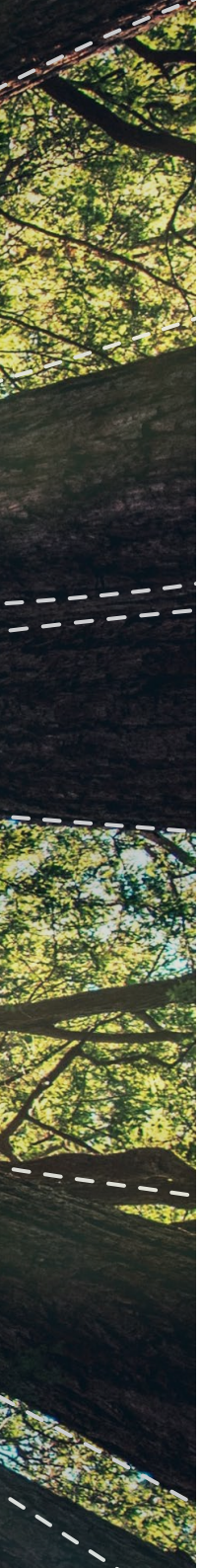

FORUM
FOR THE
FUTURE
THE FUTURE OF
SUSTAINABILITY
COURAGE TO TRANSFORM



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FOREWORD

There's much that demands our attention: climate change impacts are becoming more frequent and more intense; there is increased polarisation as evidenced with the politicisation of environmental, social, and governance efforts in the United States; the geopolitical stability that supports international cooperation is more fragile than it has been in decades; the rapid progress of artificial intelligence is ushering in heightened uncertainty as the future impacts of AI in the coming decades remain unknown. Businesses are operating against a backdrop of escalating noise and turbulence. But amidst this noise there is one signal we should be paying particular attention to: we are crossing the 1.5˚C threshold.* On the one hand, it seems irrational that with clear scientific evidence and our own lived experience, we would continue on this trajectory. But on the other hand, it seems probable, and even human, that we might.

We're asking: why does inertia persist? And then a follow-up question: as climate change impacts become more palpable in people's daily lives, will this open a new opportunity for change?

The Future's Centre's Future of Sustainability: Courage to Transform is written in response to these questions. In order to equip individuals, teams or organisations to move beyond inertia and make informed decisions in complex environments, this futures-led enquiry offers:

1. *The Business Transition Trajectories* which set out a range of pathways—or trajectories—that are being, or could be adopted in response to our environmental and social crisis.

2. *The Five Principles to Transform through Crisis* are practices businesses can adopt and adapt to not just weather disruptions but also to prosper in uncertain times.

This report was written for those working within businesses who believe in the potential of business to address our complex challenges. We hope that our insights provoke a deeper examination of the actions being taken by market actors to resist, respond, or adapt to the environmental and social crisis that we are experiencing, and allow you to observe—or imagine—where transformative potential exists.

Ariel Muller
Director of Futures and Strategic Initiatives
Forum for the Future
The Futures Centre

**Within the next five years the extra warming that comes with El Niño events will temporarily push the global climate over 1.5º C. It may then drop back below 1.5ºC, however, it is evidence of a long-term trend of warming, which will continue without a change in behaviour.*

ABOUT FORUM FOR THE FUTURE

Forum for the Future is a leading international sustainability non-profit. For more than 25 years we've been working in partnership with business, governments, and civil society to accelerate the shift towards a just and regenerative future in which both people and the planet thrive.

Forum for the Future's 2023-2025 strategy is about enabling deep transformation in how we think about, produce, consume and value both food and energy and the purpose of business in society and the economy. It comes as momentum for change is building, but social and environmental challenges are continuing to intensify. Right now, the sustainability movement faces a choice: to continue driving 'shallow transitions' or to start laying the foundations for the 'deep and urgent transformation' that's long overdue.

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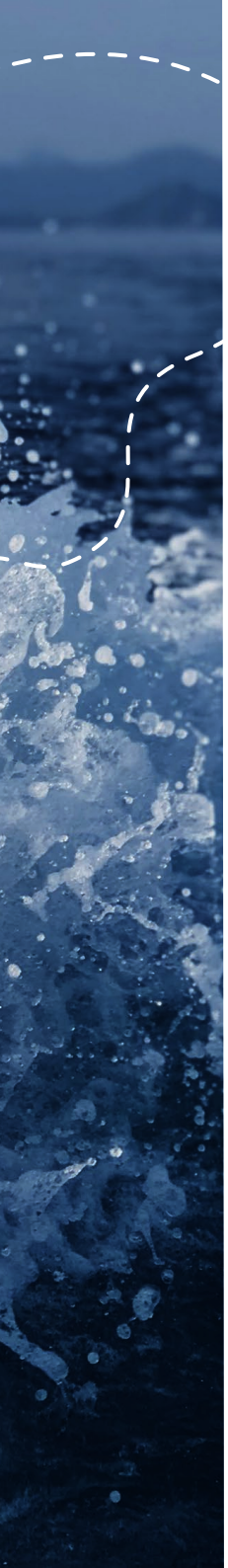


A TRANSITION IN THE 'PURPOSE OF BUSINESS' IN SOCIETY

This report is inspired and informed by work spearheaded by Forum's Purpose of Business Collective. Forum believes that business must play a role in society that goes beyond just a drive to maximise short-term profits and shareholder dividends to the exclusion of all else. To make a hopeful, liveable future possible, business must reframe profit as a means to build long-term value and well-being. It requires business to nurture a resilient, healthy operating context. Ingenuity is needed to find creative solutions that make commercial sense while working towards greater social justice and the regeneration of our communities, societies, ecosystems, and the planetary systems our civilisation depends upon. We call this a just and regenerative mindset and believe it should be at the heart of every business.

To support businesses making this transition, Forum focuses on four areas where its skills, expertise and experience can make the most difference:

- Inspiring Visionary Leadership
- Rethinking Value Chains
- Transforming Consumption
- Creating an Enabling Context

Find out more about Forum's work to transform the purpose of business.

CONTENTS

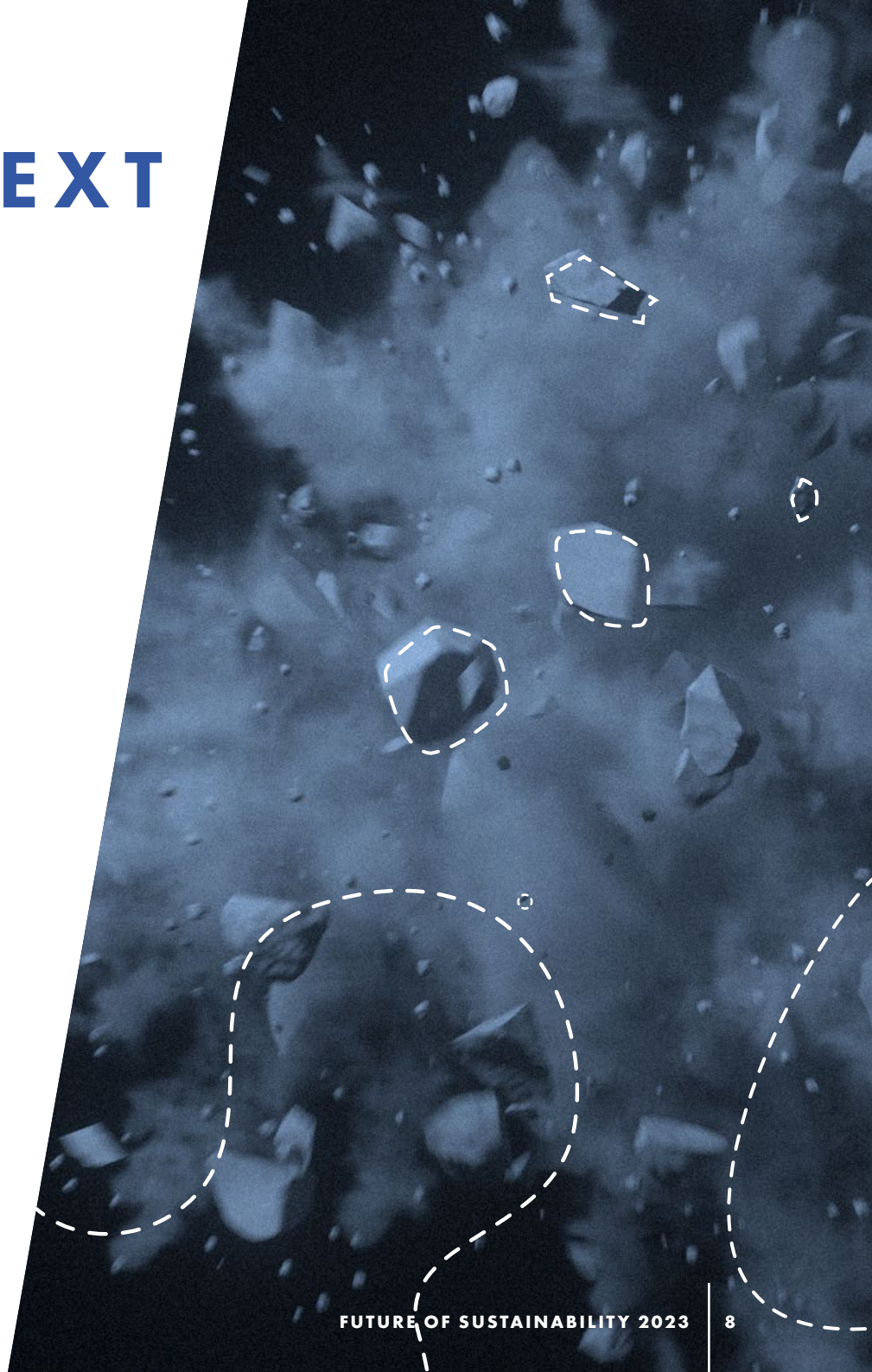
01 SETTING THE CONTEXT

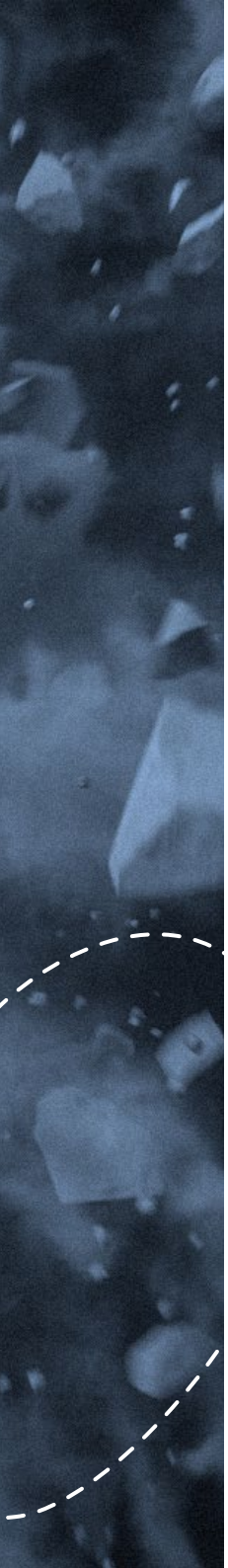
SETTING THE CONTEXT

People aiming to lead change in business are facing headwinds: inflation, rapidly changing reporting standards, price volatility, talent scarcity, and the highest number of violent conflicts since the end of the Second World War.[1] Challenges are intensifying while the need for transformational change is becoming more acute.

By 2030:

- Global natural disasters could increase by 40% – this amounts to 540 natural disasters every year; more than one per day.[2]
- The number of droughts is forecast to double.[3]
- Extreme temperature events are set to triple.[4]
- 4.8 million people are at risk of hunger by 2030 due to climate change.[5]





The atmosphere, ocean, and biosphere are experiencing widespread and rapid changes, primarily due to human-made carbon emissions. These changes are impacting weather and climate systems around the world with devastating impacts on people's health through air pollution, disease, extreme weather events, and forced displacement. We have transitioned from a focus on the concern of reaching tipping points to the current experience of encountering the consequences of tipping cascades. This shift has significant implications for the choices made between mitigation and adaptation interventions and investments. And all of this is set against the backdrop of an intensely fragile relationship between governments and citizenry, polarised politics and weak governance.

The responses from businesses to these pressures vary. A small but growing number of companies are redefining the purpose of their business, or launching new businesses, as a solution to the challenges the world faces.[6] Others are choosing to stay silent, apprehensive of being accused of greenwashing[7] or genuinely unsure of how to move forward. Of more concern are those that are sensitive to a growing anti-ESG sentiment, contending that a company's primary responsibility, above all else, is to deliver returns to shareholders.[8] Concurrently, the field of sustainability is experiencing rapid expansion and has moved into the mainstream of corporate strategy. However, in spite of this massive uptick in activity, it has not yet set us on a path towards the just and regenerative future that we aspire to achieve.

At Forum for the Future ("Forum") we define a just and regenerative future as one where:

- **Everything is nature:** Humans, and the economy and society we have created, are part of nature;
- **Thriving people:** Systems and ways of living support everyone's universal rights and potential to thrive;
- **Redefined economy:** The economy creates and distributes value fairly, with economic models that prioritise human well-being and ecosystem health; and
- **Capacity:** Social and environmental systems are resilient, with the capacity to adapt to future challenges.[9]

As the world more frequently and more severely experiences the impacts of climate change, tackling the crisis will inevitably become more complex. In this situation, how will businesses navigate this need?

This report uses a futures-led approach to encourage deeper exploration of how market actors are responding to crises and which might contribute to more transformational change.

TRANSFORMING THROUGH CRISIS: TOOLS FOR PURPOSE-LED BUSINESSES

This report was written to allow people leading change in business to explore how they can harness the potential of futures and systems thinking to make better-informed decisions in the face of a complex and challenging operating context.

