

# The future of business for Aotearoa New Zealand:

An exploration of two trends influencing productivity and wellbeing  
– purpose-led business and use of blockchain technology.

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DRAFT FOR CONSULTATION

## Inviting your feedback

The Ministry of Business, Innovation and Employment (MBIE) has prepared this **discussion document** as a **draft Long-term Insights Briefing**. It presents some early insights on the subject of the Future of Business for Aotearoa New Zealand. We invite your input to develop and finalise the insights in the Briefing before it is submitted to Parliament.

### Summary

Global megatrends, like climate change and technological change, are creating enormous challenges as well as opportunities for societies. Many governments are realigning approaches to respond to complex challenges, including shifts from focusing on growth or productivity alone, to how these can contribute to higher wellbeing outcomes. Businesses are responding through shifts in strategy, business models, and exploring new combinations and uses of technology.

At a business level, two trends occurring in this context of change are: the **growth of purpose-led business** and the emerging **use of blockchain technology** as part of increased digitalisation. Looking into these trends provides **long-term insights** into how business in Aotearoa New Zealand may change over the next 10 years and beyond, and the implications and choices that arise for government. Key insights presented in this **draft Briefing** for feedback are:

#### Purpose-led business

- The number of purpose-led business in Aotearoa New Zealand is likely to grow steadily.
- This reflects a history of social responsibility amongst business for generations in New Zealand, particularly Māori business. Growth will be driven by increasing awareness and pressure for businesses to be more socially and environmentally responsible. However, while most businesses would argue they are motivated by more than profit, many businesses will likely remain primarily focussed on profit.
- Scepticism about the effectiveness and motives of purpose-led businesses may reduce as tools like sustainability reporting and certification systems enable businesses to demonstrate their contribution to wider purpose beyond profit.
- We are interested in whether you think there is a greater role for business in contributing to wider societal outcomes. If so, then a strategic choice that governments face is whether to encourage businesses to align their purpose to society's interests. There are a range of ways this can be done, but partnerships and systems-based approaches to identify the way forward will be required to be truly successful.

#### Use of blockchain technology

- Blockchain technology is starting to transform the way business and industries manage data and transact. It is currently most commonly used in finance and supply chains, and best known for applications such Bitcoin and Non-Fungible Tokens (NFTs).
- Over the next 10 years use of blockchain is likely to grow and broaden, reflecting its function as digital infrastructure. For example, it is likely to become a more embedded capability in business and across systems supporting productivity and enable more decentralised and networked business models including decentralised autonomous organisations (DAO). There are likely to be more uses that address social and environmental challenges and contribute to wellbeing; and use of distributed data technology by Māori to grow business and enable Māori-led initiatives with data.
- Alongside potential beneficial uses, there are risks and challenges to overcome with blockchain, and uncertainty about the extent to which public trust and confidence in blockchain use will develop.
- If Aotearoa New Zealand wants to advance the use of blockchain for positive outcomes, business and government will need to build skills to support innovation and adoption. Risks and opportunities will need to be addressed in an integrated and socially connected way that can anticipate and adapt to ongoing change and manage risks. Government could make a strategic choice about the level of ambition it has to realise and shape the potential benefits of blockchain technology.

## Questions to guide your feedback

**Question 1:** In what ways are you or your business responding to big challenges, like COVID-19, climate change or technological change?

### Purpose-led business

**Question 2:** Do you think that there will be a steady increase in purpose-led businesses? Are there other possible future states you think we should note?

**Question 3:** Are there other opportunities or risks that could arise from a steady growth in purpose-led businesses?

**Question 4:** Do you think that there is a greater role for business in contributing to wider societal outcomes? If so, what do you think business needs to be able to do this?

**Question 5:** Do you think there is a role for government in enabling purpose-led businesses? What role should or could government play?

### Use of blockchain technology

**Question 6:** Are there any other aspects to the current development and use of blockchain that you are aware of?

**Question 7:** What else do you think may be probable or possible about future developments in the use of blockchain? Are there other opportunities or implications?

**Question 8:** What approaches should or could Aotearoa New Zealand take with blockchain to manage risks and enable opportunities?

Please provide your feedback by 5pm on Friday 24 June 2022. You can make your submission by:

- using the form provided at: [www.mbie.govt.nz/draft-ltib](http://www.mbie.govt.nz/draft-ltib)
- emailing to [LTIB@mbie.govt.nz](mailto:LTIB@mbie.govt.nz)
- or posting to:

Strategic Policy  
Ministry of Business, Innovation and Employment  
PO Box 1473  
Wellington 6140  
New Zealand

Please include your name, the name of your organisation (if applicable) and contact details in your submission. You may include any evidence to support your views, for example references to research, facts and figures, or relevant examples.

Information on how we will use your feedback and protect private information are in Annex One.

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## Foreword

Kia ora koutou,

Many New Zealand businesses are thinking about their role, purpose and how they operate in the context of climate change, technology change, demographic change and globalisation. How businesses respond to these changes will have significant implications for the future productivity and wellbeing of all New Zealanders. The purpose of this Long-term Insights Briefing is to raise awareness about some of the less well-known aspects of these changes and to support discussion on possible implications for New Zealand businesses. The Briefing does not make policy recommendations, but it does provide some prompts and questions about the possible role of government.

Since July last year when MBIE initially posed the question “What could the future of business look like for Aotearoa New Zealand?” we have talked with many New Zealanders and businesses about what they see as the critical issues they are facing. We are very grateful to those stakeholders for sharing their insights with us. Based on these conversations, we have narrowed the focus of this Briefing to two key trends: purpose-led business and blockchain:

- Purpose-led business is an umbrella term for businesses that strive to achieve wider outcomes than just profit. This trend is not new, but its popularity has increased with the pervasiveness of issues like digitalisation, globalisation, climate change, and questions about equity. MBIE considers this operating mode can be a useful tool for businesses looking to be part of all-of-society approaches to critical issues.
- Blockchain is a specific emerging technology. In general, New Zealand businesses are at the early stages of awareness and uptake of blockchain. Most firms are only just beginning to consider what it could mean for the business landscape of the future. What we do know is that the technology is developing quickly. While we cannot predict how exactly this development will continue, this Briefing does consider some of the potential opportunities and implications for New Zealand businesses. We also pose some ways that government could reduce the risks of emerging technology and help support businesses to take advantage of the opportunities that lie ahead.

We are now seeking your input to help us further develop our thinking on the opportunities and implications of these trends. Our ongoing conversation will help ensure we are focused on the right aspects of these trends. We look forward to you sharing your thoughts on this draft Briefing.

Nāku noa, nā  
**Carolyn Tremain**

Secretary  
Ministry of Business, Innovation and Employment

### MBIE karakia

Tāwhia tō mana kia mau, kia māia  
Ka huri taku aro ki te pae kahurangi  
Kei reira te oranga mōku  
Mā mahi tahi, ka ora, ka puāwai  
Ā mātau mahi katoa, ka pono, ka tika  
TIHEI MAURI ORA

Retain and hold fast to your mana, be bold, be brave  
We turn our attention to the future  
That's where the opportunities lie  
By working together we will flourish and achieve greatness  
Taking responsibility to commit to doing things right

## 1. Introduction

### 1.1. This draft Briefing shares insights about the future of business for Aotearoa New Zealand

We are seeking your input into this draft of MBIE's Long-term Insights Briefing (the Briefing) on:

#### **The future of business for Aotearoa New Zealand:**

##### **An exploration of two trends influencing productivity and wellbeing**

##### **– purpose-led business and use of blockchain technology.**

This Briefing is exploring how business is changing in response to megatrends and takes a deep dive into two trends – the growth of purpose-led business and the emerging use of blockchain technology.

Our aim through this is to develop long-term insights into how business in Aotearoa New Zealand may change over the next 10 years and beyond, the implications this may have for productivity and wellbeing, and some strategic choices that arise for government.

The draft Briefing has been developed through engagement and analysis, and with the use of futures thinking tools, like the pae mahara/the past, pae herenga/the present, pae tawhiti/the future framework used throughout this document.

Your input will help us develop the final Briefing for submission to the House of Representatives. Some prompts and questions have been included for your consideration.

Annex Two has information about how we selected the subject for the Briefing and developed this draft.

#### **Box 1: What is a Long-term Insights Briefing?**

Departmental chief executives are required to publish Long-term Insights Briefings at least once every three years. This is a requirement of the Public Service Act 2020. The purpose of the Briefings is to share:

- information about medium and long-term trends, risks and opportunities that affect or may affect New Zealand and New Zealand society
- information and impartial analysis, including policy options for responding to these matters.

The Briefings provide the opportunity to identify and explore the issues that matter for the future wellbeing of the people of New Zealand. They are not government policy and are independent of Ministers.

Long-term Insights Briefings are submitted to the House of Representatives. They provide an opportunity to enhance public debate on long-term issues and to usefully contribute to future decision making — not only by government but also by Māori, business, academia, not-for-profit organisations, and the wider public.

## 1.2. A context of change

### Technology change

Technology change is disrupting the business landscape at speed. Emerging technologies such as artificial intelligence, blockchain, the internet of things and big data will transform human interaction and business functions.

### Environmental degradation

The linear 'take-make-dispose' economy is responsible for emissions, waste and the depletion of resources. This includes disruptions to ecosystems, losses of biodiversity and wildlife, fundamental changes in land use, resource scarcity, declining quality of air, water and soil, and greenhouse gas emissions.

### Globalisation

Globalisation has seen the greatest increase in prosperity and reduction in poverty in human history. It has also led to environmental degradation and uneven distribution of benefits which has eroded stability of the global economy (G7, 2021). The rules of the game are changing as governments focus on domestic resilience.

**The COVID-19 pandemic has shown us how the future is inherently uncertain and hard to predict.**

**What we do know is that global megatrends will continue to shape the future economy, presenting both challenges and opportunities for New Zealand.**

### Demographic change

The global population is growing and aging, putting increasing stress on limited resources. People are also increasingly choosing to live near main urban centres. In New Zealand, ethnic diversity is increasing. Māori and Pacific people are expected to become a larger share of the population and workforce.

### Emerging markets

Emerging markets will become half of the world's GDP by 2050. What they trade will depend on the intersection with other megatrends (PWC, 2017).

### Climate change and net zero

Global warming is causing rising sea levels and more extreme weather events. Much of Aotearoa New Zealand's urban development and infrastructure is located in coastal areas making it vulnerable to coastal erosion, inundation and sea level rise. Second order effects on food chains, biodiversity and disease patterns are not well understood. Countries will need to urgently accelerate an unprecedented process of decarbonisation if they are to meet net zero commitments by 2050.

