

FUTURE NEWS

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IN THIS EDITION

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THE REGENERATIVE CITY ACHIEVABLE GOAL OR UTOPIAN MOONSHOT?

by Copenhagen Institute of Futures Studies

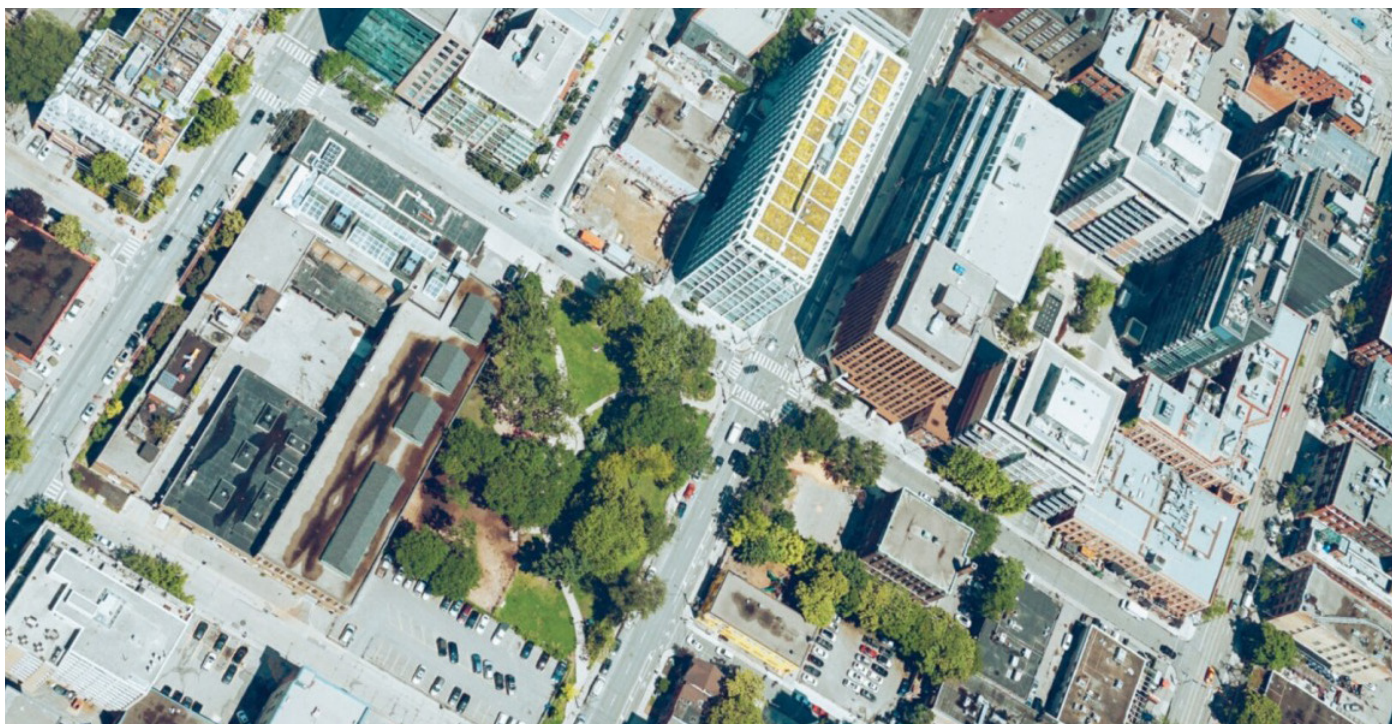


Photo: Marteen van den Heuvel

On August 22nd, 2021, we reached Earth Overshoot Day, the yearly date where the Earth's capacity to regenerate resources is surpassed by humanity's consumption of them. In recent history, Overshoot Day has occurred earlier and earlier in the year, with July 29th 2019 being the earliest date on record. 2021 represents an anomaly in the big picture of things, with the yearly overshoot being 'artificially' delayed due to a downward spike in emissions caused by COVID-19, but also offers a chance to rethink our current unsustainable trajectory. While the calculations underlying Overshoot Day have faced criticism for their simplification of complex global flows of resource consumption, energy use and ecosystem capacities, it can hardly be disputed that there are plenty of improvements to be made in how we consume, produce, extract resources and use energy. It is clear that something needs to change.