In order to offer guidance, this enquiry is designed to encourage you to first envision potential future directions by exploring how businesses are addressing environmental and social challenges through four distinct mindsets. Following this, it delves into the strategies that can be embraced to navigate these scenarios and progress towards a more just and regenerative future. In summary:

The Business Transition Trajectories are a futures tool to provoke a deeper examination of different mindsets adopted by market actors to resist, respond or adapt to the crisis, and allows you to observe—or imagine—where transformative potential exists. The trajectories can be used to engage individuals, organisations and sectors to help envision potential outcomes based on the current responses we see playing out today.

The Five Principles to Transform Through Crisis offer businesses a way to lead transformation through a complex operating environment. By embracing a shift in mindset, focusing on proactive preparedness, addressing root causes, shaping the operating context, adopting agile governance, and incorporating bias awareness into decisions about risk, businesses can enhance their ability to navigate challenges, harness ingenuity, and contribute to a more resilient future.

THE TRANSITION TRAJECTORIES

The Business Transition Trajectories encompass four forward-looking pathways to 2033 each based on a particular mindset or world view. The mindsets presented within each trajectory are derived from our observations of how businesses are currently responding to the imperative of addressing ecological and social impacts. They also draw inspiration from how businesses employed Forum's COVID-19 Trajectories—a tool that explored how different mindsets might shape how the world might 'build back better' after the pandemic—drawing from Jim Dator's archetypes framework.[10, 11]

The four trajectories may seem provocative or readily familiar. They are written to highlight opposing extremes of human behaviour and to encourage conversation on which actions will reinforce the status quo and which will contribute to transformation. Each trajectory can interact with others in contradictory or mutually reinforcing ways. You will find them simultaneously coexisting in the world around you. They do not encompass every potential factor or outcome, but provide a glimpse of how mindsets might contribute to how we respond to our changing world.

The four trajectories and their respective mindsets are:

- **PROFIT SUPREME**
  Resist or opt out, and always maintain a focus on maximising short-term shareholder value and profits.
- **SHALLOW GESTURES**
  Attempt what we can, but recognise that our actions are incremental relative to the change that is needed.
- **TECH OPTIMISM**
  Leverage technology, but risk an overreliance on technology as a solution for all problems.
- **COURAGE TO TRANSFORM**
  Align the purpose of business to contribute to solving ecological and social challenges.

EXPLORING THE FUTURES TRAJECTORIES THROUGH A SYSTEMS CHANGE LENS

Futures thinking offers insights into the implications of current trends and signals, while systems thinking uncovers the dynamics and structures shaping those outcomes.

The FSG 'Water of Systems Change' framework provides a simple methodology to help people understand and navigate the complexity of creating meaningful and sustainable social change within a system—including the market system. We've chosen this methodology to help readers understand how mindsets, power dynamics, and policies, behaviours and resources, can interact to keep conditions locked in place despite best efforts. The framework proposes that system change occurs when conditions shift simultaneously across all three levels of a system.[12]

THE FIRST LEVEL:

The first level for systemic transformation is mindsets. Mindsets shape beliefs, attitudes, and perception. Let's take an example: Gross Domestic Product (GDP) measures progress through all the goods and services produced in a country. Established in 1937 amid the Great Depression and the recovery of World War II, it emerged as the primary method for gauging a nation's economic recovery. Despite being only several decades old, it's nearly impossible to envision a world without its influence[13].

This raises questions: How might beliefs on what 'progress' meant at that time period be different from how we need to define 'progress' today? Does this measurement system still serve our needs?

THE SECOND LEVEL:

The second level focuses on how decision-making power, authority and influence are shared and negotiated between groups and individuals. It's clear that power dynamics are deeply intertwined with the climate crisis and that the solution will require addressing these inherent imbalances. For example, the wealthiest 1% of nations emit 175 times more greenhouse gases per person than the poorest 10%.[14] And the people that are the most impacted by the climate crisis are the least responsible for it. The IPCC acknowledges historical power structures like colonialism exacerbate climate change impacts.[15]

This prompts the questions: how have these imbalances shaped our structure of value chains? Could more equitable access to decision making in value chain decisions, in response to the climate crisis, contribute to better long-term climate resilience?

THE THIRD LEVEL:

The third level is the structural conditions that hold a system in place: behaviours, policies and resource flows. Changing these factors can have immediate effects. The changes are readily observable and can often be assessed through traditional evaluation and measurement techniques. But without working at the other two levels, changes in a system are unlikely to be sustained. This prompts the question: How might financial flows to ensure future climate resilience be designed differently if those who were most impacted were at the table?

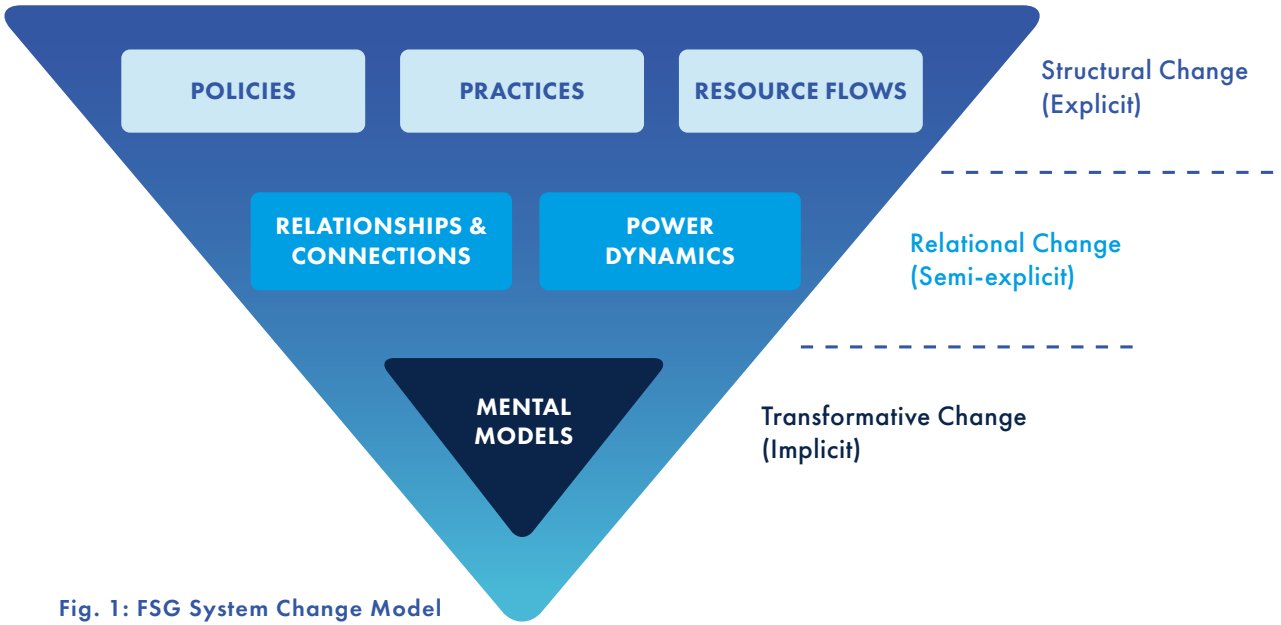


Fig. 1: FSG System Change Model

POINTS TO BEAR IN MIND BEFORE DELVING INTO THE BUSINESS TRANSITION TRAJECTORIES:

As you read the trajectories, keep these questions in mind:

How does the dominant mindset influence the trajectory's evolution over the coming decade?

How does the distribution of decision-making power, authority, and influence either reinforce existing patterns or contribute to building resilience? Conversely, how might the structure of our economy, and how it allocates resources, pose challenges to driving transformation, potentially entrenching inertia?

And finally, a reminder: that the trajectories are written to highlight opposing extremes of human behaviour—you may find them provocative or familiar. They are intended to encourage conversation on which mindsets and actions will reinforce the status quo, and which will contribute to transformation.

02

TRANSITION TRAJECTORIES

PROFIT SUPREME

In the 'Profit Supreme' trajectory, the emphasis is on maximising short-term shareholder value and profits. This is manifested through various behaviours. Some individuals hold the perspective that integrating environmental and social considerations into business operations might be considered a violation of fiduciary duty. Others opt not to address environmental and social concerns due to uncertainty on what to do—a sense of apathy. Or some may choose to capitalise on opportunities arising from a warming climate.

The cascading impacts of climate change—such as heatwaves, droughts, floods, as well as biodiversity loss and inequality—are perceived as being too distant from their current operations to be considered a material risk to the business. Decision-making power, authority, and influence remain primarily the same.

WHAT YOU MIGHT HEAR FROM PEOPLE WITH THIS MINDSET:

"Politics and no real impact. It's all just virtue signalling!"

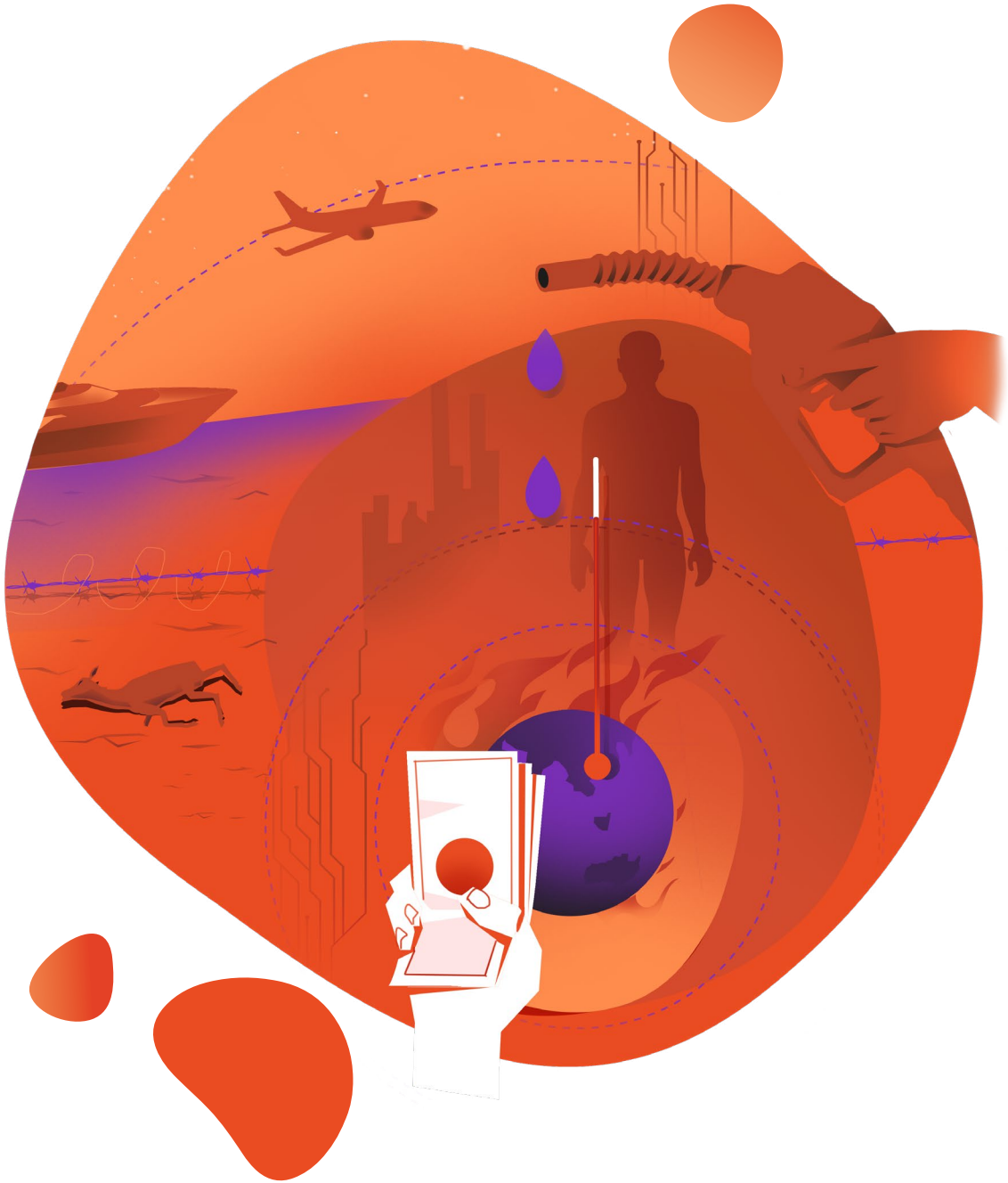
"We will continue to maximise our profits from fossil fuels as long as it remains a profitable endeavour. We anticipate being able to exit at the right moment."

"Sure, I see the effects of climate change, but what can a business like ours really do?"

"... the most common reaction [in Greenland] was not, 'We need to cut emissions,' or, 'All this ice melting is a big problem for sea-level rise elsewhere.' The reaction was, 'We're going to get something out of this. We'll have more accessible minerals and oil and gas and improved fisheries [as the oceans warm, fish are expected to migrate northward].'

So their response was to get the money."

—McKenzie Funk, author of "Windfall: The Booming Business of Global Warming", upon visiting Greenland in 2015[16]



UNDER THE 'PROFIT SUPREME' TRAJECTORY IN 2033

COMPANIES may be strategically seizing opportunities arising from a warming climate. Including, for example, tapping into the escalating demand for renewable energy or exploiting access to previously inaccessible oil and mineral and sand reserves made available due to melting glaciers. They might feel insulated from the impacts of climate change and social inequality, but ultimately are unable to evade the cascading social and environmental consequences that stem from a warming climate. Water-dependent sectors like agriculture, energy, and manufacturing will be suffering supply chain disruptions due to extended drought. Drought conditions would impact commodity prices and drive market volatility, leading to shifts in investor sentiment and fluctuations in asset prices, simultaneously shipping ports may be negatively impacted by sea level rise. In the context of economic uncertainty, the followers of the anti-ESG sentiment may feel they have an even stronger mandate to assert that profit should be the primary objective. Polarisation may become more acute, entrenching racial inequality.