### Rising inequality and political unrest

Inequality is growing for more than 70 per cent of the global population. Income and wealth disparities and a lack of opportunities are creating a vicious cycle of inequality, frustration and discontent across generations and particularly for women (UN, 2020).

### 1.2.1. Governments are shifting focus to wellbeing

Increasingly, governments are realising a sole focus on growth or productivity will not address the challenges presented by megatrends and will not achieve all the outcomes that society wants. An emphasis on sustainability and wellbeing is becoming more commonplace worldwide.

This is highlighted by the UN member states' ambitious Sustainable Development Goals (SDGs), which aim to end poverty, promote peace, share wealth, and protect the planet by 2030. By focussing on the purpose of productivity (ie improving people's wellbeing), economies can become more environmentally sustainable and better for their citizens as well as more productive.

#### Box 2: The Living Standards Framework encourages government investment and policies to consider a range of outcomes beyond productivity

Treasury published the first Living Standards Framework (LSF) in 2011. The LSF expresses a broader approach to living standards than GDP. It includes financial/physical, human, social and natural capital. All Budget initiatives must consider their impacts on these four capitals.

The 2021 version of the LSF also includes three levels of wellbeing:

- **Our Individual and Collective Wellbeing:** Captures the things that are important for our wellbeing as individuals, families, whānau and communities.
- **Our Institutions and Governance:** Captures the role our organisations play in facilitating the wellbeing of individuals and collectives, as well as safeguarding and building our national wealth.
- **The Wealth of Aotearoa New Zealand:** Captures how wealthy we are overall, including wealth not fully captured in the system like human capability and the natural environment.

These levels of wellbeing signal that government does not consider productivity alone a sufficient indicator of prosperity and holds itself responsible for affecting the change needed to respond to megatrends like climate change.

### 1.2.2. Business strategy is evolving

The changing context is creating a different environment for business. Businesses will need to adapt to respond to risks and capture opportunities: For example:

- **Environmental** — Consumers, employees and investors are considering the environmental impact businesses have in their purchasing and investment decisions.
- **Social** — Consumers, employees and investors are taking account of the social impact businesses have on their workers, suppliers and local communities.
- **Ethics** — Consumers, employees and investors want to ensure that products and services are produced by businesses in a way that treats its workers and the environment ethically.
- **Technological** — Businesses are changing how they operate and engage with their employees, customers, suppliers and shareholders, and develop products and services.
- **Legislative** — Many countries, including New Zealand, are working toward goals in legislation to achieve 'net zero' carbon emissions in the future, eg 2050.
- **Economic** — The COVID-19 pandemic has provided countries with a once-in-a-generation opportunity to reset their economies. Many, such as the EU, US and South Korea have plans to 'build back better'.
- **Demographic** — An aging population will have implications for business ownership and succession, workers working longer, and the types of goods and services demanded.

These kinds of changes in business are not new or unusual. Since its beginnings, business has evolved in role and form in response to new technologies or paradigm shifts in the way business is done. Figure 1 (page over) shows some events in the evolution of business.

**Question 1:** In what ways are you or your business responding to big challenges, like COVID-19, climate change and technological change?

### 1.2.3. How do we understand and navigate this change?

The future changes outlined above are profound — both in terms of the scope and the magnitude of change. Just like the major shift changes that came before, they will affect the ways we live our lives in ways it is difficult to imagine. COVID-19 was a present-day example of the sort of fundamental shifts we can expect. The impacts of climate change and the societal responses to ameliorate those impacts are another.

In order to navigate change successfully, we need to be able to better understand the patterns of change and, from this, develop insights about what we may need to do over the coming years, to guide us for long-term success.

In this Briefing, we tackle these difficult questions by delving into two major trends: growth in purpose-led business and the emerging use of blockchain technology. The two trends are very different, and they do not represent the sum total of all change occurring. But by taking two different views we hope to generate insights about the Future of Business for Aotearoa New Zealand to guide actions by government to enhance our future productivity and wellbeing.

### Two deep dives into changes that will affect future business

#### Purpose-led business

Although it is not revolutionary for businesses to enhance their purpose beyond profit, it is becoming more mainstream and even an expectation among consumers and investors.

A wider purpose will look different for each business — but it can generally be understood as contributing to or taking responsibility for an aspect of wellbeing beyond financial benefit for the business and its stakeholders.

There are clear implications for wellbeing, but there are also benefits to businesses' productivity. In this Briefing we focus on the evolution of purpose-led businesses and ask the questions, what are the wider implications of growth in purpose-led business and what might the future role of business be in contributing to wider productivity and wellbeing? We also explore whether there is a role for government to encourage this trend and, if so, what might future governments need to consider.

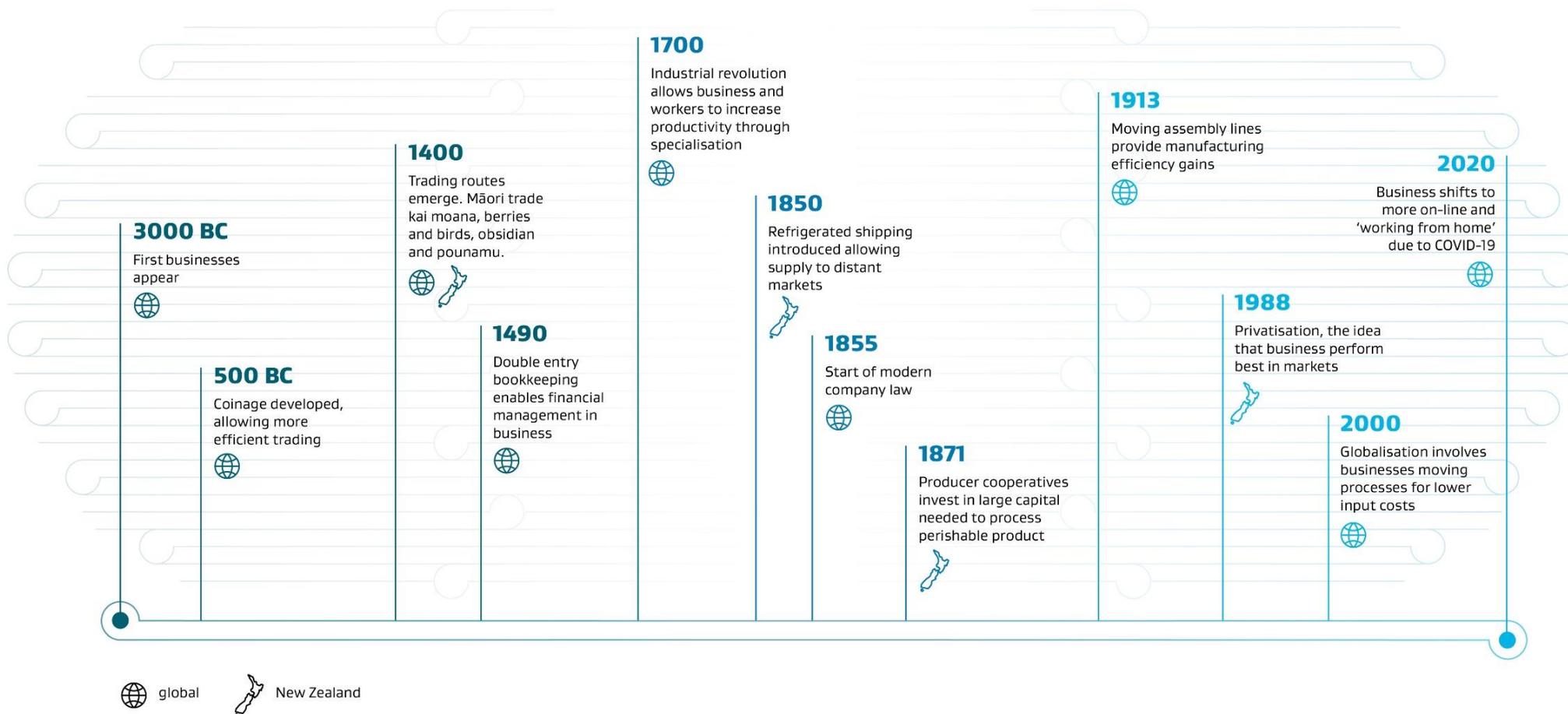
#### Use of blockchain technology

The 2020s is likely be a decade of unprecedented speed and scope of technological change. This will be driven by demand for new capabilities to solve global and local problems and address needs and shifting consumer attitudes.

Periods of change like this present enormous opportunities and challenges to business in New Zealand and elsewhere (for example to lift productivity by shifting to digital functions, or to achieve wider purpose). They also present some choices for business and government, about how technological change may be governed and shaped (Perez, 2022).

In this Briefing we focus on the emerging use of blockchain technology, as one with potential to transform some business operations and form, and the wider implications that are emerging, globally and locally, for productivity and wellbeing.

Figure 1: Business evolution over time



#### 1.2.4. What are your insights?

Question 1 asks about your experience in responding to big challenges, like COVID-19, climate change and technological change.

After considering the following sections, we are also interested in your ideas about what future decision makers could do to capture the benefits of the two trends we have investigated and respond more effectively to the challenges they present that will affect the future of our businesses.

We encourage you to think beyond current paradigms when considering your responses. Challenges for future businesses and governments will be complex. The major wellbeing challenges of the future cannot be solved by business or government alone. We may need to think differently about the traditional roles of business and government.

Global and Aotearoa New Zealand challenges ahead are not easily addressed through traditional policy approaches. Selection of the right levers for government involvement that enhance productivity and wellbeing will not be simple. We will need to be innovative in our approaches and, in the case of potentially disruptive technologies like blockchain, we will need to work faster than ever before. This will require system approaches, including partnership ways of working. Future decision-makers may need to think and act differently — which means changing our skills and capabilities, and the ways that we organise ourselves.