A good place to start this change could be in our cities. Net-negative, conventional and linear flows of resource consumption and generation have been the default setting in cities since the first industrial revolution. While they only occupy around 5% of the world's total landmass, cities are home to more than half of the planet's population. Cities have a massive impact on our climate, consuming more than two-thirds of the world's energy while accounting for more than 70% of global CO2 emissions.

While the idea of net-zero sustainability (in cities and elsewhere) has gained traction in recent decades, some have questioned if incremental improvements towards sustainability as an end-goal is enough to solve our environmental- and climate challenges. Implicit in sustainability is the avoidance of the depletion of natural resources in order to maintain some sort of ecological balance. However, when the ecological equilibrium is already heavily unbalanced, a focus on gradual improvements risks doing things too slow. Perhaps by overshooting our goal, we stand a better chance of reaching it.

The idea probably sounds good to most people. In practice, however, shifting the weight of energy use and resource consumption so that cities are no longer a strain on the natural environments they depend on is not an easy task. Cities are the most complex human-made systems on the planet, so any solutions to solve the waste of energy and resources happening there needs to consider the entire urban ecosystem in all its complexity – from the smallest design solution to the city's local, national and international ties of collaboration and exchange. Enter the Regenerative City.

Like other ideas and concepts relating to sustainability and circularity, the Regenerative City has attracted a following in recent years among a wide range of disciplines and individuals working to respond to the need for holistic and antifragile urban solutions. The concept was first developed by a commission convened by the World Future Council and Hamburg University for Architecture and Urban Development and presented in the report *Regenerative Cities* (2010). It was further expanded with subsequent reports as well as a book, *Creating Regenerative Cities* (2011) by Herbert Girardet, the co-founder of the World Futures Council.

At the core of the Regenerative City concept is the idea that city ought to develop a mutually beneficial relationship with the natural systems from which it draws its sustenance. The regenerative city's hinterland (whether it is local, regional, or global) should not deteriorate as a result of the city's dependence on its resources. Instead, this flow of resource and energy use should be designed in such a way to allow both city and hinterland to flourish.

Consuming less can be a first step to achieving a regenerative state, but consuming energy and resources at a slower rate than ecosystems can recover them is the goal. To this end, the Regenerative City relies on circular metabolism, meaning that it has replaced linear flows of energy and resources with ones that mimic the metabolic systems found in nature, where every input and output is part of a greater flow of consumption and rebirth. In theory, a truly regenerative city is one that has extended this circularity to all its flows, including those of people, activities, and data. It recognises the fact that all of these areas can contribute to the greater whole of human wellbeing, both in the present and the future.



Ecodistrict in Washington DC

So far so good. But can it actually work?

To date, only a few cities have actively pursued regeneration as a cornerstone in their urban planning. Iowa City, a small town of around 70,000 residents, began a transformation towards regeneration in 2016. The city's mayor issued a proclamation which set goals to replant native prairies and trees to store carbon, develop urban agriculture, set up new 'ecodistricts' with green building designs and renewable energy, expand cycling infrastructure, and begin composting through a zero-waste ordinance, among other initiatives. The city of Wittenberg, Germany similarly declared its intentions in 2013 of becoming regenerative, and the city of Bergen, Norway has incorporated regenerative principles in the current development of the city's old dock area, including an ambition of turning it into a zero-emission district. There are other examples of the regenerative mindset catching on, but nowhere have we seen plans to turn a megacity into a fully regenerative space – not yet, at least.

As such, the regenerative city remains more of an ideal for the future than a practical, attainable short-term goal. Yet even moonshots and utopian ideals can be powerful productive forces, in that they inspire action and bid us to aim higher. Sometimes, real change takes looking beyond what is realistic in the short-term. Historian Arnold J. Toynbee perhaps expressed this best when he wrote: 'It is a paradoxical but profoundly true and important principle of life that the most likely way to reach a goal is to be aiming not at that goal itself but at some more ambitious goal beyond it.'