CITIZENS in the 'Profit Supreme' trajectory may be experiencing the impact of disruption from AI and automation which is anticipated to displace employment for four hundred million people globally.[17] Inequality may increase, and more intensely in advanced markets.[18] A generation of people educated about climate issues since their childhood, with time on their hands, and with no remit to influence the decisions of the market actors who are determining their future, might turn to activism in an attempt to gain control of their future. This generation holds the conviction that the most urgent challenges of our time—such as climate change, racial injustice, and gender inequality—cannot be effectively tackled without prioritising and amplifying the voices of those directly impacted by these issues.

NATIONAL GOVERNMENTS might accelerate the shift towards domestic renewable energy production to tackle unemployment, fulfil domestic climate obligations, and introduce a wave of 'Green Nationalism.' However within the 'Profit Supreme' mindset they may not closely review the quality of these developments. There may be an escalation in geopolitical tensions, potentially marked by China's ascendancy in global critical mineral supply chains that support the renewable energy sector. Should a 'Profit Supreme' mindset persist, the surging global energy demand would be predominantly catered to by the oil and gas sector. With an impending water crisis, and within the backdrop of existing geopolitical tensions, the feasibility of forging collaborations to tackle transboundary water concerns could be limited. Governmental funds are increasingly going towards addressing the symptoms of climate crisis impacts rather than addressing the root causes.

CIVIL SOCIETY'S role as a critical advocate for long-term well-being may diminish in this trajectory. This might result in the absence of a key actor that raises awareness of long-term risks, through activism and campaigns, and advocates for systemic change towards more responsible decision-making. A shrinking civil society may undermine long-term resilience.

THE ENERGY TRANSITION to renewable energy is in full swing. However, in the dominant mindset of this trajectory developers might not prioritise fair wages, prevention of land grabs, or the protection of ecosystems throughout its production and supply chain. Instances of non-compliance with ethical standards could come to light, tarnishing the positive image associated with the renewable energy sector which would in turn slow the transition down. Oil and gas companies would continue to expand development into new previously protected areas under the confidence that regulators will not stop them or impose a carbon tax. Those who are currently invested in fossil fuel may wait to pull out until the last minute, further slowing the transition to renewables while they tell a green story.

THE FOOD TRANSITION in 'Profit Supreme' might be defined by impact investment interests, where there is a clear return on investment. Investments may drive research into accelerating the shift from traditional animal agriculture to plant-based diets but miss the importance of investing in building resilience into the broader food system. The lack of attention to system resilience could prove problematic, especially given that around 80% of the world's food is produced by family farms. The rise in extreme heat days will intensify, leading to potentially fatal patterns.

CONSUMPTION is perceived as the indicator of economic growth in a 'Profit Supreme' mindset. And as the economic impacts of climate change intensify, policymakers and economists may continue to scramble to jumpstart consumer spending, believing that a surge in consumption will provide the remedy. Businesses may divide into enterprises catering solely to the affluent, or to the economically disadvantaged, leaving little room for a thriving middle class.

IN 2033: In the 'Profit Supreme' trajectory the world continues on a growth trajectory to permanently exceed the crucial 1.5˚C threshold.

MEANING THAT IN 2050: people who are 11 to 20 years old today, would be 41 to 50 years and stepping into leadership roles while experiencing the impact of tipping points such as the disruption of a critical current in the North Atlantic affecting food-producing rain for billions.

WHAT MENTAL MODELS AND BIASES ARE INFORMING DECISION-MAKING IN THIS TRAJECTORY?

The dominant mindset in this trajectory is that the primary goal of business is to maximise financial profits for its shareholders or owners.

Investments in renewable energy contribute to emissions reduction; however, within a profit-driven perspective, these efforts might lack a holistic approach that encompasses biodiversity and human rights. The focus on profit might overshadow considerations such as ethical labour practices, community well-being, and ecosystem preservation. Consequently, while emissions reduction is a positive outcome, unintended negative consequences stemming from a profit-centric approach could also emerge.

In this trajectory, the distribution of decision-making power, authority, and influence plays a role in shaping the trajectory's evolution. The younger generation's avenue for impact is primarily through activism but ultimately doesn't influence decision making. A limited civil society may curtail advocacy efforts, hinder the availability of diverse expertise, compromise oversight and accountability mechanisms, and dampen public engagement. These limitations collectively undermine the transition's effectiveness and success.

SIGNALS OF THIS FUTURE EMERGING:

The Arctic's rapid warming, four times faster than the global average, is causing glaciers and sea ice to melt quickly. Greenland's thawing ice is uncovering valuable resources like coal, metals, and minerals, attracting interest from the US and China keen on exploring these new resources.[20, 21] Simultaneously, China dominates global critical mineral supply chains, accounting for approximately 60% of world-wide production and 85% of processing capacity.[22]

About 90% of worldwide freight depends on shipping. Rising sea levels could endanger numerous coastal ports, often situated just a few to 15 feet above sea level. Despite this looming danger, many port managers perceive this risk as distant due to uncertainties in sea level rise and lack of solutions. Notably, during the pandemic, shipping container costs across the Pacific surged from $2,000 to $15,000 or $20,000, offering insights into the potential operational risks from port disruption.[23]

Supply chain risks in 2022 were highlighted when a drought in China disrupted global businesses, impacting hydropower and leading to factory power cuts, affecting supply chains for electronics, car parts, and other goods, and production cutbacks for Volkswagen, Toyota, Foxconn, and CATL. The drought resulted in lower water levels in the Yangtze River, causing interruptions for ocean-going vessels.[24] According to a WWF study, by 2050, 61% of all global hydropower dams will be in basins with very high or extreme risk for droughts, floods or both.[25]

In the United States, Republican lawmakers in 37 states have introduced 165 anti-ESG pieces of legislation. About one-third of the anti-ESG proposals in 2023 was focused on diversity—asking companies to report on the 'risk' that their anti-discrimination or racial justice efforts pose to their business.[26, 27] The conflation of sustainability and diversity initiatives may demonstrate how anti-ESG sentiment is, in part about keeping existing power structures intact. In contrast, Nikayla Jefferson captures the spirit of an intersectional approach to climate justice well: "Racial justice, economic justice, immigration justice—it's all climate justice. This isn't just the white climate kids' movement anymore—this is an intersectional movement for justice."[28]

In regard to risk of heat to agricultural workers: an unprecedented heat wave in the United States has resulted in numerous fatalities, overwhelming hospitals to the point of resembling pandemic conditions. Safety agencies, caught off guard, are only in the initial stages of formulating a heat standard for workplaces. It's estimated that 75% of the world's current food production could be at extreme risk from heat stress by 2045.[29]

Research indicates that humanity's 1.1˚C of global heating might have already triggered five dangerous tipping points. These include the potential collapse of Greenland's ice cap, leading to significant sea-level rise, disruption of a critical current in the North Atlantic affecting food-producing rain for billions, and abrupt thawing of carbon-rich permafrost. Even with a minimum temperature rise of 1.5˚C, four of these tipping points shift from possible to likely.[30]

SHALLOW GESTURES

In the 'Shallow Gestures' trajectory, the dominant mindset is' attempt what we can. 'Businesses are showcasing their determination to address environmental and social crises, however they are struggling to navigate the 'trade-offs' required between short-term profits and investments—or divestments—that could foster long-term ecological and social resilience. The environmental and social crises are primarily left to voluntary market forces. People publicly expound the virtues of 'win, win, win' scenarios,but business broadly maintains a 'business as usual' approach with only incremental shifts being made.

The cascading impacts of climate change—such as heatwaves, droughts, floods, as well as biodiversity loss and inequality—are anticipated, but it's difficult to allocate resources towards a suitable response. There are signals of more distributed decision-making power, authority, and influence in this trajectory that contribute to resilience.

WHAT YOU MIGHT HEAR FROM PEOPLE WITH THIS MINDSET:

"It's a complex issue, and we're taking steps in the right direction, even if they're small."

"We only move when acted upon. We do just enough to keep people off our backs."

"We've set bold targets for transformation in... 2050."

"It is up to the G20 countries responsible for 80% of global emissions that we are beholden to for our survival. Our survival is being held to ransom at the cost of profit and an unwillingness to act despite the ability to do so."

—Mark Brown, Prime Minister of the Cook Islands, COP27, Sharm-El-Sheik, Egypt, 8 November 2022[30]

UNDER THE 'SHALLOW GESTURES' TRAJECTORY IN 2033

COMPANIES in the 'Shallow Gestures' trajectory may try to achieve their targets, but be limited by existing policies, behaviours and resources that are orientated on ensuring shareholder value and profits. Making the 'trade-off' for short-term profits versus long-term investment to ensure the transformation we need may be too difficult. Incentive policies for C-suite leaders may continue to prioritise near-term profit generation, despite their organisation's public commitments to long-term environmental and social outcomes. Companies may develop sustainably sourced product lines, but still celebrate record day sales. One function within the organisation may advocate for greater climate ambitions, while another function, in the same organisation, is actively investing in carbon-intensive activities. On the bright side, many of the companies in this trajectory might have built connections throughout their supply chain via their sustainability endeavours, along with collaborations with academia and non-governmental organisation (NGO) partners.

CITIZENS' agency to drive change in the 'Shallow Gestures' trajectory could be high, while people's trust in organisations might be very low. As a generation of people who have been educated on climate related issues since they were children, and after experiencing the disconnect between numerous pledges and actual change, their response might be a search for deeper 'root causes', such as questioning prevailing capitalist systems and growth paradigms.

NATIONAL GOVERNMENTS, having previously leaned on voluntary market-led efforts to confront global challenges, might be rapidly implementing policies to reduce emissions. This shift might occur as the expenses of adaptation rise, necessitating increased funding sources.

Increased natural disasters may result in policies aimed at incentivising local economies, bolstering resilience, and fostering the emergence of local-for-local food systems and community-based nature-based solutions. However, there are indications that certain nature-based solutions are shifting from being carbon absorbers to becoming carbon emitters. The emphasis on local self-sufficiency, particularly in the context of an increasing number of natural disasters, could extend to regional trade agreements as supply chain actors seek closer 'neighbours'. Meanwhile geopolitical tensions may continue to characterise global dynamics, particularly with the evolving China and Taiwan relations.

CIVIL SOCIETY in the 'Shallow Gestures' trajectory may divide into two types of organisations: those who believe that fundamental changes to the economic system is the only way forward and that any action otherwise is perpetuating great risks for the future, and those organisations that believe 'any progress is good progress, even if incremental'.

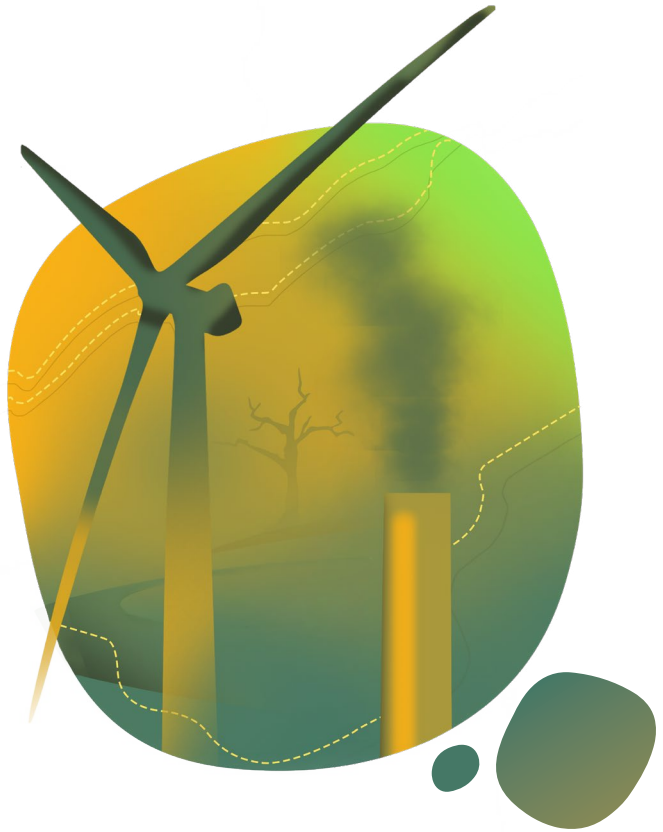
THE FOOD TRANSITION may be continuing to receive capital investments into alternative proteins driven by venture capital and impact investors who are witnessing promising returns on their investments. The adoption of just and regenerative practices may be slower than anticipated due to economic constraints, lack of incentives, or resistance to change. Decisions might still be heavily influenced by short-term financial gains rather than long-term sustainability considerations. Existing social inequalities and inherited power imbalances within the food system might persist or even worsen as climate change impacts come to the fore. Marginalised communities, small-scale farmers, and vulnerable workers may become more vulnerable. Climate-induced displacement may reshape labour dynamics, prompting workers to relocate from impacted areas in pursuit of improved prospects.

THE ENERGY TRANSITION may be delayed due to fossil fuel companies lobbying ties to governments. Energy companies might invest in renewable technologies if they see potential for financial gains, but not divest from fossil fuels. The rapid adoption of electric vehicles (EVs) may distract from the accessibility of public transportation systems. Community-energy may scale, as communities seek out more resilience in the face of increasing climate impact. Energy systems that underpin industrial operations will be susceptible to the impacts of drought. This vulnerability may ricochet through the global supply chains resulting in disruptions to the supply chains. Proactive and cooperative endeavours with supply chain actors aimed at building resilience would become essential to mitigating these challenges.

CONSUMPTION will increase due to the growth in sales on e-commerce platforms. People may make individual purchases that align with perceived ethical standards but might not extend their actions to address broader structural issues such as labour practices. The sharing economy, an economic model based on sharing access to resources, goods, or services, may gain traction, facilitated by digital platforms, however without investment it may not keep pace with overall growth in consumption.

IMPACT IN 2033: The world is hovering at the critical 1.5˚C warming threshold, but has not fully passed it.

MEANING THAT IN 2050: People who are 11-14 years old today will be in their 40s, and stepping into decision-making roles as leaders in a world that is facing "hard limits" in some regions.