**Box 3: A snapshot of business in Aotearoa New Zealand today**

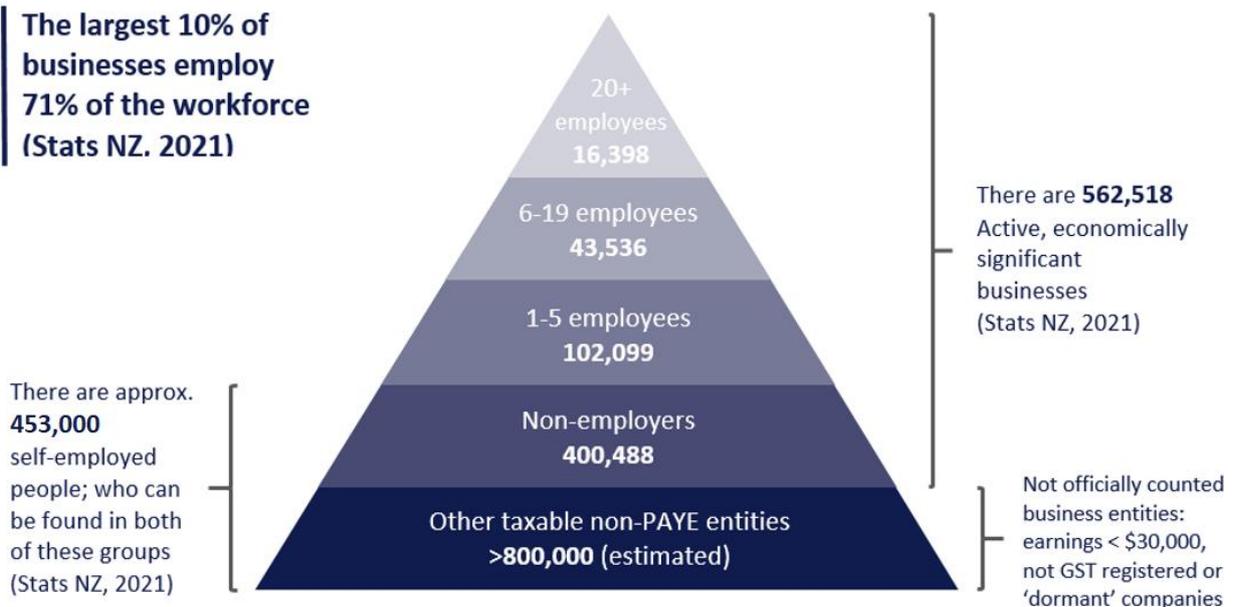
Businesses in Aotearoa New Zealand fall into a range of different structures and sizes, with more than half registered as limited liability companies. Other structures such as sole trader, partnership, co-operatives, and trusts are also common.

While the business ownership landscape is dominated by small business, the largest 10% of businesses employ more than three-quarters of the workforce (Better for Business, 2021).

The diversity in New Zealand’s businesses makes them generally well placed to weather mega trends as they can be nimble and flexible to take advantage of opportunities.

Careful thought will need to be given to the significant proportion of small-medium size businesses, who generally may not have the resource, information, or capability to address some of the major challenges on the horizon.

**The largest 10% of businesses employ 71% of the workforce (Stats NZ, 2021)**



There are approx. **453,000** self-employed people; who can be found in both of these groups (Stats NZ, 2021)

There are **562,518** Active, economically significant businesses (Stats NZ, 2021)

Not officially counted business entities: earnings < \$30,000, not GST registered or 'dormant' companies

## 2. Trend one: purpose-led business

*How might the trend of business adopting a wider purpose evolve over the next 10-20 years? A deep dive into the future of purpose-led business in New Zealand, with a focus on the implications for productivity and wellbeing.*

### Summary

The concept of purpose other than profit in businesses is nothing new. From the middle of last century, the idea that the business should play a part in addressing social challenges emerged in the principle of Corporate Social Responsibility.

We think that the number of purpose-led businesses will continue to grow steadily, even though many will continue to focus on profit. This reflects a history of social responsibility amongst business for generations in New Zealand, particularly Māori business. Growth will be driven by increasing awareness and pressure for businesses to be more socially and environmentally responsible, especially as the challenges presented by major change become more pressing.

Scepticism about the effectiveness and motives of purpose-led businesses may reduce as tools like sustainability reporting and certification systems enable businesses to demonstrate their contribution to wider purpose beyond profit.

A steady growth in purpose-led businesses is likely to benefit overall productivity and wellbeing. Businesses that seek social, environmental or ethical outcomes as well as financial returns have the potential to positively grow New Zealand's economy, while contributing to solving societal challenges, in so doing lifting productivity as well as intergenerational wellbeing.

We explore two fundamental questions arising from this trend: Is there a greater role for business in contributing to wider societal outcomes? And if so, is there a role for Government in helping to accelerate this trend by encouraging business to shift to purpose-led approaches?

### 2.1. Why are we focusing on purpose-led business?

There is growing pressure on businesses to focus beyond financial returns to achieve broader outcomes for multiple stakeholders, such as treating workers fairly, supporting local communities, addressing intergenerational wellbeing, and reducing environmental impact.

Many businesses we spoke to have or are thinking about adopting a purpose wider than profit. This often reflects the business owner's values and is driven by the increasing expectations of their customers, consumers, investors, workers, and the local communities within which they operate.

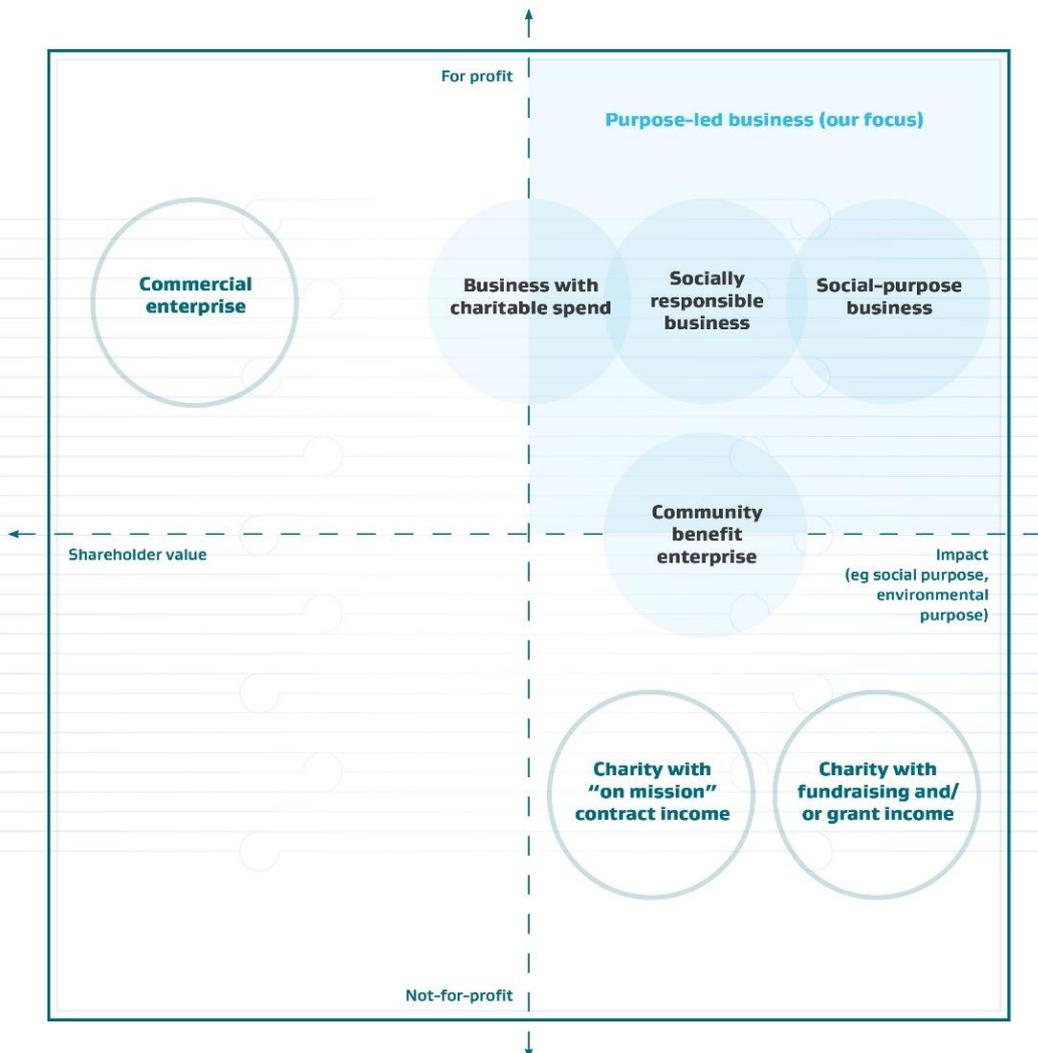
This trend is well established, but there is still scope for it to develop over the next 10 or more years as more businesses adopt a wider purpose and as new and more consistent reporting methods are developed, giving greater confidence and credibility.

### 2.2. What is a purpose-led business?

A purpose-led business is one that wants to achieve both positive financial returns and wider social outcomes, balancing both profit and purpose.

Figure 2 below shows a spectrum of different types of business, and the types we are grouping as purpose-led as those seeking both purpose (impact) and profit.

**Figure 2:** Range of types of businesses and the focus of this report. Figure based on the report by Nesta, *Growing Social Ventures 2011*, adapted by MBIE.



The trend that we are particularly interested in is businesses that have traditionally been focussed on achieving financial returns but are starting to adopt wider purposes that (ie moving toward the business models in the top right quadrant in Figure 2).