When it comes to how we design cities and how these cities relate to their surroundings, regeneration as an ideal encourages us to aim for a deep structural transformation of urban flows, rather than settling for incremental improvements nudging us towards sustainability.

This report was originally produced by the Copenhagen Institute of Futures Studies.

Book Review

by Charles Brass – Chair Futures Foundation

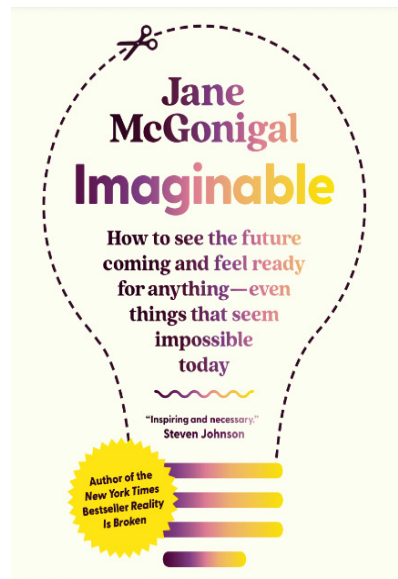
Imaginable

Jane McGonigal

Futurist and game designer Jane McGonigal delivers an illuminating look at how imagining the future can help to change one's own life while making a difference in the world. This is a fascinating book about how the future does not have to be an undiscovered country.

McGonigal has the rare distinction of being one of the few people on the planet who anticipated the current pandemic. As part of her work with the Institute for the Future, in 2008 she created a six-week simulation of a fictional global respiratory virus, which accurately predicted most of what has transpired with COVID-19. This is just one of the future games or simulations through which McGonigal has invited thousands of people to participate in processes that have remarkably presciently anticipated some of the emerging future (sometimes for specific organisations, sometimes as public events – in fact she is planning just such an event for ten years after this book is published and all readers are invited to attend that event).

“Imaginable” is an accessible, optimistic field guide to the future, and McGonigal organizes it into three parts: **Unstick your mind** which coaxes readers into a futurist mindset, **Think the unthinkable** which develops



the ability to spot change and **Imagine the unimaginable** in which readers become players in three futuristic campaigns.

For a book about the future, which these days feels quite bleak, McGonigal's book is bizarrely upbeat and radiates hope. Her writing has the uncanny ability to make a reader optimistic about terrifying scenarios. The thesis is not that the future is rosy, but that if we imagine the unthinkable now, when it hits we will be more capable of moving past shock and denial into action.

McGonigal puts it this way:

“The truth of the future isn't what will happen; it's what could happen. From where we stand today, we can only provably say: Here

is the potential, or the momentum, for certain kinds of change. But the future is always uncertain, in flux, and changeable; it is a perpetually expanding and collapsing set of possibilities. We have to sneak up on the trug hot the future sideways. We ask: Is this possible? Well, what about that – is it possible? And how about this? What can we do to make it more possible? Each question about what could possibly be different sneaks us up a little bit closer to the truth. And what is that truth? Well, it is different for everyone” (p 230).

Just like the real world, there are good things and bad things in this book. Not in the sense of how the text is written — casually but informatively, as if a game master were presenting a seminar — but in the sense of content. There are doomsday scenarios. There is modern-day inequality and injustice. For sensitive readers, it might be difficult to imagine such scenarios, even if the charge is to fix things.

Some of the asks feel big: how are you supposed to think 10 years ahead? McGonigal is prepared for these concerns, however, and gives advice for readers to get more comfortable with the idea of uncertainty,

recognizing that not everyone can do that and that's okay. The simulations are gradual, with each chapter building up to the final simulations.

Her tips for how to predict what the world will be like 10 years from now include looking for "signals of change. This is a stimulating guide to preparing for the future. Readers will be inspired to put their imaginations to use.

What we determine to be "unthinkable" or "unimaginable" are just that, failures of thought and imagination. The past can act like a prison, limiting your notions about what's possible to what has already happened. In "Imaginable," McGonigal trains us to think like futurists, bending our brains so that all possibilities are conceivable.