WHAT MENTAL MODELS AND BIASES ARE INFORMING DECISION-MAKING IN THIS TRAJECTORY?

In the 'Shallow Gestures' trajectory, the dominant mindset is 'attempt what we can.' While efforts demonstrate remarkable ingenuity and innovation, their capacity to drive the necessary transformation might be constrained.

The financial system's primary emphasis on immediate profit generation and the policies and behaviours that reinforce it have resulted in a disconnect from the overall well-being and resilience of businesses. This short-term profit-oriented approach may be leading to decisions that prioritise immediate gains at the expense of the long-term health, stability, and sustainability of companies operating in the real economy.

Overlooking this constraint might be reinforced by a 'herd mentality bias' which leads decision-makers to evaluate actions based on peers' performance or a benchmark. The industry benchmark might reflect a less ambitious standard, impeding the necessary level of transformation. This bias persists even when aligning with peer organisations contradicts established scientific evidence regarding the associated risks of maintaining 'business as usual.'

SIGNALS OF THIS FUTURE EMERGING:

The gap between rhetoric and action was made explicit in a 2022 Ceres study.[32] In an analysis of listed companies in the S&P 100 index, nine out of every ten companies acknowledged climate change as a material risk to their industry. However, the study indicated that only half of the 100 companies disclosed that they lobbied for climate policies aligned with the objectives of the Paris Agreement in the past three years. Fewer than one in two hundred companies who submitted climate change-related data to a leading environmental disclosure platform have credible climate transition plans.[33]

Only 7% of companies are on track to achieve their net zero targets for scope 1 and 2 emissions at the observed rates of change. Moving targets to 2050 increases that share just slightly to a mere 8%. Even in a scenario where companies accelerate emissions reduction to twice the current rates in the years to 2030 and then three times after – 59% would still fail by 2050; the deadline deemed necessary to avert the most catastrophic and irreversible impacts of climate change.[34]

Evidence of companies acting in contradiction to themselves is exemplified by State Farm, California's largest homeowner insurer, whose sustainability initiatives bear the tagline 'Good Neighbors. Better World.'[35] However, State Farm recently declared its decision not to underwrite new policies in California due to concerns about 'rapidly growing catastrophe exposure.' The company, is the largest underwriter of oil and gas ventures in the United States retains fossil-fuel-related investments totalling at least $30.9 billion as of 2019.[36]

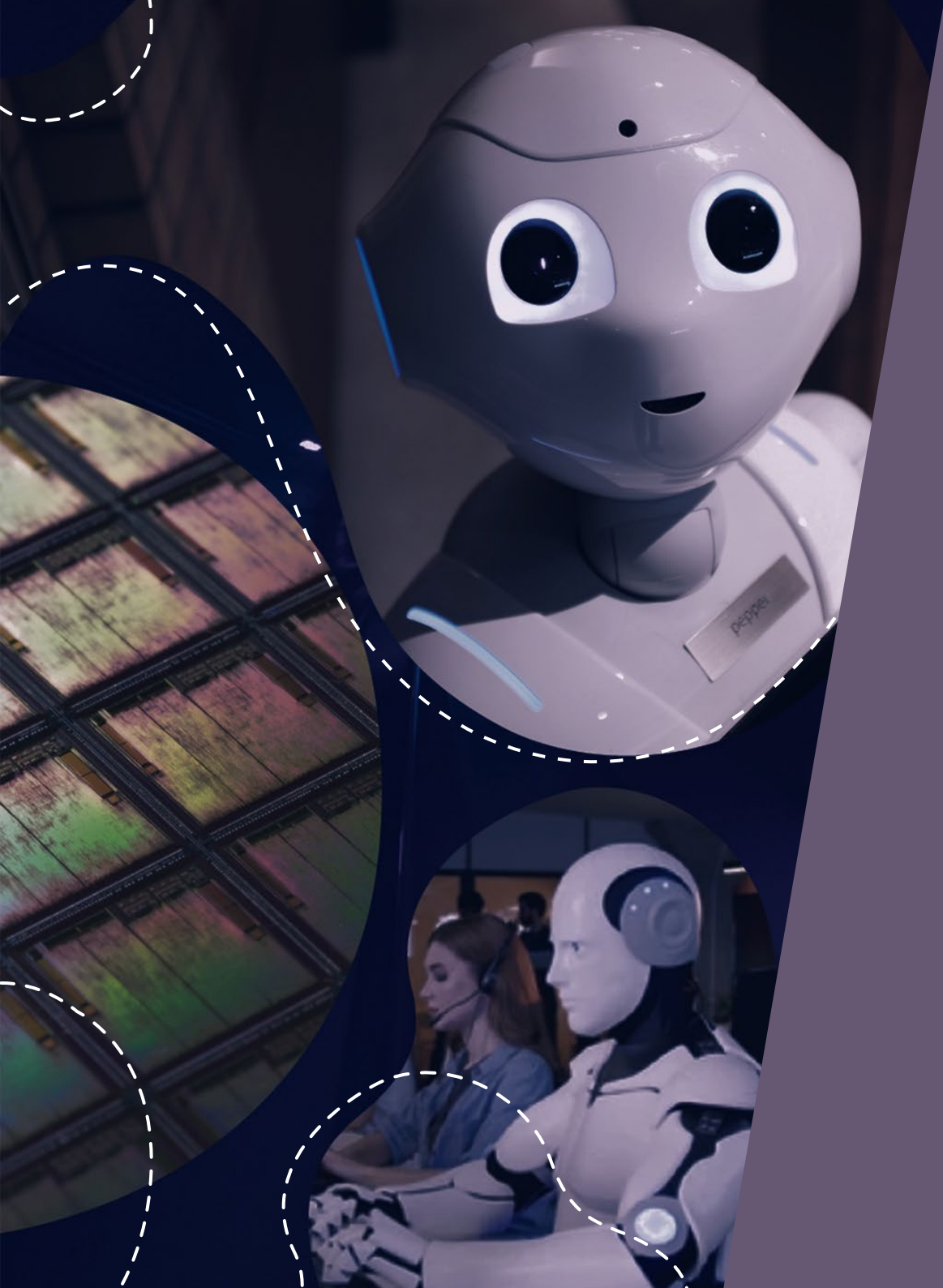
Nature-based solutions are expected to serve as significant tools for emissions reductions, however their potential can only be fully realised when they happen in tandem with efforts to reduce emissions originating from fossil fuels they will be able to achieve that potential. Nature-based solutions may not be able to survive increased temperatures. For example, a forest of mangroves along the coastline in northern Australia died due to extreme heat, rainfall shortages, and low sea levels in the summer of 2015-16. The 1,000km stretch of mangrove forest has been emitting methane at rates eight times higher than live trees.[37]

E-commerce's impact: the transportation of goods worldwide is a significant contributor to the CO_2 emissions associated with e-commerce. In 2020, the shipping and return processes of products were responsible for a substantial 37% of total greenhouse gas emissions. Projections indicate that by 2030, the number of delivery vehicles is set to surge by 36%, resulting in approximately 7.2 million additional vehicles. This expansion is not only predicted to raise CO_2 emissions by around 6 million tonnes, but it will also lead to a 21% increase in commutes as vehicles encounter greater traffic congestion and longer travel times.[38] Many of these companies are simultaneously advancing sustainability initiatives.

TECH OPTIMISM

Within the 'Tech Optimism' trajectory, businesses harness data and technology to confront environmental and social issues. This outlook carries an optimistic view, envisioning solutions as potential game-changers. Crises spur heightened innovation. Enterprises rely on agile, technology-driven platforms that emphasise quick experimentation and emerge as crisis-driven solution providers. Yet, technology's progression canal so provoke challenges such as job displacement, ethical quandaries, and underestimating the role of social cohesion in contributing to resilience.

The cascading impacts of climate change—such as heat waves, droughts, floods, as well as biodiversity loss and inequality—are anticipated and there are signals of more distributed decision-making power, authority, and influence.

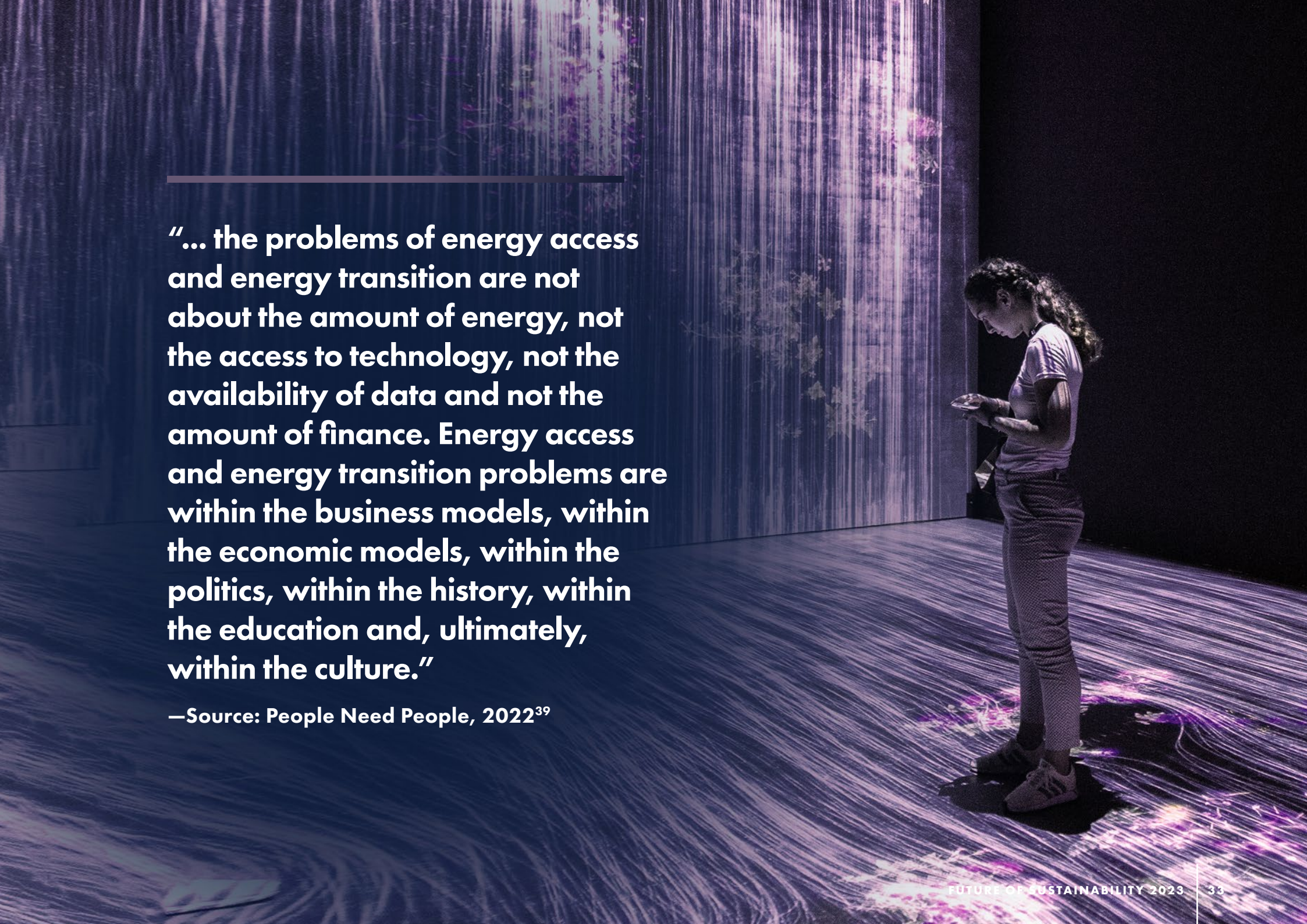


WHAT YOU MIGHT HEAR FROM PEOPLE WITH THIS MINDSET:

"There is a tech solution for every problem"

"Humanity has a long history of innovation and overcoming challenges with technology."

"We can optimise technology, boost participation, and amplify the utilisation of local and indigenous wisdom. These options can establish the nimble, adaptable systems needed to foster resilience as we navigate this time of transition."



"... the problems of energy access and energy transition are not about the amount of energy, not the access to technology, not the availability of data and not the amount of finance. Energy access and energy transition problems are within the business models, within the economic models, within the politics, within the history, within the education and, ultimately, within the culture."

—Source: People Need People, 2022[39]

UNDER THE 'TECH OPTIMISM' TRAJECTORY IN 2033

COMPANIES in a 'Tech Optimism' trajectory may continue the race to develop the latest and greatest technologies, without consideration for the potential implications these technologies might have. Ethical considerations related to data privacy, algorithmic bias, and the misuse of advanced technologies may be overlooked, this may erode trust and hinder equitable access. The lack of proper ethical frameworks might lead to unintended negative consequences. Technology could potentially exploit unfair labour practices, while data centres, especially those located in regions with access to affordable and eco-friendly power, might face scrutiny for their water consumption. Communities and companies may come into direct conflict, as communities concerned about their own water supply protest further development. Positively, technology solutions will facilitate renewable energy adoption and smart grids, aiding communities and infrastructure in addressing climate impacts. Predictive analytics, early warning systems, and real-time monitoring can potentially mitigate the risks of extreme weather events and natural disasters.

CITIZENS in 'Tech Optimism' may experience the rapid implementation of technology creating a divide between individuals within the 'tech economy' and those outside of it. Wealth and power among a few tech companies and countries may persist. Citizens may also demand for measures to address the impact on employment. The concept of 'dark data'—the digital and carbon footprint of our personal lives — may become a concern. On the positive side, digital platforms allow citizens to contribute to scientific data, participate in real-time monitoring, and increase awareness during crises and online networks facilitate the exchange of knowledge, supporting adaptive planning and localised solutions.