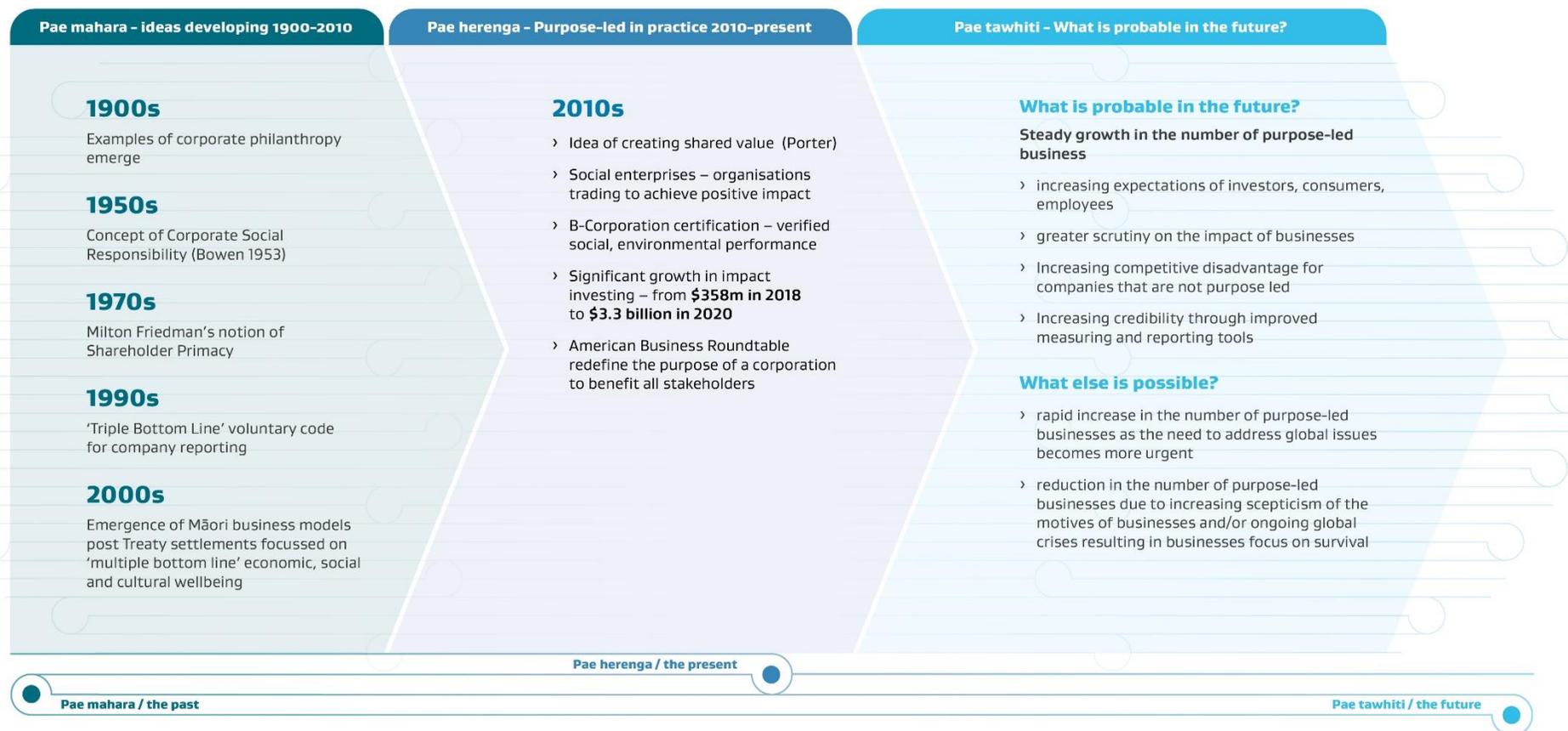
Figure 2 shows that the idea of ‘purpose’ beyond profit in business could potentially range from a company with some well-meaning charitable initiatives, through to businesses that are transforming from traditional capitalist mindset into organisations that pursue what Porter calls ‘shared value’ — where business success and social progress are interdependent” (Porter & Kramer, 2011).

Most businesses would say that they are motivated by more than just profit. In this Briefing our focus is on businesses operating at the transformative end of this spectrum where social impact is integrated into business function and is a key part of the measure of business success. In such companies ‘shared value’ is integrated into all areas — business products and services, the way the business is governed and operated, and the way that the business supports its wider community and environment.

### 2.3. A visual: purpose-led business over time

Figure 3 illustrates some of the ways in which the notion of business purpose has changed over time and indicates some probable and possible future developments. In the next sections we explore this trend and what it might mean for the future of business.

**Figure 3:** Change in business purpose over time



## 2.4. Pae mahara / the past

### 2.4.1. Purpose-led businesses aren't anything new

A focus on purpose beyond profit is not a new concept. In the 1950s and 1960s, it was common for businesses in developed economies to consider not just shareholders but everyone who has a stake in the success of a firm (Schwab & Vanham, 2021). This concept of 'Corporate Social Responsibility' can be traced back to Howard Bowen in 1953 who explored the importance of a 'social contract' between business and society premised on the idea that a business functions because of public consent. (Bowen, 1953)

These philosophies led to the idea that companies create mission, vision, values and principles to guide the organisation aimed beyond delivery of the product or service they offer. By the 1990s, the concept of Triple Bottom Line reporting formalised this into a voluntary code for company reporting, covering the three 'bottom lines' of financial, social and environmental performance.

From the 1970s this approach was tempered by economist Milton Friedman's notion of "shareholder primacy" as the global organising principle for business. Friedman is quoted as saying "the business of business is business" and "the social responsibility of business is to increase its profits" (Friedman, 1970). Friedman argued that businesses are spending somebody else's money, such as shareholders, customers or workers, to achieve these social outcomes and compares this to a tax.

Friedman's scepticism of Corporate Social Responsibility was reflected by a number of commentators especially in the early 2000s. These commentators pointed out that very few businesses actually did it, it detracted from core business, businesses only did it to influence political decision making and while it is an effective public relations tool, most were empty promises.

### 2.4.2. Purpose-led businesses aren't new to Aotearoa New Zealand

A shareholder primacy approach has remained a dominant organising principle for business to this day in Aotearoa New Zealand. However, there are still numerous examples of New Zealand organisations that have historically been more purposefully focussed on combining profit with social and environmental responsibility.

Māori businesses have provided leadership in this area. Examples of purpose-led business included Iwi-owned companies formed post Treaty settlements to sustainably invest settlement funds and manage returned land and resources. The earliest example is Ngāi Tahu Holdings, which was formed after its 1998 Treaty settlement. These companies introduced ultra-long term strategic vision into business practices, focussed widely on economic, social and cultural wellbeing.

#### Box 4: Over a century of business philanthropy

For over a century business owners have taken a philanthropic approach to the use of business profits to benefit wider social objectives.

In 1900, Chocolate maker George Cadbury founded the Bournville Village Trust with a gift of 313 houses set at affordable rent to "alleviate the evils of modern, more cramped living conditions".

In 1914 Henry Ford announced he would double his workers' wages to twice the average wage for automakers, cut the working day from 9 to 8 hours and offered profit sharing to employees who lived a 'clean lifestyle' — so everyone could own a Ford car.

New Zealand corporate philanthropy developed later, starting with family trusts — like the Todd Foundation. These often-distributed funds gained from success in retail business.

In 2010, the New Zealand Business Council for Sustainable Development undertook a study examining how 50 of its members were approaching Corporate Social Responsibility. They found that corporate responsibility was often woven into the way New Zealand companies do business, but not necessarily using a formalised approach - “for most businesses... they feel it’s the right thing to do...rarely is a small-medium enterprise decision to get involved in a social capacity based on some strategic analysis of the company’s purpose or a business case” (New Zealand Business Council for Sustainable Development, 2010).

New Zealand governments have not attempted to influence business social responsibility activities. There are some tax incentives to encourage business to make financial donations. Companies can deduct the total amount of donations to approved donees for the financial year from their yearly taxable income.

#### Box 5: Cooperatives — working together for common good

Cooperatives are based on international cooperative movement principles, that include requiring them to have concern for the sustainable development of their communities.

Cooperatives emerged in New Zealand in the 1860s and now number about 330, with the top 30 having revenues of NZ\$42 billion per year (Cooperative Business New Zealand, 2021).

## 2.5. Pae herenga / the present

### 2.5.1. As stakeholders respond to global megatrends, businesses are having to rethink their role and purpose

Shareholder primacy has led to tremendous economic progress but has equally brought about major social, economic, and environmental challenges. Expectations are mounting from all types of stakeholders for businesses to play a leading role in addressing these challenges, for example:

**Table 1: Demands from business stakeholders to become more purpose-led**

New generations	Investors	Consumers
<p>As Generation Z and Millennials become a larger share of the community, they are demanding that businesses provide societal good as well as return on investment (Adams, 2019). They want to work for employers that are serious about issues such as environmental sustainability, as well as looking for good remuneration, career opportunities, security, and work flexibility and balance.</p> <p>The idea of ‘effective altruism’ is gaining traction – where individuals are actively making personal choices that benefit wider society.</p>	<p>Investors are considering the wider social impact of their investments:</p> <p><b>Total investment market</b></p> <ul style="list-style-type: none"> <li>• 2018: US\$502 billion</li> <li>• 2020: US \$715 billion</li> <li>• 2022: US\$2.1 trillion or 2% of global assets under management (Global Impact Investing Network, 2022).</li> </ul> <p><b>NZ investment market</b></p> <ul style="list-style-type: none"> <li>• 2018: NZ\$358 million</li> <li>• 2020 NZ\$3.3 billion or 1% of total funds under management (Banhalmi-Zakar, Boele, &amp; Bayes, 2021).</li> </ul>	<p>Consumers are increasingly choosing to purchase products and services from businesses that can demonstrate sustainable and ethical practices. New Zealanders are actively engaged in sustainability with 29% of New Zealanders actively seeking out ‘do good’ brands and 87% of New Zealanders seeing sustainability as a key concern. In the United Kingdom, total ethical expenditure has continued to rise steadily for the past twenty years, reaching £122bn in 2020 (Sustainable Business Council, 2019) (Ethical Consumer, 2021).</p>

*The global business community itself encourages a shift toward wider purpose*

*“Society is demanding that companies, both public and private, serve a social purpose...[companies] must benefit all of their stakeholders, including shareholders, employees, customers and the communities in which they operate”*

- **Larry Fink**, CEO of BlackRock, the world’s largest financial asset manager, 2018 letter to CEOs (Fink, 2018).

*The purpose of a business has eroded over time to a preoccupation with profit and shareholder value, and calls for businesses to redefine their purpose ... changes in ownership, governance, performance measurement, law, regulation, taxation and partnership can promote this*

- **Colin Mayer**, professor at Saïd Business School at Oxford University (Mayer, 2019).

*“[t]he purpose of the corporation must be redefined as creating shared value, not just profit per se. This will drive the next wave of innovation and productivity growth in the global economy”*

- **Michael Porter**, a professor at Harvard Business School (Institute for Strategy and Competitiveness).

**The global business community is shifting towards a wider purpose**

*“[w]e have an opportunity to shift the economy to have a whole economy transition, turning an existential risk into what is, in my view, probably the greatest commercial opportunity of our time, and one that puts people and planet first”*

- **Mark Carney**, former governor of the Bank of England (Carney, 2020).

*businesses must become ‘net positive’ to help fix the world’s problems, such as climate change and inequality*

- **Paul Polman**, former CEO of Unilever, (Polman & Winston, 2021).

*...redefine the purpose of a corporation to lead companies for the benefit of all stakeholders (customers, employees, suppliers, communities and shareholders).*

- **American Business Roundtable** statement to 181 Chief Executives 2019 (Business Roundtable, 2019).

*...a new social contract between individuals, government and businesses that can better respond to changes in technology, demography and the climate, and which provides security for all, investment in capabilities and the fair sharing of risks*

- **Minouche Shafik**, professor at the London School of Economics and Political Science, (Shafik, 2021).

### *Business operations are also being influenced by shifting societal expectations*

We heard in our stakeholder engagements that competition for talent is expected to increase due to an ageing population and other constraints on skills supply. Workers are also becoming more selective about the types of businesses they work for. Businesses are also looking for ways to appeal to consumers of today and tomorrow by demonstrating good corporate citizen behaviours to maintain or improving their reputation and position against competitors.