She starts by asking us to think 10 years ahead, a long window that induces the psychological phenomenon of "time spaciousness," then suggests looking at the world with "strangesight" — the precursor to foresight, noticing new developments ("future forces") that might portend a larger shift. Instead of just paying attention, McGonigal wants us to be "paying imagination" to the world around us. As she says: "Imagination is the first act of pulling the future into the present" (p 236)

In *Imaginable*, Jane McGonigal draws on the latest scientific research in psychology and neuroscience to show us how to train our minds to think the unthinkable and imagine the unimaginable. She invites us to play with the provocative thought experiments and future simulations she's designed

exclusively for this book, with the goal to:

"build our collective imagination so that we can dive into the future and envision, in surprising detail, what our lives will look like ten years from now develop the courage and vision to solve problems creatively take actions and make decisions that will help shape the future we desire access "urgent optimism," an unstoppable force within each of us that activates our sense of agency" (p 8).

Imaginable teaches us to be fearless, resilient, and bold in realizing a world with possibilities we cannot yet imagine—until reading this transformative, inspiring, and necessary book.

Let's be clear. This is not a book about predicting the future—or at least that's not its primary purpose. Ultimately, the goal of *Imaginable* isn't just to leave you better equipped to react better to threats and opportunities. The ultimate goal is to position you to help create and influence the kinds of futures you actually want instead of passively waiting for them to arrive.

It's conceivable (in fact very likely) that something that no one, not even the best predictive futurists out there, has imagined could occur. The only way that you can be prepared for such an unimagined future is to imagine as wide a variety of futures as you possibly can, thereby further pushing your brain's ability to understand, react, and adapt to novel situations. The more you practice the exercises and skills in this book (a) the more unlikely it is that you'll be surprised or caught off guard by any possible given future, and (b) even if that

happens, the more resilient you'll be, the faster you'll be able to respond constructively, the more solutions you'll be able to think of, and the more you'll be able to thrive in that future (even if you have to redefine what it means to "thrive," as I believe we all must if we wish to weather the existential threat of climate change).

McGonigal clearly believes this is a book for everyone, a position this reviewer would endorse. As she says in her introduction:

"Futures thinking isn't a superpower, and you don't have to fix everything or save everyone. But futures thinking is an incredibly useful, practical tool to prepare your mind to adapt faster to new challenges, build hope and resilience, reduce anxiety and depression, and inspire you to take actions today that set yourself up for future happiness and success" (p xxviii)



Jane McGonigal, PhD is a world-renowned designer of alternate reality games — or, games that are designed to

improve real lives and solve real problems. Jane is also a future forecaster. She is the Director of Games Research & Development at the Institute for the Future, a non-profit research group in Palo Alto, California. Her research focuses on how games are transforming the way we lead our real lives, and how they can be used to increase our resilience and well-being. Imaginable is just the latest in a series of books exploring these themes.

FUTURISTS IN ACTION

WHEN EVERYTHING IS CHANGING, THIS IS WHAT YOU MUST DO TO PLAN STRATEGICALLY

by Sonny Neale



Photo by Damir Spanic on Unsplash

DEAL WITH REALITY FOLKS!

When is Strategic Planning more than just Planning Strategically?

I just got off a call with a wonderful person whom I suspect has a commitment is even bigger than mine to the role of public agencies protecting the public good...

We were talking about strategic planning (theirs). After many, many conversations this last two years (COVID years) about how to plan in a fundamentally uncertain environment. In this conversation I realised that I've distilled two things I think are really important to consider.

THE FIRST THING: CONTEXT IS DECISIVE

There's a famous apocryphal story about how a woman left her bag of groceries leaning against a wall in an art gallery by mistake. When she returned the next day her 'installation' had won first prize in the art competition she hadn't realised was being conducted...



This was a great question in my philosophy classes about “What is Art” but it also serves to highlight the role of context, and it’s the context that we need to increasingly bend our mind these days (rather, bend it to *consciously* because it’s happening either way).