NATIONAL GOVERNMENTS in a 'Tech Optimism' trajectory prioritise minimal regulatory oversight on AI development and deployment, believing that innovation should be allowed to flourish without comprehensive oversight. This will make it challenging to effectively manage unethical usage and anticipate unintended consequences of tech-driven distributed governance models. Extensive citizen monitoring may infringe upon individuals' privacy rights, especially if personal data is collected and analysed without consent or safeguards. Those who have embraced a proactive, anticipatory approach will be more adept at responding to emerging challenges, for example prioritising tech education and workforce development programs in advance of the need.

CIVIL SOCIETY may assume a role in ensuring accountability among tech companies guided by the belief that genuine progress should be closely tied to benefiting humanity. There may be an increase in demand for 'public-interest technologists' – individuals who place the common good at the forefront of technological advancements. These individuals function as vigilant overseers, ensuring that technological innovations are aligned with ethical principles and uphold human rights.

FOOD TRANSITIONS in a 'Tech Optimism' trajectory may develop an over-reliance on technology that leads to a disregard for traditional and indigenous farming knowledge, which has been passed down through generations and could offer valuable insights into sustainable agriculture. Because not all regions and populations have equal access to advanced technologies, relying solely on technology may exacerbate pre-existing inequalities, leaving marginalised communities and countries behind in terms of new tech solutions. While technology will undoubtedly play a role in enhancing food system resilience, it cannot completely substitute for social cohesion, local engagement, and human adaptive capacity.

ENERGY TRANSITIONS within the 'Tech Optimism' mindset may place an overemphasis on technological solutions that might divert attention and resources away from broader systemic changes needed to achieve sustainability, such as energy conservation and lifestyle changes. Facilitating a successful energy transition goes beyond technological shifts; it demands a transformation in consumers' energy relationship. Altering consumer behaviours, attitudes, and expectations about energy usage is intricate and involves education, incentives, and cultural change.

CONSUMPTION remains high in the 'Tech Optimism' mindset with online platforms and digital payment systems facilitating e-commerce, expanding businesses' reach and revenue streams. While technologies that have aimed to reduce waste and extend the lifespan of products may grow, the underlying emphasis on continuous consumption may remain unchanged. In a tech optimism world perpetuate material extraction, production, consumption, and disposal, even within a system designed to minimise environmental impact. The rapid production and disposal of technological devices may exacerbate resource consumption and e-waste issues without an equal investment in circular economy practices. There may be signs of circularity gaining more momentum, enabled by the same platforms, given the value of materials.

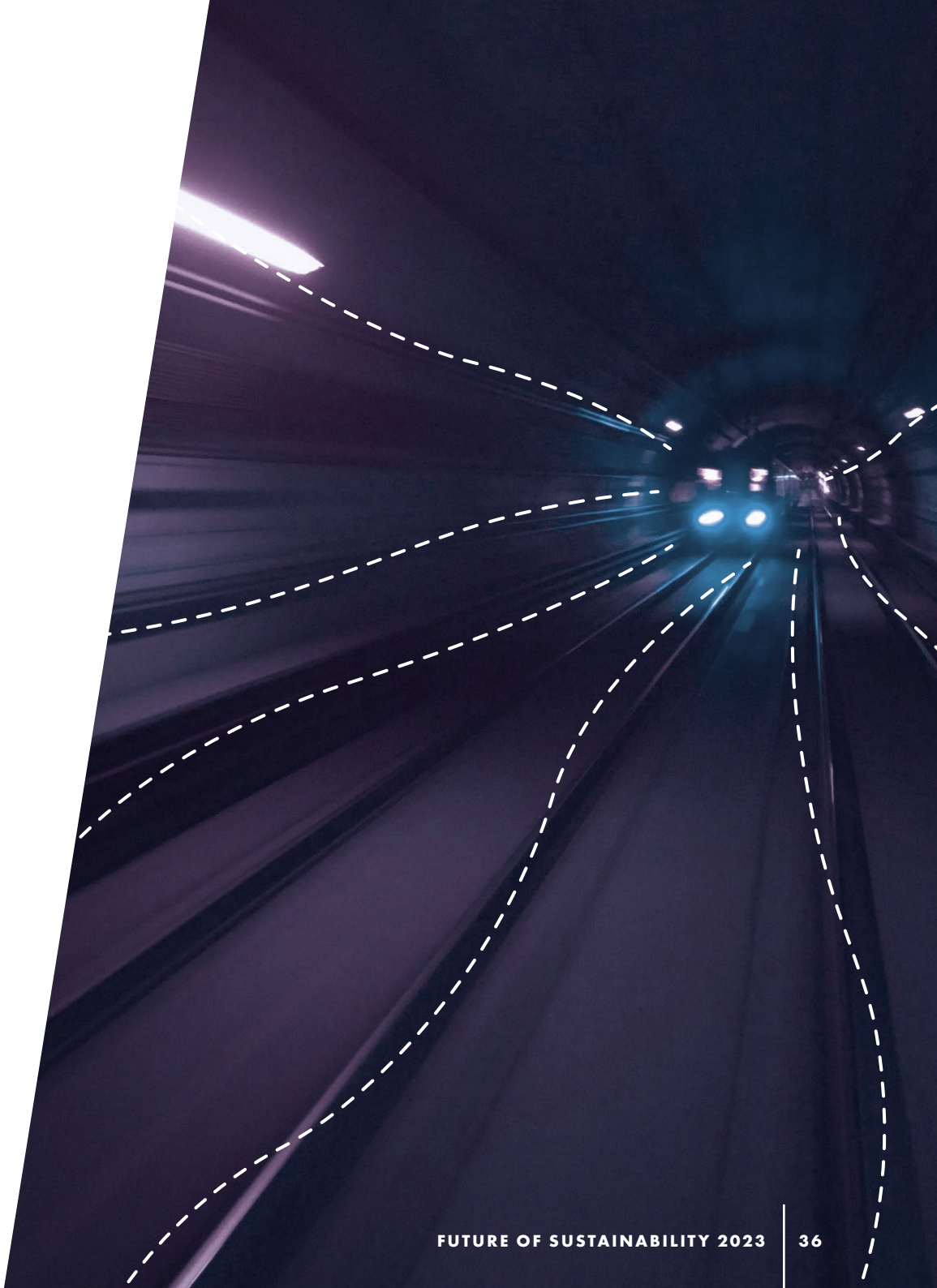
IMPACT IN 2033: Limiting global warming to below 1.5˚C has remained a challenging endeavour despite the efforts in innovation. Companies that once held a tech-optimistic view have recognized the need for a more holistic perspective.

IMPACT IN 2050: If warming is kept to 1.5˚C, the IPCC estimates that as much as 90% of all warm water coral reefs will still die off. If the temperature creeps higher, it's likely to mark the first-ever man-made extinction of an entire ecosystem.[40]

WHAT MENTAL MODELS AND BIASES ARE INFORMING DECISION–MAKING IN THIS TRAJECTORY?

Certainly, technology undoubtedly plays a significant role in addressing our challenges. However, this trajectory aims to delve into the assumptions and blindspots that can arise from an overly optimistic bias towards technology. A nuanced understanding is necessary to determine when it is appropriate and effective in addressing challenges. This mindset could be reinforced by an 'innovation bias,' which tends to give excessive weight to novel and creative solutions or ideas, often overlooking a proper diagnosis of what's truly needed and how innovation can be scaled to the benefit of many.

In this trajectory the distribution of decision-making power, authority, and influence inform how the pathway unfolds. For example a deficiency in diversity during the initial design phases of technological solutions leads to long-term bias. On the other side of the coin, we see the introduction of a new role: the 'public-interest technologist' which may be able to provide a check and balance to 'innovation for innovation' sake.



SIGNALS OF THIS FUTURE EMERGING:

With the increasing global demand for data storage and the growing scarcity of water resources, data centres will come under heightened scrutiny. More than 30% of the world's data centres are located in the United States. In Oregon a local paper fought to unearth information revealing that a Google data centre uses over a quarter of the city's water. In New Mexico, farmers protested a decision by the city to allow a Meta data centre to move into the area.[41]

On 30 May 2023, the Center for AI Safety issued a public warning about the dangers posed by artificial intelligence, signed by over 350 scientists, executives, and public figures, stating that safeguarding against AI-related risks should be a global priority on par with pandemics and nuclear war. Some of the signatories, including the CEOs of Google DeepMind and OpenAI, are from companies involved in AI's creation, making them key players in determining AI's impact on humanity.[42]

New trade patterns are emerging with a focus on micro, small and medium enterprises (MSMEs). The Monetary Authority of Singapore, Bank of Ghana and Development Bank Ghana are working together to develop the Ghana Integrated Financial Ecosystem (GIFE). According to a joint statement by the three banks, GIFE "aims to enhance financial capabilities and access for MSMEs in Ghana and generate greater opportunities for cooperation in trade and financial services between Singapore and Ghana." Over time, "it is envisaged that the integrated financial ecosystem model can serve the Asia-Africa SME trade corridor more broadly."[43]

Alternative protein can overlook broader food system issues. As it gains popularity, established food giants acquiring companies within the sector risks consolidated control and worries around inaccessibility and the affordability of more sustainable food sources. For instance, Brazilian cattle leader JBS invested $100 million in a Spanish cellular agriculture startup. This raised concerns as to whether this alternative meat company was delivering on transformation or not, due to its track record.[44] To truly revolutionise the industry, a food tech company might vet the practices of its

Small scale farmers who produce the majority of the world's food will most likely be excluded from AI related benefits with the digital divide and poor internet penetration rates. Continued marginalisation and lack of access to newer advanced technologies would leave smallholders behind in the transition unable to meet demand amidst increasing food insecurity with the lack of affordable and nutritious food.[45]

As of September 2022, nine 'global core' tipping elements and seven 'regional impact' tipping elements have been identified. Out of those, one regional and three global climate elements are estimated to likely pass a tipping point if global warming reaches 1.5˚C namely Greenland ice sheet collapse, West Antarctic ice sheet collapse, tropical coral reef die off, and boreal permafrost abrupt thaw.[46]

COURAGE TO TRANSFORM

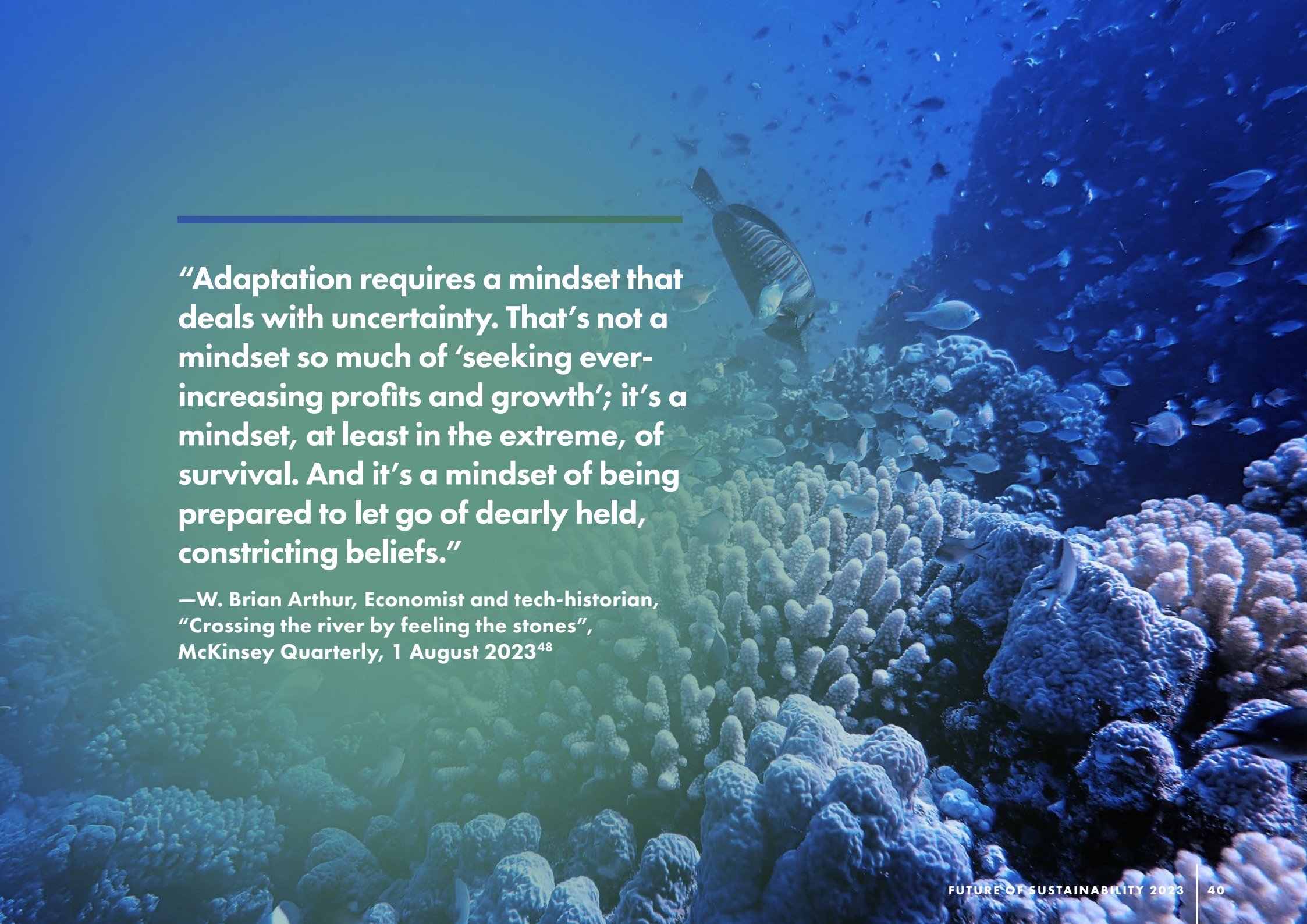
In the 'Courage to Transform' trajectory, businesses respond by creating value inways that provide solutions to ecological and social challenges. Businesses, governments, financial actors and civic leaders step forward to accelerate the emerging paradigm shift: continuing to prioritise profit at the expense of human and planetary well being is no longer tenable. While there is no blueprint, market actors are beginning to take action to address root causes. The cascading impacts of climate change—such as heatwaves, droughts, floods, as well as biodiversity loss and inequality—are anticipated and resources are being allocated to prepare for them. Decision-making power, authority, and influence are a core ingredient in transformation, contributing to long-term resilience.

