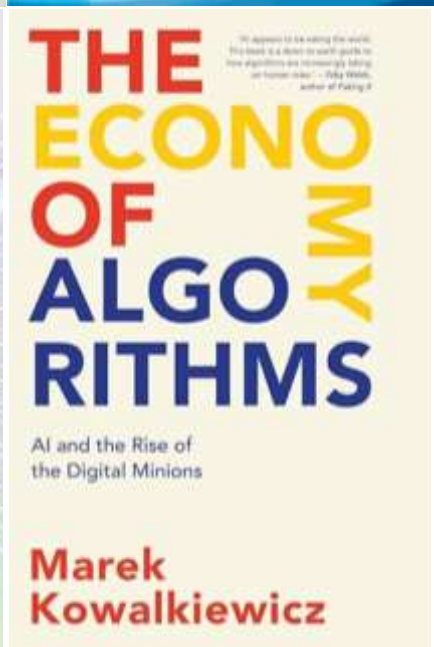
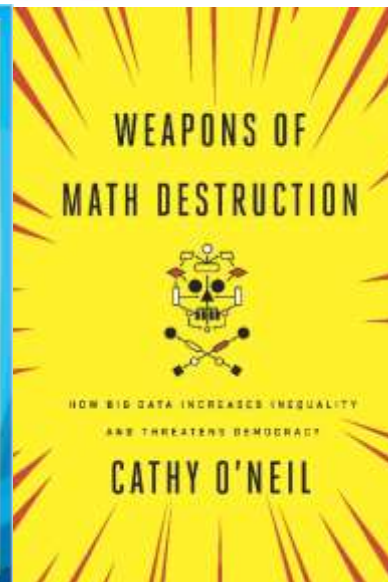
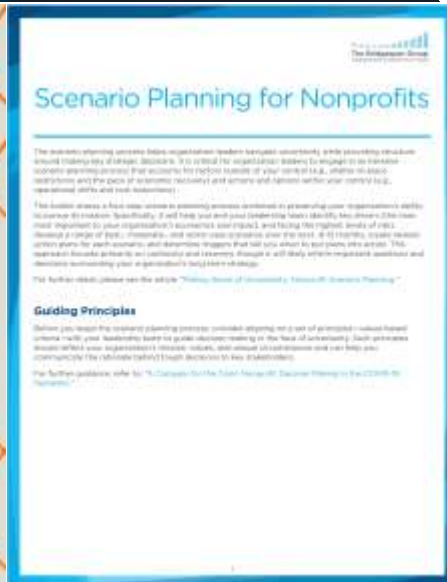
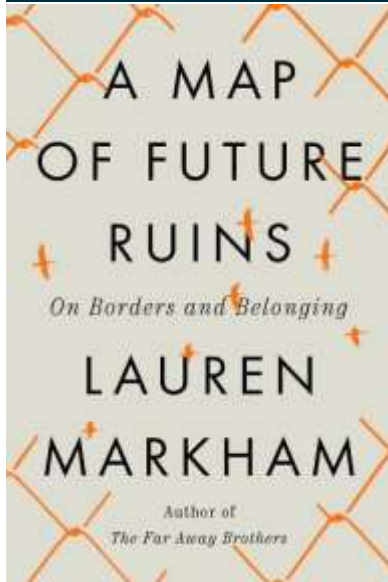
[Perplexity](#) and [Arc Browser](#) generating summaries for search queries, contain a menu of accompanying media, and list the reputable sources where they pulled the information from. [Claude 3](#) (Anthropic) is out. [Intelligence X](#) is a first-of-its-kind archival service and search engine that preserves not only historic versions of web pages but also entire leaked data set. [Hint: read where it searches.] [theHarvester](#) is designed to capture public information that exists outside of an organisation’s owned network.

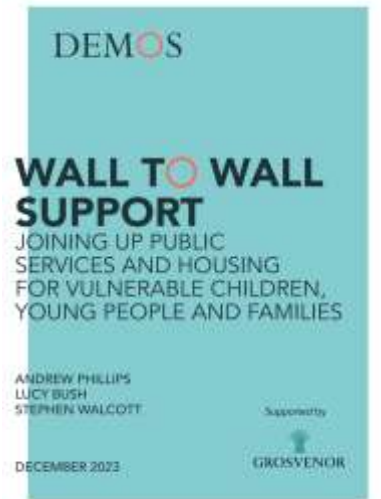
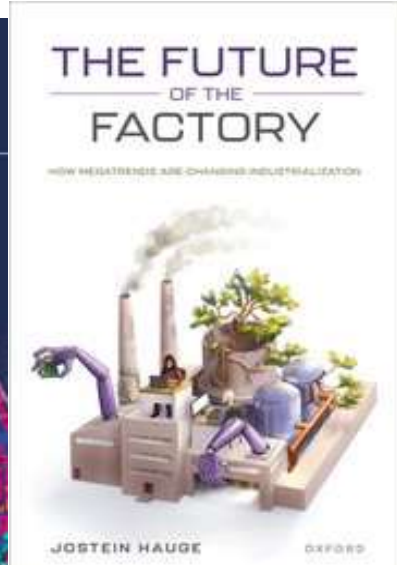
[TinyWow](#) offers PDF, video, image, and other online tools to make your life easier. Hand-drawn illustration library for free use: [Open Peeps, Hand-Drawn Illustration Library](#). What does the internet think. You can find out the percentage of positive, negative, and indifferent connotations to any topic spoken about online. [Whatdoestheinternetthink.net - What does the internet think?](#) Here is a [website](#) that has AI tools you never knew existed. (Free)

Cathy O’Neil on Weapons of Math Destruction: How Big Data Threatens Democracy. ‘Algorithms are opinions embedded in code’ and ‘Big Data processes codify the past. They do not invent the future. Doing that requires moral imagination.’ (See link below.)

A study found that using [two spaces after a period](#) improves reading speed.

Books/Reports:







Policy area	Policy instrument
Macro-level policy	<ul style="list-style-type: none"> • State-owned enterprises • Development banks or other long-term financing • Special economic zones • Fiscal policy • Monetary policy • Infrastructure investment • Price regulation • Antitrust and competition policy
Business support	<ul style="list-style-type: none"> • R&D subsidies and tax breaks • Assistance to small- and medium-sized enterprises • Promotion of incubators and clusters • Public-private partnerships • Promotion of venture capital • Public procurement • Optimizing firm coordination and linkages
Trade policy	<ul style="list-style-type: none"> • Import tariffs and quotas • Export subsidies and support • Incentives and regulation on foreign direct investment • International trade agreements
Research and innovation policy	<ul style="list-style-type: none"> • University research funding • Establishment of research centres and agencies • Intellectual property rights
Education and training policy	<ul style="list-style-type: none"> • Subsidies and tax breaks for labour training • Skills formation and upgrading schemes • International education cooperation

Figure 1.2 Taxonomy of industrial policy instruments

Source: Author, inspiration taken from Naudé (2010) and Peres and Primi (2009).