A normal thing taken out of context can be something extraordinary, and the opposite can also be true. In a previous life I used to sell artwork in Paris. It was A LOT easier selling a piece well-framed and lit on a wall than the same thing leaning against a wall in a dusty attic.

The thing is the same, but the context is different.

It is such a truism to say that things are changing all the time... that phrase simply doesn’t cut it anymore. Things aren’t changing, the actual CONTEXT IS CHANGING.

That’s what is sooo discombobulating. Not only do we not know what’s going to happen in the future, but we also don’t know the context in which we’re going to be operating. Will global supply-chains ever get reformed fully (probably not); will strategic competition and the GZERO world ramp up to the point of ‘hot’ conflict (probably at some point); will climate change unpin some for the foundations of what we’ve gotten used to as normal (yup).

It’s not the context we’re worried about anymore, it’s the whole bloody-thing!

SO, BACK TO STRATEGIC PLANNING.

Increasingly when I’m asked to talk about strategic planning, I try to shift the conversation to the context in which the strategic planning is taking place. It’s one thing to talk about where you/we want to be in 2,5, 10 years’ time (and I LOVE that I’m getting asked more and more to talk about 10 years and less about 2) but another to talk about the environment in which you will exist in 2,5 or 10 years. And really, how can we authentically talk about where the organisation or agency should be if we’re not first talking about the world in which it operates?

It was ok (perhaps) to take a narrower view when we felt we could legitimately expect the world to more-or-less the same (extrapolated on a linear path from the past, through now, and to that future date) but that particular event horizon has long passed beneath us and we're well into the space-time vortex leading to an inexorable, and unknowable, future now...

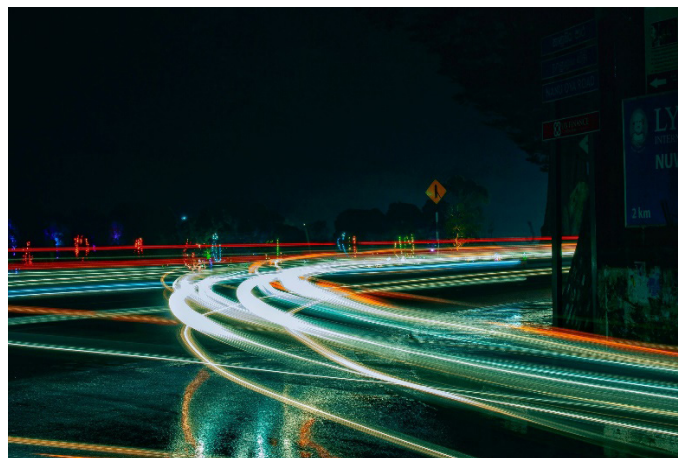
THE SECOND THING: LOOK FROM OUTSIDE IN, NOT INSIDE OUT

This is the operative element: what you DO to create the context and explore the fundamental assumptions etc that are driving your thinking.

If I've the chance to run a deliberate process with people I tend to use tools from the discipline of Foresight, but you can also just do it in normal conversation too.

I strive to help people (myself included) look at their entity from an external standpoint. What does it look like from outside in different possible futures in which you could be operating?

Some of those future worlds (scenarios) you'll love, some you'll hate, but they're all possible and what does that mean for how you position yourself, the services you develop and provide, the relationships/networks you need to spend effort on? What *influence* do you have over outcomes in different scenarios? What's consistent, what's not... can you hedge and prepare a bit for a few different things or do you want to go hell-for-leather at one preferred vision?



When you shift the conversation about the future of the enterprise from sitting in the seat driving the race to sitting in the stands observing it, there are suddenly so many rich questions to ask!

It's a small tweak perhaps, but also really, not so small!