WHAT YOU MIGHT HEAR FROM PEOPLE WITH THIS MINDSET:

"We realise now we've been bank-rolling our own risk for decades."

"We made the rules. We realised that we can change them!"

"Transformational change seems to be as much about unforgetting intentionally forgotten histories as it is innovating new solutions."[47]



"Adaptation requires a mindset that deals with uncertainty. That's not a mindset so much of 'seeking ever-increasing profits and growth'; it's a mindset, at least in the extreme, of survival. And it's a mindset of being prepared to let go of dearly held, constricting beliefs."

—W. Brian Arthur, Economist and tech-historian, "Crossing the river by feeling the stones", McKinsey Quarterly, 1 August 2023[48]

UNDER THE 'COURAGE TO TRANSFORM' TRAJECTORY IN 2033

COMPANIES in the "Courage to Transform" trajectory have aligned the purpose of their businesses to create value in ways that provide solutions to environmental and social challenges. Family businesses, driven by a commitment to long-term well-being, may take the lead in demonstrating alternative governance models. For instance, individuals like Yvon Chouinard of Patagonia, who shifted ownership of his company to a non-profit to address climate change. New approaches to financial accounting and valuation methods might be adopted. They could be based on the principle of 'resilience indicators', a ratio that assesses the balance between short-term profits and investments in long-term resilience. Companies credit ratings might be linked to these ratios. Companies unable to align profits with resilience might then restructure their business models to do so. This shift might prompt financial investments and capital allocation to adopt a more patient capital approach.

Companies might have leveraged their influence to transform their operational landscape and prompted open discussions on a pathway to change the goals of the economic system. They may have adopted anticipatory approaches with supply chain partners to build resilience, fostering collaborative risk assessment and preparedness across the supply chain. Due to this businesses may have evolved to more of a networked ecosystem using platforms to foster collaborative structures that generate value and drive innovation in new ways.

CITIZENS might have learned to leverage a legal system to file suits against governments for violating their right to a healthy environment and future generations might now be given individual and collective

human rights. As shareholders, citizens might wield financial influence to promote long-term resilience, all while retaining their activist stance.

NATIONAL GOVERNMENTS might have implemented more progressive policies to reduce emissions and create the certainty the market needs to make the transition. Absorbing the impacts of natural disasters, civil unrest, and high unemployment. Governments may have experimented with new economic approaches, rooted in the principle of prioritising resilience over growth. The principles might encompass a collection of policies and investments tailored to support locally-driven economies, enhance investments in climate-resilient infrastructure, investments in nature-based solutions, and employment programs to support the implementation of these initiatives.

CIVIL SOCIETY'S ROLE may begin to shift from challenging the status quo to actively engaging in shaping the transition to a just and regenerative world. This may include facilitating collaborative platforms that bring together businesses, civil society, and academia to share knowledge and to prototype innovative ideas for the new operating context. Citizens begin to find access and agency to legal mechanisms to sue organisations to ensure action.

ENERGY TRANSITION: A faction of oil and gas industry leaders may step away from the pack to share their exit strategies from the industry. Their proposed solutions could be fortified by innovative financial instruments to support those impacted by the transition out of fossil fuels. Their industry acumen, combined with their clarity of purpose, might set in motion a new narrative for the industry. These fossil fuel mavericks could emerge as unexpected heroes. Financial capital is flowing to distributed energy grids that enhance biodiversity and are rights respecting. Responsible energy companies, with a clear view on the limited resource, may position early to develop circular supply chains for recovering minerals and other valuable resources.

THE FOOD TRANSITION may develop low cost and sustainable nutrition solutions while also strengthening the broader food system through regenerative approaches. Local food systems might gain prominence, while innovative land use approaches that focus on usage rather than ownership could surface. Emission reduction payments for nature restoration may persist as an effective and replicable method to restore the environment. Despite ongoing drought and heat challenges, proactive steps are taken to mitigate their effects. Community-centered Innovation Labs are emerging as a means to foster local resilience.

CONSUMPTION patterns may shift in response to the experience of living in new climate realities. Consumption begins the shift towards a sharing economy. People are sharing their belongings and forming connections with neighbours, offering stability amid uncertainty. The new generation values empathy and well-being over material possessions.

IMPACT IN 2033: After surpassing the critical 1.5˚C threshold in the mid-2020s, a glimmer of hope emerges in 2033 as the IPCC confirms a stabilisation of emissions. The journey to this point has been arduous and not without sacrifices. But the news from the IPCC marks a paradigm shift, a new confidence in what we're able to achieve, together.

AND WHAT THAT MEANS FOR 2050:
The world has avoided most critical tipping points. Nature reclaims its balance and restoration takes hold.

WHAT MENTAL MODELS AND BIASES ARE INFORMING DECISION-MAKING IN THIS TRAJECTORY?

The mindset in 'Courage to Transform' is one that applies a proactive forward-thinking approach to addressing challenges. It is characterised by a willingness to disrupt the status quo and to collaborate across sectors and disciplines towards a shared solution. It recognizes that transformation begins by recognising what isn't working about the existing financial and economic structures and begins to leverage its agency to influence the broader operating context.

In this trajectory, the distribution of decision-making power, authority, and influence plays a role in shaping the trajectory's evolution, and is evidenced by new governance models like land-use and shared land-ownership. There is a trend toward more distributed decision-making power, authority, and influence in this trajectory, such as Gojek offering shares to their drivers.

This mindset might be reinforced by a bias towards social responsibility, inclusivity, and a belief in the importance of considering broader societal impacts.

SIGNALS OF THIS FUTURE EMERGING:

A signal of citizens leveraging human rights comes from Montana, United States: 16 plaintiffs, aged 5 to 22, had alleged the state of Montana's pro-fossil fuel policies contributed to climate change and violated their right to a healthy environment because of fossil fuel development and won.[49]

The rights of future generations were recently included in the application of human rights with their integration into the Maastricht Principles. While not legally binding, the inclusion of the rights of future generations is expected to support landmark cases, including 'climate lawsuits' against governments and businesses.[50]

With regard to new mechanisms to restore nature, a tide of financial mechanisms are being designed to address climate and biodiversity challenges, and there are signals that results-based climate finance, such as payments for emission reductions, is working. This mechanism incentivises climate action and helps countries achieve their Nationally Determined Contributions to the Paris Agreement. As one example, Costa Rica is a leader in using financial levers to promote conservation and climate change action. Carbon tax revenues are being used to fund forest preservation and sustainable development.[51]

On anticipating the value of circular supply chains, Redwood is revolutionising the battery supply chain by providing substantial sources of domestic anode and cathode materials. These materials are derived from a growing volume of recycled batteries that are reintegrated directly into US cell manufacturers' processes.[52]

On community centred innovation labs, Mars initiated the Farmer Income Lab (FIL) to focus on strategic sourcing and engagement with smallholder farmers. By understanding their diverse needs and obstacles, companies can create tailored initiatives that align with corporate objectives and uplift these farmers. The 'Farmer Segmentation' concept offers guidance on effectively supporting smallholders in global supply chains. It highlights the initial steps and real-world instances where segmentation enhances both business outcomes and the well-being of smallholder

There are signals that power dynamics in the supply chain are changing. Sustainability legislation in the EU, US, and UK has been called out for its lack of supplier engagement in developing the regulations. Production and supply chain actors can help ensure a rights-based approach to avoid reproducing inequities in the past.[54]

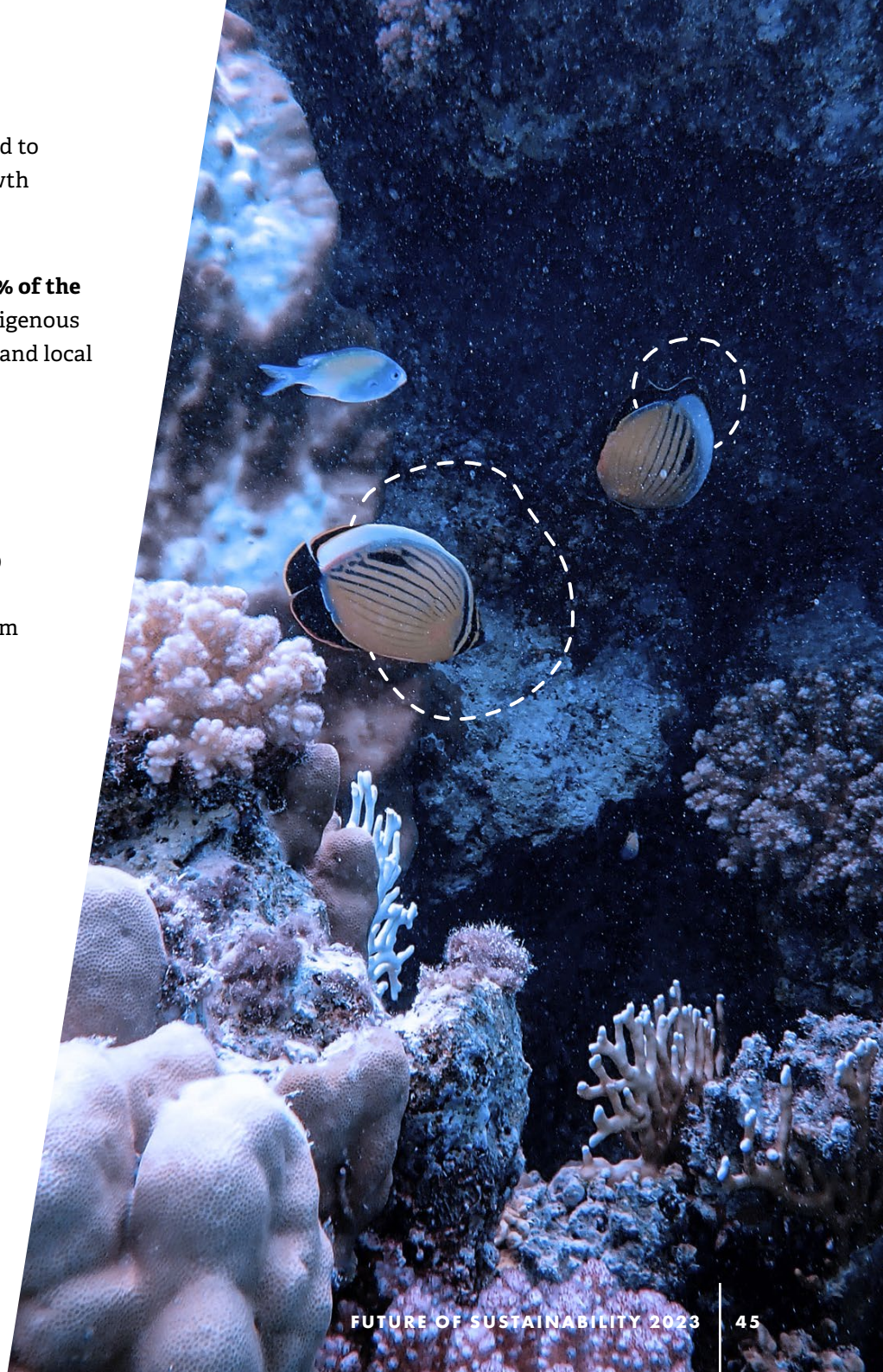
In support of ecosystem building, GoTo, the result of a merger between Gojek and Tokopedia, granted shares to about 600,000 drivers during its 2022 initial public offering (IPO), totalling over $20 million. This marks a significant moment as the first instance of a Southeast Asian sharing-economy giant including gig workers in its IPO incentives. GoTo's successful stock debut garnered $1.1 billion, recognising the valuable input of driver-partners and reflecting the increasing global attention on gig worker rights.[55]

The sharing economy is growing. According to Brookings, the sharing economy is estimated to grow from $14 billion in 2014 to $335 billion by 2025. This estimate is based on the rapid growth of Uber and Airbnb as indicative.[56]

On shifting land-ownership models, for centuries, Indigenous peoples, who account for 5% of the world's population, have tried to protect and care for 80% of the world's biodiversity. Indigenous peoples and local communities are now managing more land. Indigenous, Afro-descendant and local communities' land cover increased by 102.9 million hectares from 2015 to 2020.[57, 58]

As an exemplar of family-owned business leadership, Patagonia is integrating purpose into its corporate governance. Valued at approximately $3 billion, the company has placed ownership within a specially structured trust and nonprofit entity. These measures ensure the company's independence and guarantee that its substantial yearly profits of about $100 million are channelled toward tackling climate change and preserving undeveloped lands globally. Patagonia's founder, Yvon Chouinard, said, "Hopefully, this will influence a new form of capitalism that doesn't end up with a few rich people and a bunch of poor people."[59]

On resilient innovation at the grassroots level, Bangladesh relies on hundreds of people, not scientists, to monitor water levels at rivers, streams and reservoirs across the country. The system alerts people before the floodwaters arrive, allowing them to get out of danger. This effective human communication chain relies on high-tech forecasting and low-tech relationships. The government recently signed a deal with Google to expand this service. According to NPR, Saleemul Huq, director of the Bangladesh-based International Centre for Climate Change and Development, said, "I tell my American friends, 'You should send your sceptics to Bangladesh!' We have gone through the doom and gloom phase. Now, it's all about solutions."[60]



WAYS TO USE THE TRANSITION TRAJECTORIES:

Change is inherently a social endeavour intricately linked to shifts in attitudes, behaviours, and collective perceptions. The Business Transition Trajectories are a structured framework that can be used to engage individuals, organisations and sectors, in better understanding the external context. This exploration not only fosters a deeper understanding of the repercussions of current decisions but can also ignite a sense of urgency and commitment to instigating meaningful change —and potentially break through the inertia that often impedes change by introducing alternative narratives that challenge traditional perspectives.