#### 2.5.2. Leadership in purpose from Māori and Pacific businesses

##### *Māori businesses continue to expand the concept of purpose-led business*

Māori entities and businesses often endeavour to incorporate Māori values and principles into their strategic goals and approach to the governance, management and operations of their business (The Impact Initiative, 2021).<sup>1</sup> Some of the values, principles and concepts identified as relevant and beneficial to Māori businesses included kaitiakitanga (guardianship), rangatiratanga (leadership, ownership), manaakitanga (hospitality), and whanaungatanga (relationship/kinship) (Mill, 2021). A recent BDO survey of Māori businesses found that kaitiakitanga is central to many Māori businesses and that other businesses can learn much from this aspect of Te Ao Māori (BDO, 2021).

Intergenerational wellbeing is central to Māori values, which in turn is reflected in long-term business strategies and approaches. Māori businesses and iwi commonly refer to a “multiple bottom line” approach. This approach balances multiple values and objectives — spanning social, cultural, financial, environmental, spiritual and political domains (Mill, 2021). The BDO survey found that Māori businesses measure success using three distinctive measures: happy and healthy whānau, financial performance and cultural wellbeing (BDO, 2021).

Te Ōhanga Māori (the Māori economy) is estimated to have grown from \$16.5 billion to almost \$70 billion in the last twenty years (APEC, 2021). There has also been significant growth and diversification of the Māori asset base (MBIE, 2021).

##### *Pacific businesses have also introduced unique worldview into the New Zealand system*

Common Pacific cultural values and worldviews focus on family and collectivism. These values shape how Pacific businesses contribute to both social cohesion and business sustainability (Moana Research, 2020). These values have also influenced business practice with Pacific businesses predominantly hiring other Pacific people leading to more employment opportunities.<sup>2</sup> A holistic view of wealth also plays into the way in which wealth (money, time, knowledge or goods) are shared amongst the wider community (Moana Research, 2020).

In 2017, there were 1,500 Pacific businesses with employees and 4,100 self-employed Pacific individuals in New Zealand. These organisations (businesses and not-for-profit) produced \$3.1 billion in goods and services. The asset base of the Pacific economy was \$8.3 billion (The Treasury, 2018).

#### 2.5.3. Many small businesses are purpose-led but act more informally

Small business often has more informal approaches to purpose beyond profit – which often doesn’t involve measuring or reporting – just doing. We heard that while businesses face higher costs from doing these things, compared to those that don’t, they do it because they want to ‘do good’ or ‘it is the right thing to do’. Many small business owners, especially in rural areas tend to be strongly connected into their local communities. They often use their business as a vehicle to support the local community —

<sup>1</sup> There are a range of characteristics that may lead to a business identifying itself as a Māori business, such as Māori ownership or directorship, employing Māori workers, and/or adopting Māori philosophy, tikanga, principles and practices.

<sup>2</sup> Pacific Business Trust, Pacific Business Trust Presentation to MBIE. 2021. (Unpublished)

such as sourcing products and services from suppliers with shared values, driving local community projects, reducing environmental impact and encouraging staff to participate in volunteer community work (eg volunteer fire brigade). Some businesses noted that doing these things also motivated their employees.

#### 2.5.4. The evolution of purpose – recent developments

##### *Social enterprises – the development of purpose driven business*

More recently, social enterprises (or community enterprise or impact enterprises) are becoming part of the business landscape. These are organisations that trade to achieve positive social, cultural and environmental impact (The Impact Initiative, 2021). While there is no formal legal definition of a social enterprise in New Zealand, they usually have the following characteristics:

- the social, cultural and/or environmental mission provides public or community benefit and is the primary purpose of the organisation
- the majority of income is derived from trading a product or service
- the majority of either expenditure or profit is spent in the fulfilment of the purpose of the organisation (The Impact Initiative, 2021).

Business and Economic Research Limited (BERL) estimated in 2018 that there were up to 6,600 social enterprises in New Zealand, contributing as much as NZ\$1.7 billion to GDP and creating a wider impact of NZ\$2.9 billion (BERL, 2019).

##### *Calls for changes and clarification to governance roles*

In recent years there has been a call to expand governance settings to better recognise changing business context. In July 2021 the Institute of Directors called for a review of legislation to enhance directors' duties (IOD, 2021). A recent Private Member's bill has also been drawn calling for modification of the Companies Act 1993 to clarify that directors can take into account wider matter than the financial bottom-line, including the principles of The Treaty of Waitangi, environmental impacts, good corporate ethics, being a good employer and the interests of the wider community. At the time of writing this Bill was at first reading stage.

##### *Partnership approaches between businesses*

A direct example of businesses working together to link Environmental, Social and Governance (ESG) performance to financial performance is an A\$100 million sustainability-linked loan agreement between the ANZ Bank and Kathmandu (ANZ, 2021). Under the terms of the loan, Kathmandu has committed to various ESG targets and the costs of the loan are adjusted (either up or down) according to how well it then performs against the targets.

##### *Governments appear slow to respond*

Action at government level appears to be limited. In recent years, some countries have enacted laws to require Corporate Social Responsibility due diligence, mandatory corporate philanthropy, mandatory governance structures and have made Corporate Social Responsibility a duty under corporate law. The effectiveness of these approaches is unclear. "At least for now, the major function of the mandatory CSR laws appears largely expressive rather than regulatory or adjudicative" (Li-Wen, 2020).

#### **Box 6: Examples of social enterprises**

**Whenua Iti Outdoors:** experiential learning programmes that focus on personal and social development in the outdoors to achieve positive change in individuals and communities.

**Oak Tree Devanning:** Employs ex-offenders to unpack products from shipping containers.

**Loomio:** An app that aims to reduce inequity by making it easy for anyone to participate in decisions that affect their work and lives.

Source: (The Impact Initiative, 2021)

Following the COVID-19 pandemic, as many countries ‘build back better’, there have been calls for Governments to consider ways they can tap into the willingness of purpose-led businesses to assist with recovery. In July 2020, the Social Purpose Institute wrote an open letter to the Canadian Government to accelerate and scale social purpose business in communities across Canada (Social Purpose Institute at United Way, 2020).

2.5.5. Formal and informal approaches to demonstrating wider purpose are continuing to develop

*Sustainability reporting is a growing trend for businesses to formally demonstrate wider purpose*

To demonstrate wider purpose, businesses are voluntarily reporting on Corporate Social Responsibility (CSR) or ESG factors alongside their financial reporting. This report is often called a ‘sustainability report’.<sup>3</sup> Sustainability reports cover a broad range of factors (eg carbon emissions, waste, health and safety, diversity, business ethics and tax transparency) (PwC, 2022).

Although sustainability reporting is increasing in Aotearoa New Zealand, our companies are slow to improve the quality of reporting (compared to global organisations) and lagging behind in reporting on climate-related financial risks and opportunities see Box 7.

### Box 7: Some data on sustainability reporting

#### Worldwide:

- 80% of businesses worldwide and 96% of the world’s largest 250 companies publish sustainability reports (KPMG, 2020).

#### Aotearoa New Zealand:

- 74% of the 100 largest (based on revenue) organisations in New Zealand reported on sustainability performance (KPMG, 2020).
- Although this number was up 5 percentage points from 2017 New Zealand was still below the global average.
- Of the 50 companies listed on the S&P/NZX 50 Index, 28 companies reported on climate change risk and 40 companies reported on a range of social issues from gender diversity to pay equity (NZX and Wright Communications, 2019).
- A survey (by BDO) of Māori businesses found about half currently report on ESG metrics (BDO, 2021).

There are other indications that awareness and support for sustainability reporting is growing. The trend in sustainability reporting is supported by investors, consumers and other stakeholders, who increasingly expect businesses to disclose more information about their environmental, social and governance impacts and strategies (MBIE, 2021).

*Sustainability reporting frameworks are still developing and are not perfect*

Our engagements with stakeholders identified a number of challenges to this trend. There are concerns that sustainability reporting is ‘green-washing’ by businesses because of a lack of consistency and integrity in the metrics and methods businesses use to report on wider outcomes, and a lack of checks and assurance of accuracy.

<sup>3</sup> For a more detailed overview of sustainability reporting see: MBIE, *International Developments in Sustainability Reporting*, Occasional Paper, June 2021. [International developments in sustainability reporting \(mbie.govt.nz\)](https://www.mbie.govt.nz/publications/international-developments-in-sustainability-reporting)

To address this concern, there are international efforts to consolidate sustainability reporting frameworks, such as by the International Financial Reporting Standards Foundation, to bring greater consistency and coherence (The International Financial Reporting Standards Foundation, 2021) (MBIE, 2021).

In some areas there is growing agreement on common frameworks. For example, an International Sustainability Reporting Framework for climate change (presented at the United Nations Climate Change Conference COP26) is looking promising as a credible framework that many countries will adopt. Similarly, on 31 March 2022, the International Financial Reporting Standards (IFRS) Foundation's International Sustainability Standards Board (ISSB) published draft sustainability-related standards for reporting (IFRS, 2022).

We also heard that some businesses, especially smaller ones, are deterred from adopting sustainability reporting because of high compliance costs, and the time and technical expertise needed. While there are toolkits and guidance available to businesses to help them adopt sustainability reporting, for example, the Global Reporting Initiative provides standards and best practice for impact reporting and the United Nations (UN) provides a toolbox for businesses to act on and report against the UN's Sustainable Development Goals, these do not appear to be sufficient for smaller businesses.

Guidance on integrated reporting is provided the Value Reporting Foundation which provides methods and tools to help business integrate their values into their reporting systems.<sup>4</sup> A BDO survey of Māori businesses noted that there was growing keenness for a specific tool to help them manage and report on ESG factors, with many saying they would use such a tool if one were available (BDO, 2021).

### Box 8: Certification – demonstrating purpose-led

**Certified B-corporations** are businesses that meet high standards of verified social and environmental performance, public transparency and legal accountability to balance profit and purpose. Globally there are over 4,600 B-corporations, the majority of which are small to medium-sized business. In New Zealand there are 124 B-corporations as at May 2022, compared to 22 in 2019, and 1 in 2014. New Zealand examples include KiwiBank and Ecostore (B Lab Global, 2022).

**Industry-led certifications:** Many industry associations in New Zealand offer certification of sustainability, traceability, cultural and ethical practices to help members prove their commitment to wider objectives. An example is QUALMARK in the Tourism Industry which awards performance at bronze, silver or gold level and includes elements related to environment, cultural practices, safety and sound governance practices.