P.S. for all those of you who have done a bunch of personal development over the years (all of you?), you'll recognise the resonances in your own journey and relationships ('get over yourself')

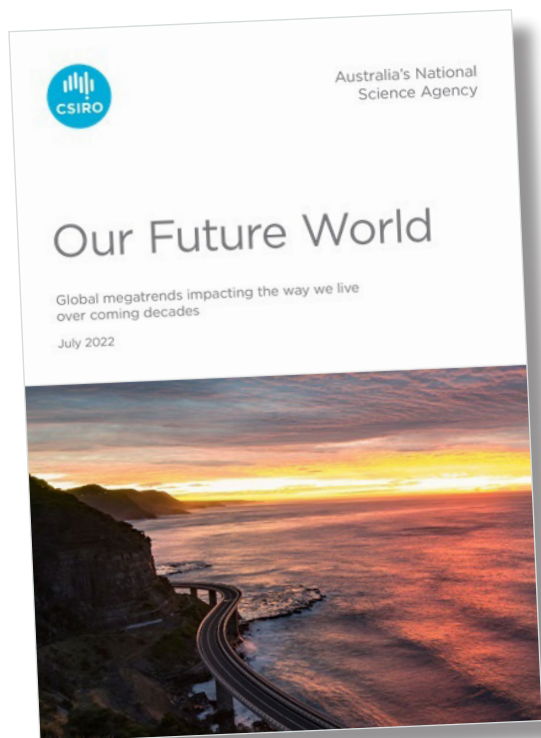


Sonny Neale is a collaboration expert working within Australia and Asia for over twenty years. He regularly writes on Collaborative Leadership, including an upcoming book of the same name.

Signals in the Noise

SEVEN MEGATRENDS THAT WILL SHAPE THE NEXT 20 YEARS

by CSIRO



A once-in-a-decade report from CSIRO, Australia's national science agency, identifies seven global megatrends that hold the key to the challenges and opportunities ahead.

A once-in-a-decade report from CSIRO, Australia's national science agency, identifies seven global megatrends that hold the key to the challenges and opportunities ahead.

With an outlook to 2042, *Our Future World* revisits CSIRO's ground-breaking 2012 report of the same name, exploring the geopolitical, economic, social, technological and environmental forces unfolding around the world, predicting their likely impact on Australia's people, businesses and governments.

The seven global megatrends are: Adapting to climate change; Leaner, cleaner and greener; The escalating health imperative; Geopolitical shifts; Diving into digital; Increasingly autonomous and Unlocking the human dimension.

CSIRO Chief Executive Dr Larry Marshall said megatrends help us to understand the challenges and massive opportunities that will shape our future.

"Australia is at a pivotal point. There is a tidal wave of disruption on the way, and it's critical we take steps now to get ahead of it," Dr Marshall said.

"From resource scarcity to drug resistant superbugs, disrupted global trade, and an increasingly unstable climate threatening our health and way of life – these are just some of the challenges we face.

"But these challenges also tell us where the most powerful innovation can be found, when we see a different future and leverage science to create it.

"Australia has the highest wind and solar capacity of any developed nation and a wealth of critical energy minerals – we can be a leader in feeding the world's hunger for clean energy.

"The next wave of digital innovation will generate \$10–15 trillion globally.

"Australia can tap into this to transform existing jobs and create new jobs and wealth while leveraging Artificial Intelligence to solve some of our greatest challenges, like outthinking bushfires, accelerating vaccine development, predicting drought, or stabilising our energy grid.

"We have the opportunity now to use science to invent the kind of world we want to live in – but we have to act, and we have to do it together.

"Trust in science led Australia's response to COVID-19, and science can help us lead a Team Australia response to the challenges ahead," he said.

Our Future World report co-lead author Dr Stefan Hajkowitz said: "We analysed thousands of data points collected over decades. Some of the trends we identified have

Signals in the Noise

SEVEN MEGATRENDS THAT WILL SHAPE THE NEXT 20 YEARS

been widely discussed, while others are newer and directly related to our experiences during the pandemic.

“We are, for example, just beginning to understand the potential long-term impacts of the pandemic on mental health and chronic illness.

“We anticipate that while the pandemic sped up digital transformation, the real explosion in our capability is yet to come. In this environment, digital skills will become more valuable, but rather than replacing human intelligence, technologies like AI will assist us in doing our work better.”

Our Future World co-lead author Dr Claire Naughtin said: “Trust emerged as a central theme – trust in institutions, technology, supply chains and security will all be key issues over the coming two decades.