- For more information on how to use these scenarios you can download the accompanying Courage to Transform slide presentation.

EXPLORING HOW YOUR ORGANISATION MAY RESPOND TO THESE TRAJECTORIES BY ASKING:

- What trajectories resonated with you as being true? Is there a mindset you find more dominant in your organisation or sector?
- Using any of the trajectories as a case-study, how might changing decision-making power, authority, and influence longer term outcomes in that scenario?
- What behaviours contributed to more risk? Which contributed to more resilience?
- Can you imagine the world operating with an economic model with broader indicators than growth in another 20 years? If it were possible, what would need to be done today to prepare for that future?
- What struck you about the 'Courage to Transform' strategy that might be difficult, or easy?

03

FIVE PRINCIPLES TO TRANSFORM THROUGH CRISIS

"What if the urgency is not in how quick we respond, but how deep?
What if the slow, deep work of collective unlearning, or making space for different ways of being and thinking together, or taking the time to value different cultures through practice rather than words, is how we address the source of our interconnected crises, not just their symptoms?"[61]

—Sophia Robele, Development Practitioner, *"When urgency resides in the slow, quiet, and invisible"*

The following Five Principles to Transformation offer a guide for those leading change through crisis. By embracing a shift in mindset, focusing on proactive preparedness, addressing root causes, shaping the operating context, adopting agile governance, and incorporating bias awareness in decisions about risk, businesses can enhance their ability to navigate challenges, drive innovation, and shift their purpose to create a more resilient future.

Transformation amidst a crisis cannot be done alone. Systemic challenges require systemic approaches. Collaboration with the broader operating system including suppliers, customers, competitors, civil society, financial actors and governments will be essential. Collectively we can build the capacity to navigate the decade ahead.

1. Shift from a risk mitigation mindset to a transformational mindset.

Prepare for crises so that when they happen, individuals and organisations are able to adapt in ways that 'raise the bar' and restart the organisation from a better position.

2. Shift from addressing the symptoms of the crisis to addressing the root cause of the crisis.

Keeping the underlying causes of crises at the forefront of internal, public and policy spaces to ensure that action aligns with addressing root causes.

3. Shift from passively responding to your operating context to actively shaping the context.

Increasing your agency to influence a more transformative operating context. Businesses can influence the enabling conditions around this including policy, market system norms, citizen and stakeholder expectations, and consumer aspirations.

4. Shift from slow centralised decision-making authority to more agile distributed governance models.

Distributed governance can be an important factor in bolstering resilience, by dispersing decision-making authority. Effective responses rely on empowering those nearest the situation. Their authority and contextual insight allow tailored reactions.

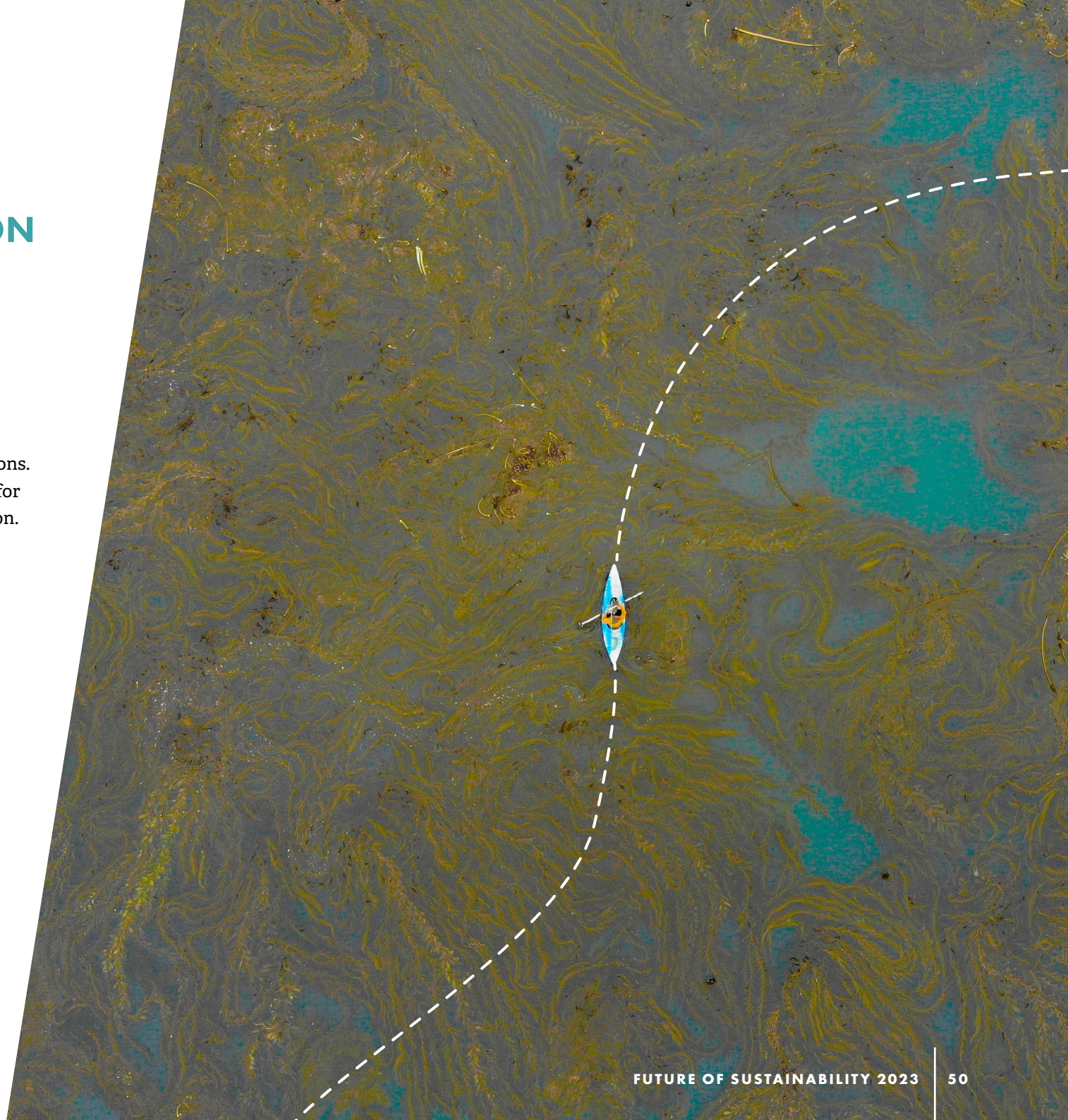
5. Shift from an assumption that we are exempt from bias in how we assess risk to incorporating bias awareness into decisions around risk.

Current risk assessment and mitigation approaches tend to undervalue how our cognitive bias informs how we understand and prepare for risks.

01

FROM A RISK MITIGATION MINDSET TO A TRANSFORMATIONAL MINDSET

A ‘risk mitigation’ mindset aims to strengthen the current state in preparation for potential disruptions. In contrast, a transformational mindset prepares for crises to enable a restart from an improved position.



ACTIONS TO TAKE

DEVELOP AN ANTICIPATORY MINDSET AS PART OF REGULAR BUSINESS ROUTINES:

Decision-makers will be better equipped to make bold decisions when unexpected events occur if they have the opportunity to 'game out' some of the future uncertainties. In the IKEA case study on page 56 Ludvig Liljekvist shares how IKEA no longer sets specific annual business goals but instead uses 'scenarios' to navigate disruption throughout the year. Monitoring trends, threats, and signals of change, builds the capacity to respond to change.

REVIEW THE BUSINESS MODEL ON A LONG-TERM HORIZON:

When considering long-term risks, how the company creates 'value' may need to transform, particularly for carbon-intensive businesses. Design transition plans for greenhouse gas (GHG) intensive business models in a way that allows for the emergence of new ways to contribute to resilience while intentionally and carefully phasing out the existing model.

PREPARE FOR EVENTS SO THAT YOU RESTART FROM AN IMPROVED POSITION:

Instead of merely avoiding risks, see challenges as opportunities for growth and positive change. Develop, or co-develop, a clear vision of where you want to be in the future. Use scenarios to understand how the landscape might change, identify opportunity areas, and when change happens you'll be prepared. Create an environment where diverse perspectives are valued, and collaboration drives innovation.

MEASURE WHAT WE VALUE:

Transition from evaluating impact through a singular metric to employing indicators that gauge the overall health and functioning of a system. The Coca-Cola case study provides an additional example on page 62: Wouter Vermeulen, Senior Director shared: "When we started, water replenishment was a volume metric. Now we know there are more quantifiable shared benefits for ecosystem restoration...flood protection, public health, local economic growth."

02

FROM ADDRESSING THE SYMPTOMS OF THE CRISIS TO ADDRESSING THE ROOT CAUSES OF THE CRISIS

In the 'Profit Supreme' trajectory, the government, lacking an anticipatory approach, directed resources towards alleviating the symptoms of climate crisis and inequality instead of addressing the root cause. Amid ongoing crises, public focus shifts towards event impacts rather than the underlying problems. To foster enduring resilience, it's crucial to persistently address root causes and make sure they are actioned.

ACTIONS TO TAKE

DIAGNOSE THE SYSTEM TO IDENTIFY ROOT CAUSES:

Diagnosing a root cause means finding the main reason behind a problem. To do this, start by clearly describing the problem and collecting information. Keep asking 'why' to understand deeper reasons. Identify opportunities in specific business functions to shape citizen and consumer aspirations through marketing, communications, and product/service innovation.

BE SURE TO INCLUDE HISTORICAL CONTEXT:

Incorporate historical context into your futures' practice. Through comprehending historical injustices, marginalised perspectives, and systemic biases, we unveil how past choices have shaped today's organisational structures and practices. This comprehension empowers us to more effectively promote equitable and regenerative solutions as crises emerge, while also reducing the potential of reverting to outdated practices.

USE 'ACUPRESSURE' OR LEVERAGE POINTS IN YOUR OPERATING CONTEXT TO UNLOCK CASCADING CHANGES:

Enhance your ability to address challenges by moving beyond surface symptoms and address the dynamics and structural challenges that are creating the problem. Through careful analysis, you can determine the points in the system where making changes will create more than one positive impact.

FOSTER A CULTURE OF CONTINUOUS LEARNING:

Embrace a culture of learning and agility to quickly respond to unexpected situations. Foster an atmosphere where individuals feel at ease taking risks and participating in bold conversations that challenge established norms within the organisation, even at senior management levels. Nurture an environment where it is safe to experiment, to fail, to question the status quo and to explore new approaches.

03

FROM A PASSIVE APPROACH OF RESPONDING TO YOUR OPERATING CONTEXT TO PROACTIVELY INFLUENCING YOUR OPERATING CONTEXT

Transitioning from a passive approach of reacting to your operating context to actively shaping it is a hallmark of the 'Courage to Transform' trajectory. In this path, businesses enhance their resilience by taking the initiative to influence their operational context. This becomes particularly important in addressing risks such as climate change, which necessitate collaborative efforts.

ACTIONS TO TAKE

MAP CONNECTIONS AND FEEDBACK LOOPS TO UNDERSTAND WHERE TO INTERVENE:

Develop a comprehension of the interlinked systems that envelop your business operations. Examine how climate change and other risks influence different facets of your activities, supply chain, stakeholders, and the larger environment, considering both social and operational viewpoints. This perspective can improve decision making and risk management. By recognising how climate change impacts various aspects, from operations to stakeholders, you can embrace sustainability, seize innovation opportunities, and engage stakeholders effectively.

FRAME THE NARRATIVE:

Assist both the general public and policymakers in drawing clear links between the visible signs of environmental and social risks and their root causes and the actions that need to be taken to address the root causes, not just the symptoms. French TV stations, for example, are now adding climate change context to all of their weather forecasts.[62]

CLOSE THE CLIMATE RISK TO POLICY ACTION GAP:

Businesses can foster long-term resilience through advocating for climate-resilient policies and biodiversity conservation. Engaging in policy discourse, partnering with governments, and affiliating with industry groups enable businesses to shape regulatory frameworks, thereby influencing the operational landscape for greater resilience in the long-term.

CREATE COLLABORATIVE PARTNERSHIPS:

Forge partnerships with other businesses, research institutions, and organisations that share your vision for influencing the operating context. Collaborative efforts can amplify your influence and lead to collective impact. Businesses can initiate conversations and collaborations with industry peers, stakeholders, and experts to build consensus around the need for new ways of measuring value. Collective efforts carry more weight and influence.

CASE STUDY: CATALYSING BOLDER DECISIONS AT IKEA

Instead of setting out specific goals for the year, Ingka Group, (IKEA) has developed a set of "scenarios" to give the business room to manoeuvre as the outlook changes. It means acknowledging that widely different outcomes are possible. "It's teaching us agility in how we operate," said Jesper Brodin, CEO of Ingka Group (the largest IKEA retailer which represents about 90% of IKEA retail sales) in an article in the Financial Times.[63] Meanwhile, supply chain disruptions improved more quickly than anticipated, leaving the group with more inventory and, in turn, the need to lower the prices of some of its products. "We are celebrating that things are going in the right direction," said Brodin, "but we have no concept of predicting with precision what's going to happen in 6 to 12 months."[64]

We spoke to Ludvig Liljekvist, who leads insight and foresight at Ingka Group's strategy and innovation department, to learn more about what this looks like in practice. Ludvig is an expert in using world building, design fiction together with established and emerging design and storytelling techniques to raise ambitions for creating a better future for many. Ludvig shared that yearly Ingka Group uses scenarios and world building techniques as part of informing and developing strategies and innovation for transformation. Collectively they explore different potential futures based on a three to 10-year beyond horizons and decide what are some of the big moves will be or we need to make. For the more dynamic issues, like technology, they will track more change frequently.