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<sup>4</sup> <http://examples.integratedreporting.org/fragment/446>

## 2.6. Pae tawhiti / the future

In the remainder of this section we suggest a range of ways in which purpose-led business could develop, assuming status quo government response. These are grouped as a probable future, some other possible futures, and an unlikely future. These are not the only 'futures', and have been included here to spark discussion during consultation.

### 2.6.1. Probable future: The most likely future

Table 2: Probable future – 10 years+	
<p><b>The number of businesses adopting a wider purpose continues to grow steadily.</b></p> <p><b>However, many New Zealand businesses will still focus on financial returns.</b></p>	<p><b>Assumptions</b></p> <ul style="list-style-type: none"> <li>Investors, consumers, employees, customers and local communities increasingly see businesses as key to improving social problems.</li> <li>There is also greater public scrutiny on the wider impact of all businesses.</li> <li>Businesses that are not purpose-led are at a competitive disadvantage — they find it more and more difficult to access foreign markets, investment and finance, and talent, or face reduced sales or an erosion in their social license to operate.</li> <li>There is international convergence on measuring and reporting on wider impact by businesses. This provides greater confidence and credibility for purpose-led businesses.</li> <li>Meanwhile, new technologies, innovations and data are developed to aid transparency, measurement, scrutiny and credibility.</li> </ul>

### 2.6.2. Possible futures: Futures that could happen given the bounds of uncertainty

Table 3: Possible futures – 10 years+	
<p><b>The number of purpose-led businesses declines</b></p>	<p><b>Assumptions</b></p> <ul style="list-style-type: none"> <li>Investors, employees and consumers become increasingly sceptical of how genuine businesses are at achieving wider outcomes.</li> <li>There are more and more challenges for businesses due to ongoing crises (such as ongoing pandemic, wars, natural disasters, economic shocks or other major disruption). Many businesses focus on survival or maintaining position.</li> </ul>
<p><b>The number of purpose-led businesses increases rapidly</b></p>	<ul style="list-style-type: none"> <li>Society becomes increasingly disillusioned with the slow pace of government action, while businesses are seen as a credible alternative to government to solving major social problems.</li> <li>As the impact of global change becomes more urgent there is a rapid growth in demand from investors, employees and consumers for businesses to contribute to solutions.</li> <li>Meanwhile, new innovations emerge that significantly reduces the cost and effort associated with becoming purpose-led.</li> </ul>

### 2.6.3. Unlikely future: Is this an impossible future?

We've added a third type of future to help you stretch your ideas about what might happen for purpose-led businesses. This may be dismissed as a wild card or science fiction, but it is built on observations of current trends — could it come about?

**Table 4: Unlikely future – 10 years +**

<p><b>The role of governments and businesses becomes less clear cut</b></p>	<p><b>Assumptions</b></p> <ul style="list-style-type: none"> <li>• Technology increasingly replaces some of the roles of government, by enabling more automated functions and cross-border 'virtual networks'. This begins to challenge the current world order based on geographic regions (see our discussion on blockchain below).</li> <li>• A few mega-global businesses emerge to assume the role of governments in some areas — using their access to capital and resources greater than many countries' GDPs and their mastery of the new virtual networks.</li> </ul>
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**Question 2:** Do you think that there will be a steady increase in purpose-led businesses? Are there other possible futures you think we should note?

#### 2.6.4. Implications of the probable future of purpose-led businesses for productivity and wellbeing

We have suggested that in the future there will likely be a steady growth in purpose-led businesses, but that there will still be many businesses solely focussed on profit. Below, we look at potential opportunities and risks of this probable future on both productivity and wellbeing.

**Table 5: Implications for productivity of a steady growth in purpose-led businesses**

Opportunities	Risks
<p>Financial performance may be positively impacted by a purpose-led approach</p> <p>There is evidence that adopting wider purpose, such as Environmental, Social and Governance (ESG) goals, is associated with enhanced financial performance, especially over the longer-term.</p> <p>A meta-analysis of over 1000 studies by the NYU Stern Centre for Sustainable Business found that:</p> <ul style="list-style-type: none"> <li>- over half (58%) of the studies found a positive relationship between ESG and financial performance, as measured by return on equity, return on assets or share price (Whelan, Atz, &amp; Clark, 2021)</li> <li>- Only 8% of the studies found a negative relationship with the rest finding either a neutral or mixed relationship.</li> </ul> <p>It is difficult to know whether the adoption of ESG performance measures causes an improvement in financial performance, or whether better financial performance means a business is more likely to adopt ESG performance measures.</p> <p>Further work is needed to understand causality, but if ESG performance measures improve financial performance, this may be because consumers are willing to pay a premium, workers are more engaged or motivated, the company has better risk monitoring and management, better operational performance, or some combination of these things.</p>	<p>In the future, businesses could be disadvantaged if they fail to demonstrate wider purpose</p> <p>Given the expected gradual shift in expectations of investors, consumers, customers, workers, etc (both in New Zealand and overseas) if businesses do not demonstrate a wider purpose in the future, then this may put them at a competitive disadvantage.</p> <p>This may mean they may face, for example, limited access foreign markets, difficulty attracting investment, finance and talent, reduced sales, or an erosion in their social licence to operate.</p> <p>This has the potential to impact both on individual businesses and on New Zealand's economic productivity more generally if our major trading partners and competitors move faster than New Zealand.</p>
<p>Improvements in resilience and viability</p> <p>A few people we talked to mentioned that they thought being a purpose-led business helps them identify risks or opportunities that they wouldn't otherwise consider, which improves their long-term viability and resilience.</p>	<p>Erosion of social licence to operate</p> <p>Large businesses in particular are perceived by many as a key cause of many of society's ills today. Businesses choosing not to be purpose-led may erode the current social licence that enables business to operate.</p>

Implications for wellbeing of a steady growth in purpose-led businesses	
<p><b>Opportunities</b></p> <p>Positive contribution to the resolution of important social issues</p> <p>Businesses choosing to contribute positively to social outcomes have the potential to improve outcomes for wellbeing in the area that is the subject of their purpose:</p> <ul style="list-style-type: none"> <li>- Improved environmental outcomes: For example, businesses that choose greenhouse gas emission reductions as a wider outcome will make a greater contribution to addressing climate change.</li> <li>- Improved inclusiveness and equity outcomes: Businesses that choose inclusiveness, equity or worker wellbeing within their organisations as a wider outcome, such as setting goals for workplace diversity or gender pay equity, will make a greater contribution towards addressing social cohesion. There are also studies that show that companies that do establish equity and inclusiveness measures can be shown to have positive financial performance outcomes (McKinsey &amp; Company, 2020).</li> <li>- Improved intergenerational outcomes: A firm's contribution to wellbeing also has the potential to positively influence intergenerational wellbeing.</li> </ul>	<p><b>Risks</b></p> <p>General risks of purpose-led businesses on wellbeing outcomes</p> <p>Selecting wider purpose may not necessarily achieve desired societal outcomes because the nature and scale of impact will depend on how many businesses engage, what choices businesses make about the level of effort and resource they want to put in and how ambitious they want to be. As a result:</p> <ul style="list-style-type: none"> <li>- Businesses may choose purposes that do not match wider social expectations, and so they may not contribute significantly to areas where there is greatest need.</li> <li>- Business contributions may be less ambitious or less timely than those that are necessary to achieve New Zealand's domestic and international targets and are unlikely to be sufficient in addressing these problems outright.</li> <li>- Business may choose to achieve different wider purposes and have different approaches to achieving them, their actions may not be coordinated and so limit overall impact.</li> <li>- Businesses adopting wider purposes could create confusion between the role of business and the role of government and could cause government to delay taking action (Bebchuk, 2020).</li> </ul>
	<p>Risks to wellbeing from businesses that choose not to be purpose-led</p> <p>Some argue that the principle of profit maximisation espoused by Friedman has contributed to overall reductions in wellbeing and concentrated of wealth into the hands of a few. They point to numerous examples of environmental degradation or human suffering resulting from unethical business practice focussed solely on profits for shareholders (Cappelen &amp; Kolstad, 2006).</p>

*More work is needed to properly quantify the opportunities and risks of our probable scenario*

Most of the insights above are difficult to quantify. More work is needed to properly understand the effects on all aspects of wellbeing of purpose-led businesses.

**Question 3:** Are there other opportunities or risks that could arise from a steady growth in purpose-led businesses?

## 2.7. So what? Some strategic choices

The question now is - is it enough that business continues to steadily move towards purpose-led approaches — or should we do more to leverage the benefits of this trend for future productivity and wellbeing? Below we explore the role of business and the role of government.

### 2.7.1. What is the role of business in contributing to wider societal outcomes?

Businesses are part of society and so also need to be part of the solution to the significant challenges facing society (Eggers & Macmillan, 2013).

Business does not operate on its own and only functions with public consent (Bowen, 1953)

The challenges are becoming so great that society needs business to be part of the solution because there is a growing consensus that complex social and environmental challenges cannot be solved by governments alone (Eggers & Macmillan, 2013).

#### Businesses need to contribute to wider societal outcomes

Businesses might actually be better placed than Governments to resolve difficult problems due to better access to resources “Governments and NGOs lack sufficient resources, technology and capabilities themselves to fully meet these challenges alone... only business is equipped to create large-scale positive change and economic prosperity” (Porter & Kramer, 2011).

Business has a responsibility because it takes advantage of common resources and has contributed to (or in some cases even caused) the social problems that affect everyone. (Eggers & Macmillan, 2013).

Social problems are the responsibility of governments. The reason why some businesses might be taking on purpose-led functions is because of decades of government failure to properly address the wider social issues. The real problem here is failures in political systems.

#### Business should stick to making profits for their shareholders

“The business of business is business” (Friedman, 1970).

Businesses already contribute to the common good in a range of accepted ways, such as:

- paying taxes on profits and goods and services, or levies resource use
- employment of citizens
- meeting standards on safety and environmental management
- general contribution to the nation’s overall wealth
- supply of products or services that support wellbeing or productivity.

**Question 4:** Do you think that there is a greater role for business in contributing to wider societal outcomes? If so, what do you think business needs to be able to do this?

## 2.7.2. The future role of government

*What is the role of government in encouraging businesses to align their purpose to society's interests?*

Government has strategic choices about the level of intervention or if it wants to intervene at all:

- **Government could choose to be a neutral observer this trend**, leaving it to businesses to decide whether and how to adopt wider purpose. Such an approach reflects a general worldview that governments should not try to direct or influence business strategy, and that this should be left to the market.
- **Government could choose to shape and influence this trend**, for example to accelerate the trend. Given that businesses are increasingly taking a broader view of their purpose to also meet the same challenges faced by governments, tapping into business resources and capability may create greater and better coordinated outcomes for productivity and wellbeing.