“Currently just under 70% of Australians do not trust AI systems but would be more willing to use these systems if appropriate ethical measures were in place.

“This latest update on the global megatrends gives us line of sight as to what has changed over the past decade and a view to the coming decades.

“Like aircraft engineers would use wind tunnels to test the robustness of new aircrafts, we can use these megatrends to develop, test and refine future strategies to ensure they are robust, whatever the future holds.”

Snapshot of the megatrends:

1. **Adapting to climate change:** with natural disasters expected to cost the Australian economy almost three times more in 2050 than in 2017, we can expect to be living in a more volatile climate, characterised by unprecedented weather events.
2. **Leaner, cleaner and greener:** an increased focus on potential solutions to our resource constraints through synthetic biology, alternative proteins, advanced recycling and the net-zero energy transition. By 2025, renewables are expected to surpass coal as the primary energy source.
3. **The escalating health imperative:** the post-pandemic world has exacerbated existing health challenges posed by an ageing population and growing burden of chronic disease. One in five Australians report high or very high levels of psychological distress and there is heightened risk of infectious diseases and pathogens resistant to modern antibiotics. There is now a burning platform to also respond to our health risks and improve health outcomes.
4. **Geopolitical shifts:** an uncertain future, characterised by disrupted patterns of global trade, geopolitical tensions and growing investment in defence. While the global economy shrunk by 3.2% in 2020, global military spend reached an all-time high of \$2.9 trillion and Australia saw a 13% increase in cybercrime reported relative to the previous year.
5. **Diving into digital:** the pandemic-fuelled a boom in digitisation, with teleworking, telehealth, online shopping and digital currencies becoming mainstream. Forty percent of Australians now work remotely on a regular basis and the future demand for digital workers expected to increase by 79% from 2020 to 2025.
6. **Increasingly autonomous:** there has been an explosion in artificial intelligence (AI) discoveries and applications across practically all industry sectors over the past several years. Within the science domain the use of AI is rising with the number of peer-reviewed AI publications increasing nearly 12 times from 2000 to 2019.
7. **Unlocking the human dimension:** a strong consumer and citizen push for decision makers to consider trust, transparency, fairness and environmental and social governance. While Australia saw a record level increase in public trust in institutions during the pandemic, this ‘trust bubble’ has since burst, with societal trust in business dropping by 7.9% and trust in government declining by 14.8% from 2020-21.

Signals in the Noise

SEVEN MEGATRENDS THAT WILL SHAPE THE NEXT 20 YEARS

Our future world; seven global megatrends

From 2012

Window of opportunity for government, companies and societies to respond to biodiversity declines and climate change...



Adapting to a changing climate

Operating in a volatile future climate characterised by unprecedented weather events that push historical boundaries.

Wrestling with the challenge of rising demand for food, water, energy and minerals and the promise of future solutions...



Leaner, cleaner and greener

Realisation of potential solutions through synthetic biology, alternative proteins, advanced recycling and the net-zero energy transition.

Forecasting the potential impacts of an ageing population and the growing burden of chronic illness on future health budgets...



The escalating health imperative

Living in a post-pandemic world that has exacerbated existing health challenges and created a burning platform to respond to future risks.

Period of rapid economic growth and urbanisation across Asia and the new demands of the growing middle-class population...



Geopolitical shifts

An uncertain future, characterised by disrupted patterns of global trade, geopolitical tensions and growing investment in defence.

Potential of increased connectivity and adoption of digital products and services at the infancy stages of online retail and teleworking...



Diving into digital

Pandemic-fuelled boom in digitisation, with teleworking, telehealth, online shopping and digital currencies becoming more mainstream.

Promise of science, technology and innovation as a potential driver of opportunities in response to these megatrends...



Increasingly autonomous

Explosion in artificial intelligence and global investment in research and development driving discoveries and applications.

Emergence of the experience economy and demand for personalised services, driven by rising incomes and ethical consumerism...



Unlocking the human dimension

Strong consumer and citizen push for decision makers to consider trust, transparency, fairness and environmental and social governance.

To now and beyond...