Ludvig spoke passionately about how futures thinking can build the capacity for bold decisions for a more resilient and regenerative future:

"We now design bespoke processes and toolkits for our teams, so that the agency is switched to others to develop their own vision, wished position. Futures raises the confidence of making those bold decisions towards creating a better everyday life for the many people. It's still around competition, but it's also around purpose because we know from research what the main driver of trust is for the IKEA brand: it's our commitments to people and planet. So, if we can make sure they know they can make the case for changing the future for the better – well, then you get the entrepreneurs going in the company. Then it's not a futurist telling them what they can do, it's them realising what they can do, and that's much more powerful."

04

FROM SLOW CENTRALISED DECISION-MAKING AUTHORITY AND RESPONSIBILITIES TO MORE AGILE DISTRIBUTED GOVERNANCE MODELS

In volatile contexts, swift and effective responses depend on empowering individuals close to operational situations. Their authority and contextual insight allow tailored responses. In times of stability, standardised responses were sufficient, but now, rapid decision-making is becoming more important. Distributed governance, a decentralised decision-making approach, involves shared responsibilities among multiple entities, promoting inclusive and collaborative management. This inclusivity enhances collective problem-solving, leading to rapid adaptation and agile responses, ultimately fortifying the system's resilience.

ACTIONS TO TAKE

MAKE COLLABORATION AND COOPERATION KEY PARTS OF THE BUSINESS MODEL:

Business can act as a 'scaling and enabling' agent through cooperation, collaboration and especially innovation during a crisis. Develop long-term relationships with suppliers and local communities in ways that give them collateral to engage in financial markets, transparent information over supply chain mechanics, ownership of their intellectual property, and a voice on how contracts are shaped and adapted.

INTRODUCE MORE INCLUSIVE DECISION-MAKING ACROSS THE SUPPLY CHAIN:

Embed the value of biodiversity and ecosystem services into business models and decisions to support systems to thrive and recognise that businesses cannot thrive without them. The Dutch Central Bank became the first central bank to track biodiversity as a material financial risk. This action revealed that 36% of the portfolio values of the Dutch financial institutions were exposed to nature-related risk.[65]

CO-DEVELOP CONTEXT-SPECIFIC RESILIENCE:

Partner with communities to create context-specific solutions for carbon sequestration, biodiversity protection, water management, hazard management and livelihood resilience. Reframe farmers and producers from low-paid providers of unprocessed goods to stewards of land, generating multiple social, environmental, intellectual and commercial values by rewarding their work to build natural capital. Create incentives to enable better stewardship, e.g., technology transfer, higher premiums, and weather insurance subsidies.

CASE STUDY: INVESTING IN THE ECOSYSTEM WITH MONICA OUDANG AT GOTO IMPACT FOUNDATION

Forum interviewed Monica Oudang, Chairperson GoTo Impact Foundation and Tanah Sullivan, Head of Sustainability at GoTo Group, about what has enabled Gojek's resilience in the face of crisis.

PT Gojek Indonesia, stylized as gojek, is an Indonesian on-demand multi-service platform and digital payment technology group based in Jakarta. Originally established in 2009 as a call centre for courier delivery and ride-hailing services, Gojek has evolved into a super app with over 20 services operating across Southeast Asia and with a current valuation of US$10 billion. Gojek launched the Anak Bangsa Bisa Foundation at the beginning of the pandemic to promote equality and sustainable livelihoods for individuals dependent on daily earnings. On 17 May 2021, Gojek and Tokopedia announced the completion of their merger and established a new holding company called GoTo. As part of its US$1.1 billion (S$1.5 billion) Indonesian IPO, GoTo gave away thousands of shares each to 600,000 Gojek drivers, setting a precedent for Southeast Asia's sharing economy. GoTo Impact Foundation (GIF) is an impact catalyst organisation, combining the compassion of foundations with the innovation spirit of social entrepreneurs. Established by GoTo, the foundation's mission is to build innovation ecosystems to mobilise and deploy people, capital, knowledge, and expertise to tackle Indonesia's intractable challenges such as waste management and digital inequality in Indonesia and beyond.

Investing in a solution ecosystem, not a start-up:

"I would like to highlight trust. When you have trust in an ecosystem you can rally things faster and have agility. Our drivers and merchants worked in the spirit of mutual collaboration. We believe to build an ecosystem you need trust, mutual collaboration, and participation with all. In order to make something work and in order to create systemic change, we fund the 'solution ecosystem' – not the start-up and not the CEO. We need all these organisations to work together and to make sure everyone has an equal seat at the table in order to build a resilient ecosystem." —Monica Oudang, Chairperson GoTo Impact Foundation

Thriving in a Volatile Uncertain Complex Ambiguous (VUCA) world:

"We've always lived in a VUCA world! It just becomes a part of us how we think and how we behave. It becomes ingrained in how we approach problems. Scenario planning? It just happens automatically. I think the number one thing that makes us different, however, is that we are brave in making decisions. Clarity is one of the most expensive currencies to have here, but it doesn't keep us from taking risks and making brave decisions." —Monica Oudang, Chairperson GoTo Impact Foundation

05

FROM AN ASSUMPTION THAT WE ARE EXEMPT FROM BIAS TO INCORPORATING BIAS AWARENESS INTO DECISION MAKING

Bias was a consistent factor shaping decision-making across all trajectories. Specifically, in the first three trajectories, there were instances where bias influenced decision-making regarding risk, in ways that actually resulted in vulnerabilities to long-term resilience. The United Nations Office for Disaster Risk Reduction, an organisation with the sole aim of helping decision-makers understand and act on risk, asserts that one of the key factors missing from current approaches to risk mitigation is that we do not factor in how human minds make decisions.[66]

Biases significantly influence decision-making and can distort the way information is processed and choices are made. This happens because people might have opinions or preferences that influence how they think and make decisions. Sometimes bias is obvious and intentional, but other times it's subtle and happens without someone even realising it. Biases can become even more acute in highly changeable, high-stress environments and can influence decisions in damaging ways.

ACTIONS TO TAKE

Explore bias training through an environmental and social crisis lens to increase awareness of various biases and prejudices that can impact decision-making and risk assessment. This type of training is especially key to understanding perception and risks.

BIAS	HOW IT INCREASES RISK AND UNDERMINES RESILIENCE
The 'herd mentality bias' pushes people to follow peers' performance, even when evidence warns of higher risk from complacency.	When decision-makers unquestioningly 'follow the crowd' regarding climate information, it can cause delayed responses and lock in irreversible changes.
'Optimism bias' refers to the inclination of individuals to perceive the world as less risky than reality or to downplay the significance of risks to themselves.	The prevalent outlook on risk (and notably more so for longer risk) is the assumption that 'it won't happen to me.' This can hinder financing to build resiliency.
The 'trade-off bias' is the tendency to see the changes required today as losses rather than future gains for resilience.	The trade-off bias leads to resistance to taking actions that incur economic losses in the near term, even if they are essential for mitigating long-term.
'The next generation will solve it' is the tendency to believe that the next generation will disrupt the status quo.	The science is clear. People need to lead disruption and transformation now with immediate and collective steps to mitigate the impacts of climate change.
'Carbon myopia' is the tendency to focus exclusively on reducing carbon dioxide (CO_2) emissions as the sole solution to climate change.	Carbon myopia refers to a narrow or shortsighted focus solely on carbon emissions reduction, often to the exclusion of other important environmental and sustainability considerations.

CASE STUDY: 'MEASURING WHAT WE VALUE' WITH WOUTER VERMEULEN AT COCA-COLA

The Coca-Cola Company is an important commercial water consumer globally. Working in partnership with community organisations and NGOs, it has invested alongside the Coca-Cola Foundation in water regeneration projects across Europe, ranging from wetland and marshland restoration to establishing non-conventional water resources to improve water security.

Wouter Vermeulen, Senior Director, Sustainability & Public Policy Europe, The Coca-Cola Company, spoke at the Reuters Responsible Business event in London in June 2023.

"When we started, water replenishment was a volume metric. Now we know there are more quantifiable shared benefits for ecosystem restoration... like flood protection, public health, and local economic growth."

The Coca-Cola Company worked with partners and stakeholders to pilot a standardised methodology for accounting the ecosystem service benefits of water replenishment in economic terms, with the goal of encouraging further private-sector investment. The pilot projects demonstrate that in various contexts, water restoration can not only enhance a variety of ecosystem services but also offer benefits such as carbon sequestration, improved water quality, flood protection, recreation, and provision of food and raw materials. This demonstrates the ability to have a positive return on investment for society, with ecosystem service benefits of "paying back" the original investment in a limited period of time.[67]

04 CONCLUSION

“Inside the word “emergency” is “emerge”; from an emergency new things come forth. The old certainties are crumbling fast, but danger and possibility are sisters.”

– Writer, historian, and activist Rebecca Solnit, “Hope in the Dark”, 2016[68]

CONCLUSION

In conclusion, we would like to highlight a quote from our interview with Pamela Mar, Managing Director, Digital Standards Initiative:

"No one is saying what they are doing is wrong, but it's clear that many actions today are good but inadequate to the scale of the challenge. The issue is that there's no clear vision for what's next. It's like fog, which means that none of the traditional business planning methods can apply. So we resort to the incremental. Everyone has the five incremental actions they can do until they figure out what that vision really looks like."

We know that the systems we're working within were crafted for distinct purposes and no longer align with our present requirements. A redesign is overdue, yet the path forward remains elusive, as Pamela aptly puts it, a fog. In the face of a 'fog', inertia can easily set in, especially as the current system places a high value on us being 'busy.' Nonetheless, the moment requires that we take immediate action.

The first three trajectories, Profit Supreme, Shallow Gestures and Tech Optimism, share what might go wrong in the decade ahead, while the fourth trajectory, the Courage to Transform, asks you to imagine what might happen if things go right.

There are good reasons to imagine what might *go right*.

Despite the potential for despair with the news of crossing the 1.5˚C threshold, conditions may be converging to facilitate a paradigm shift. A climate-educated generation is entering the workforce. Emerging technologies are unlocking innovation, collaboration, and democratised access. The deadly outcomes of an economy fixated on growth as the sole measure of progress are getting harder to ignore. By harnessing our imaginative capacity, perhaps we can clear that fog. We can design systems that cater to what we need today to yield outcomes that are both equitable and regenerative.

This report offers insights into our current situation, approaches for transforming through crisis, and an invitation to imagine better futures. While just touching the surface of current and future complexities, its goal is to stimulate new connection and informed action toward a just and regenerative future amidst the next decade's challenges.

05

FORUM FOR THE FUTURE

FUTURES CENTRE

The Futures Centre is Forum for the Future's creative hub for utilising applied futures to facilitate a proactive approach to integrating principles of justice, equity, universal rights, and resilient ecology as we enter an age of transition. We help people take action during uncertain times by exploring potential future scenarios, and considering various trajectories and their implications. Our open and participatory web platform, www.thefuturescentre.org, showcases how Forum applies futures thinking to cultivate just and regenerative transitions in energy, food, and the purpose of business and allows you to contribute your own signals of change.

For organisations interested in embedding futures thinking we offer futures coaching, bespoke programmes, and horizon scanning and trend monitoring for critical issues in the context of a just and regenerative future.

Across 2023-2024, the Futures Centre is exploring how applied futures can unlock proactive action in the following areas:

Future-fit Value Chains: How can value chains become more resilient, fairer and support thriving communities and landscapes?

Transforming Consumption: What are the business models, cultural shifts, and equity considerations that can radically reduce our consumption of finite resources, while enabling everyone to enjoy a good life?

Shifting Economic Paradigms: The market system is underpinned by economic paradigms that have been in place only since the last World War. What role might the private sector play in shifting the world toward models that better serve today's needs?

The Future Land Crunch: What emerging innovations could help resolve the competing demands on land and what do they tell us about the future of sustainable and fair land use?

Transition Trajectories Interactive Game: We aim to enhance the accessibility of the trajectories and would like to explore how to 'gamify' the scenario process, making it more widely available and engaging.

Please contact the Futures Centre if you're interested to explore opportunities at futurescentre @forumforthefuture.org

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Gold Partner

Silver Partner

Bronze Partners

07 APPENDIX

This report integrates futures and systems change methodologies. In addition to trends research, our horizon scanning and exploration of essential systems dynamics included expert interviews, cross-sectoral partner collaboration and change signals from the Futures Centre. Our focus was on discerning how business responses to risk reveal if they are sustaining the status quo or fostering transformation through present decisions.

The Transition Trajectories are four future-oriented pathways that are inspired by how we observe businesses responding to the pressures to act on sustainability today. They draw from desktop research, interviews with partners, activists, and entrepreneurs, as well as insights from Forum's work. We applied the FSG Model of Systems Change to understand how systems change when conditions at three levels of the system begin to shift concurrently. This approach points to the power of understanding the different levels at which change happens in human societies and understanding how 'deeper' levels (such as values, assumptions, worldviews and implicit narratives) shape power dynamics, influence the underlying design and patterning of systems (such as resource flows), and frame and influence the parameters within which change occurs.

The Business Transition Trajectories also draw upon Forum's application of the COVID-19 Trajectories, which were designed to explore how we might emerge from the pandemic. The COVID-19 Trajectories framework drew on Causal Layered Analysis and the Dator archetypes for social change narratives.

The steps within 'Courage to Transform' are drawn from emerging literature on risk and resilience such as "Risk and Resilience in the Era of Climate Change" by Dr Vinod Thomas, "Our World at Risk: Transforming Governance for a Resilient Future Global Risk Report 2022" by United Nations Office of Disaster Risk Reduction (UNDRR), and Forum's Compass for Just and Regenerative Business Report.

OUR PERSPECTIVES:

While we have tried to include many different perspectives in our analysis, we recognise that this work is necessarily partial. Not all trends and signals have been represented. We also acknowledge that this work is reflective of our own biases as an international sustainability organisation founded in the UK, with offices in Singapore, Mumbai, London and New York.

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