On the next page we identify some of the ways that future governments could shape and influence this trend, with examples, should it make a strategic choice to do so.

The ideas we have presented for discussion are not discrete 'either/or' options nor are they a complete list of possible options. They are also not policy recommendations; any government would need to explore these (and no doubt other) options further before making any decisions. They have been included to help spark the discussion during our consultation on this Briefing.

No matter what, we think that future governments will need to approach this trend differently in order to properly capture benefits of an increase in purpose-led business:

- **Working in partnership**

The challenges being addressed by purpose-led business requires government, business and communities to work together in new ways on wicked problems. True collaboration and co-design will be better achieved when there is shared intent and trust is established.

There are now numerous models for partnership-based approaches between government and business. A partnership-based approach on purpose-led businesses might involve working with particular sectors or groups to identify common targets and measurement tools that businesses can then use to more effectively contribute to common objectives.

Partnership-based approaches may be particularly useful with Māori businesses who have demonstrated leadership in this field, as their experiences and insights may also be useful as a guide to other business.

- **Taking a system view**

System-based approaches to policy making recognises that the system being managed is interconnected and complex. It also recognises that interactions between the parts of a system can produce 'emergent' properties that cannot be understood by examining each part in isolation. Systemic problems are often deeply rooted and solving them generally requires a change in the goals of a system.

For example, Beatson points out that that while business and government seem to be on similar paths towards purpose-led approaches, there is a lack of connection between the two. He suggests that one way to resolve this is to work together to focus on the core mission – ie set direction of change and build capability in organisations to enable change (Beatson, 2021).

*Ideas for the role that government could play in encouraging purpose-led business*

The table below indicates a range of policy levers that could potentially be used to enable or capture benefits from purpose-led business. With a system perspective, any choices would involve thinking about what mix of approaches may be optimal.

	Idea	Example
Information and resources	Government provides <b>information</b> and <b>data</b> , plus <b>tools</b> and <b>measuring systems</b> to enable businesses to build the capability to pursue a purpose-led approach. Provided also in education settings.	Climate action toolbox to help businesses take action to reduce their carbon emissions (business.govt.nz, 2022). Guidance for Purpose-led business: <a href="#">Making a difference with your purpose-led business — business.govt.nz</a>
Strategy and planning	Government could work with industries and businesses to <b>set strategy</b> for key productivity or wellbeing outcome areas.	Businesses that align with the strategy could then capture benefits from government activities in areas like trade and tourism.
Removal of barriers and cost reduction	The <b>cost of regulatory oversight is reduced</b> , or <b>processes simplified</b> if businesses can demonstrate that they have an effective purpose-led operation. <b>Barriers in legislation and administration are removed</b> to create a flexible environment for purpose-led businesses.	Simplified processes for regulatory oversight activities where a business has demonstrated a successful purpose-led approach.
Incentives	The Government could use <b>tax incentives</b> to encourage businesses to adopt a wider purpose. <b>Awards or positive publicity</b> for companies that are contributing to wider social outcomes through a purpose-led approach.	Tax exemptions for businesses who demonstrate wider purpose or 'social credit' to reward individuals who work with purpose-led businesses with extra leave or other non-monetary incentives.
Direct Support	Government could make <b>strategic choices about which businesses it procures</b> from, invests in or partners with - eg for grants, procurement, innovation funding and so on.	Pre-requisites for funding or support includes a requirement that companies operate a purpose-led model.
Regulations	The government could use <b>regulatory tools</b> including tools for regulation of markets or other controls such as requirements for sustainability reporting, or standards for making purpose-led claims.	In April 2021, the European Commission made it mandatory for some large companies to disclose information on the way they manage social and environmental challenges. (European Commission, 2021).

**Question 5:** Do you think there is a role for government in enabling purpose-led businesses? What role should or could government play?

### 2.7.3. The future role of citizens and consumers

Citizens and consumers may have a role in championing or dampening efforts by purpose-led businesses. With democracy evolving and decentralising in many forms, it may be individuals that lead certain social/economic movements. Citizens as employees, consumers, and shareholders can have a strong interest in ensuring that common goals in society are met, and are also drivers of much change. While our focus has been on the respective roles of business and governments, further consideration could also be given to the role of citizens in promoting purpose-led businesses.

### 2.8. What are your insights?

This section has presented exploration of the trend of purpose-led business, how they are likely to develop, and the implications and choices this may raise for business and government. Questions 2 – 5 invites your perspectives on these.

We have asked these questions not to test any policy, but rather to gain a better understanding of the range of perspectives on the subject, to help us reflect on some of our assumptions, and to consider unknowns as well as knowns. Including your perspectives in the final Briefing will help ensure it is an effective input to any future policy in this area.

*To recap on our questions:*

We are interested to hear from you about whether you think that the number of purpose-led businesses will continue to grow steadily, even though many will continue to focus on profit. We think this will be driven by increasing awareness and pressure for businesses to be more socially responsible especially as the challenges presented by major change become more pressing.

We want to know if you think that there is a greater role for business in contributing to wider societal outcomes or whether business is doing enough already without having to adopt a purpose-led approach.

We also want to hear your perspective on the role government could play in helping to accelerate this trend by encouraging business to shift to purpose-led approaches. We identified a spectrum of policy levers, but more work will be needed to identify which combination of options would be most effective.

We do think that future governments will need to consider using innovative partnership and systems-based approaches to truly capture the potential for purpose-led businesses to play a meaningful role in helping to solve the great challenges of our time.

### 3. Trend two: use of blockchain technology

*How might New Zealand business use, and be shaped by, technologies in the future? A deep dive into the emerging use of blockchain technology, with some insights into its role in productivity and wellbeing.*

#### Summary

Technology is a large and fast-moving driver of change in our current times. By exploring blockchain, as one example of an emerging technology, we have developed insights about how business may use, and be shaped by, this technology over the next 10 years.

Blockchain technology is starting to transform the way business and industries manage data and transact. It is currently most used in finance and supply chains, and best known for applications such as Bitcoin and NFTs.

Over the next 10 years use of blockchain is likely to grow and broaden, reflecting its function as digital infrastructure. For example, it is likely to become a more embedded capability in business and systems supporting productivity, and will enable more decentralised and networked business models (eg DAO). There is likely to be more uses that address social and environmental challenges and contribute to wellbeing, and use of this distributed data technology by Māori to grow business and enable Māori-led initiatives with data.

Alongside potential beneficial uses, there are risks and challenges to overcome with blockchain, and uncertainty about the extent to which public trust and confidence in blockchain use will develop.

If Aotearoa New Zealand wants to advance the use of blockchain for positive outcomes, business and government will need to build skills to support innovation and adoption. Risks and opportunities will need to be addressed in an integrated and socially connected way that can anticipate and adapt to ongoing change and manage risks. Government could make a strategic choice about the level of ambition it has to realise and shape the potential benefits of blockchain technology.

#### 3.1. Why are we focusing on blockchain?

*Technology is an agent for change*

As new technologies (digital and other) develop, they are applied in ways that can change the ways in which businesses operate and create value and also how we live our lives (Policy Horizons Canada, 2021). The overall pace and scale of change from technologies has been growing and is expected to keep increasing in the years ahead. This is being driven by the exponential growth and availability of data and the ways in which technologies interact and are being combined together, for example:

- biological, manufacturing and digital technologies are being used together to grow new protein foods cultivated in labs
- digital sensors that collect environmental data, combined with artificial intelligence systems, are enabling cities, and the people that live in them, to make more efficient use of transport, renewable energy, and reduce climate warming emissions (UN Economist Network , 2020).

The technology sector is also now New Zealand's second largest exporter. According to industry research, in 2020 it employed 111,760 people, paying higher than average wages and with each job creating nearly five additional new jobs (NZTech, 2021).

### *MBIE has roles with technology*

Reflecting the impact and potential of emerging technologies, particularly digital, on society and economy, the government has initiated a Digital Strategy for Aotearoa (see Box 9). Part of this is to support all New Zealanders having the skills to use, trust and benefit from the adoption of emerging technologies.

MBIE has roles in the development and implementation of this strategy, alongside partner agencies like DIA, DPMC, and StatsNZ, and is also partnering with the digital technology sector to develop a Digital Technologies Industry Transformation Plan (Digital Technologies Industry Transformation Plan, 2022).

### *Scope of this section*

This section of the draft Briefing provides a ‘deep dive’ into some of the trends and early signals about the use of blockchain to develop some insights about its implications over the medium to long-term. Our aim is to develop an awareness of the patterns of development and use. It is not a comprehensive technological assessment or literature review.

We chose to explore blockchain because it is a still emerging technology that, like we’ve seen with the internet, is starting to transform the ways business use data and transact. It is also likely to also influence the ways we live our lives over time. Insights about blockchain may also be helpful to guide our approach with other emerging technologies.

## 3.2. What is blockchain?

‘A blockchain is a data structure with a unique set of properties suited to decentralized systems. The data in a blockchain is usually wrapped in a package called a block and when the network is updated with new information this block is linked to the previous update. In this manner the links form a chain that cannot be broken without invalidating the entire chain. The data is immutable meaning that once a block is written it cannot be deleted or changed. In a public blockchain this is managed by having many participants each storing a copy of the data and agreeing on any updates. These nodes keep the network decentralized — without a main server or single-point-of-failure, and transparent — open to anyone to participate and audit the activity’ (BlockchainNZ, 2022).

Value created on a blockchain is referred to by various names, like cryptoassets, cryptocurrencies, digital tokens and digital financial assets. For consistency with other government agencies, we use the term cryptoassets.<sup>5</sup> Cryptoassets have different forms and purposes, like:

- payment or gas tokens<sup>6</sup>

### **Box 9: Digital Strategy for Aotearoa**

Government is currently developing a [Digital Strategy for Aotearoa](#), that will set goals toward a vision of ‘enabling all of Aotearoa New Zealand to flourish and prosper in a digital world’ (Government, 2021).

The Digital Strategy has three pillars or proposed themes:

- Mahi Tika — Trust
- Mahi Tahī — Inclusion
- Mahi Ake — Growth

<sup>5</sup> [What cryptoassets are \(ird.govt.nz\)](#)

<sup>6</sup> Bitcoin is the original and well-known example. These payment tokens are also utilised for paying for transactions on the various blockchains, ie new entries on the bitcoin blockchain requires the spending of bitcoin as a fee which is paid to “miners” that verify the transaction.

- security or asset tokens: held for investment purposes, and including NFTs (non-fungible tokens)<sup>7</sup>
- utility or consumer tokens: that support exchange or access to services.

Transactions made through most blockchains<sup>8</sup> and other distributed ledger technology are made peer-to-peer. This means that the businesses, communities, and systems that use blockchain can operate with less need for intermediaries such as central agencies or banks. The decentralisation that blockchain enables is generally regarded as its most transformative feature.

This is a very high-level overview of blockchain. More in-depth sources of information include reports by Callaghan Innovation (2018) and the OECD's Blockchain Primer (2018).

### 3.3. A visual: use of blockchain technology over time

For this Briefing we have grouped the development of blockchain into three stages, each marked by its own trends:

- **Pae mahara** / the past — emergence of Bitcoin and cryptocurrencies 1990 – 2014:
- **Pae herenga** / the present — emergence of smart contracts and decentralised autonomous organisations (DAOs)
  - 2015 – 2021
- **Pae tawhiti** / the future — what is probable in the future 2022 – 2050

These stages and key events are described further in the following sections and shown visually in Figure 4.

The pae tawhiti/future part of the figure indicates what we think we are likely to see in New Zealand in the use of blockchain — a probable future. This has been informed by exploration of the past and present trends, supported through advice from people experienced in the development, use or regulation of blockchain, and published research (Centobelli, 2021) (Sims, 2021) (Allen, 2020). It builds in assumptions that government and business approach to and use of blockchain will develop, including implementation of the Digital Strategy for Aotearoa, but be similar in nature to that seen to date.

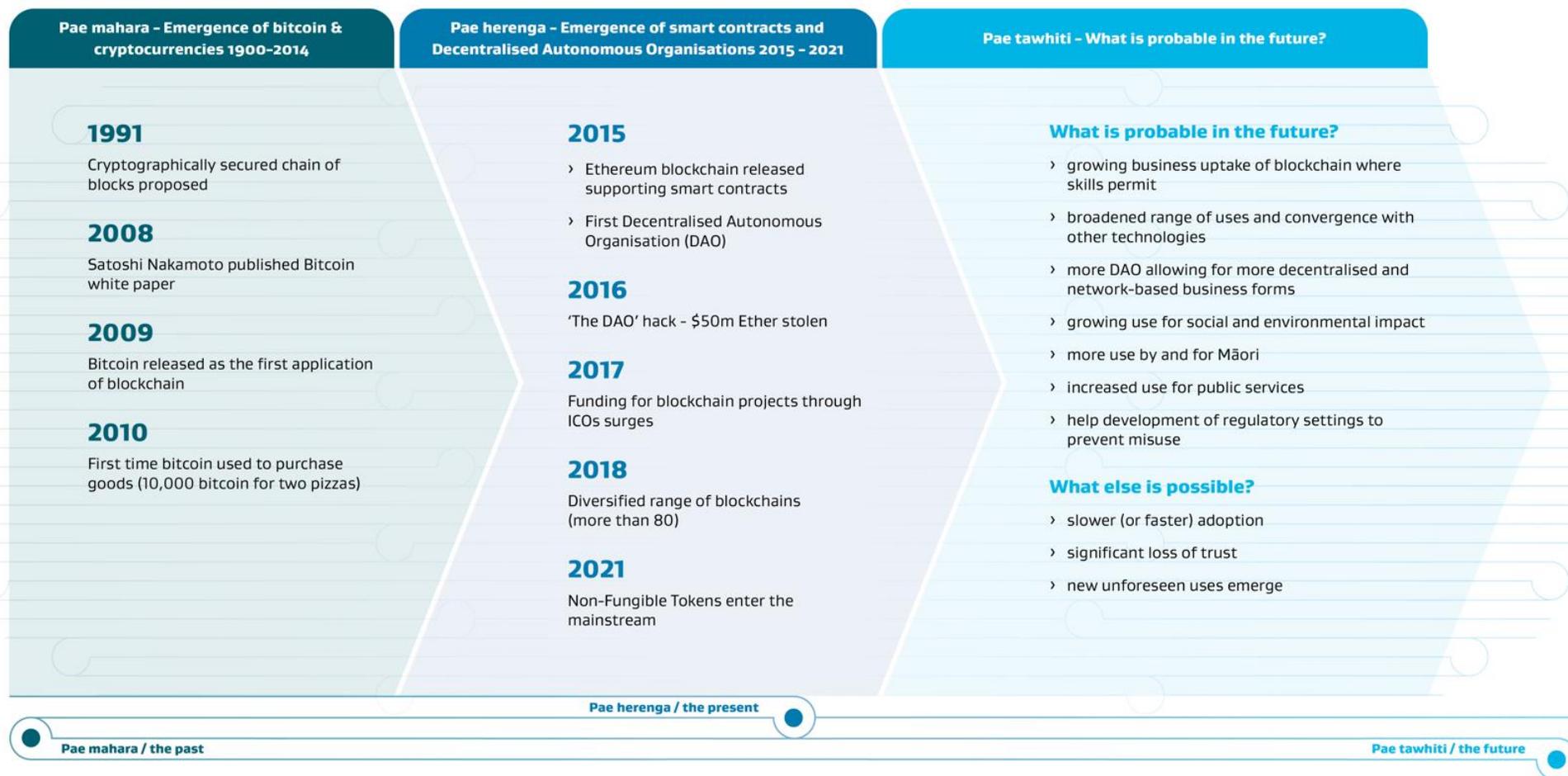
The figure also notes some of the other possibilities, arising from the many unknowns about how this technology will develop and be adopted, and other events that could shape the context for its use. These uncertainties are clues to things that business and government need to be aware of and responsive to.

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<sup>7</sup> NFTs are a unit of data on a blockchain that can be sold or traded. Non-fungible means unique. NFTs can be associated with anything digital, including digital art, computer game or virtual world assets, music, film, and tickets for access to services or events.

<sup>8</sup> Blockchains come in two broad forms: public (open-access or permissionless), which allows anyone to participate, and private (or permissioned), which have more control over who can participate. These can be thought of like an internet and an intranet. The type of model can have a bearing on its efficiency, governance and transparency.

**Figure 4:** Use of blockchain technology over time



### 3.4. Pae mahara / the past

Bitcoin was the first application of blockchain. It was released in 2009, following publication in 2008 of a white paper by Satoshi Nakamoto titled 'Bitcoin: a peer-to-peer electronic cash system', and before widespread awareness of blockchain as a technology (Gupta, 2017). Bitcoin was created through the novel combination of various existing technologies (such as cryptography, game theory and algorithms) and was intended as a peer-to-peer e-currency — an alternative to electronic cash.

Although Bitcoin wasn't widely adopted in its early years, it laid the foundations for developing decentralised technologies, and associated applications, like NFTs and the use of 'tokens'. What we now refer to as blockchains (eg Ethereum, Cardano, NEO, Stellar) are essentially developments of the underlying technology used for Bitcoin.

### 3.5. Pae herenga / the present

#### 3.5.1. Emergence of smart contracts enabling a range of decentralised applications

The market release of the Ethereum blockchain in 2015 enabled smart contract functionality of blockchain. A smart contract is a computer protocol that digitally facilitates, verifies, or enforces the negotiation and/or performance of a contract. Its programmable rules must be met before any data can be validated and added to the blockchain, and allows less or no human involvement.

With these developments blockchain is now thought of as digital infrastructure – a platform for decentralised applications that can allow transactions to be more secure, less error prone, or more labour efficient, all of which can support productivity.

#### **Box 10: Smart contract example: Walmart Food Traceability system**

In 2016 Walmart initiated their Food Traceability system, which uses smart contract functionality to support food security and safety. The system has reduced the time taken to trace contaminated food – from days to seconds.

Corporations such as Nestle, Dole, Tyson Foods and Unilever have implemented similar systems, expanding on track-and-trace functionality to make more informed decisions across all stages of their supply chains (Rejeb, 2020). Recently, Walmart expanded their use of blockchain to create an automated process for handling invoices and payments of its 70 third-party freight carriers, resulting in significantly fewer invoice discrepancies and faster carrier payment times.

Internationally, usage of blockchain was first for payments, in supply chains (see Box 10), and in the energy and finance sector. This is now expanding to uses for other purposes, such as data management, digital identity and governance and in areas such as healthcare, government administration, environmental management, and online environments (sometimes called Web3).

Smart contracts form the basis of NFTs. These are best known currently for their role verifying digital art and collectibles, but are likely to be increasingly used for other purposes such as ticketing for access to services.

Investment in blockchain has grown from US \$3.1 billion in 2020 to US \$25.2 billion in 2021,<sup>9</sup> with business value generated by blockchain estimated by Gartner to be US \$3.1 trillion by 2030.<sup>10</sup>

### 3.5.2. Whole system applications beyond improving productivity for individual firms

This expansion of use means that blockchain has applications not just for individual firms, but also in broader systems, such as across industries, a whole economy, or internationally. This is largely through its ability to support decentralised functions that can lower the cost of coordination and governance *between* economic agents, like firms or people, as well as having an impact *on* the agents themselves. For this reason, researchers are thinking about how uses of blockchain could support innovation in systems (Allen, 2020) and the notion of a token economy is emerging (see Box 11).

#### Box 11: A token economy

A token economy describes a system that uses digital tokens, sometimes called ‘coins’, to reward user or network participation, like content creation, that creates value in a company or broader system (Kim & Chung, 2019; Lee, 2019).

A current example is the social networking site Steemit that rewards users for their content through cryptocurrency-based tokens.

Tokenisation can be used not only by business but by any system to incentivise action, for example, potentially by government as a kind of policy tool, and by communities to support local economies, reinforce values and support data sharing.

Broader system applications of blockchain include uses such as digital identity verification, water rights management, renting out underutilised land for car parking, tracking parts and ticketing across air travel systems, improving efficiency of energy systems, and public administration (including regulation systems, public contracts, taxes, and accounting) (Jennath, 2019) (CB Insights, 2022). In Estonia, a significant portion of its public administration is now based on its own blockchain technology, and other countries and cities are also beginning to implement blockchain-based solutions across public systems (U4SSC, 2020).

These broader system applications are also examples of how blockchain can support wellbeing.

Table 6 lists some indicative impacts — benefits and risks/challenges — of blockchain in the context of goals of strengthening productivity and broader outcomes and wellbeing. These are noted as indicative as the links to productivity and other outcomes are highly complex and not readily generalisable.

<sup>9</sup> [www.cbinsights.com/research/report/blockchain-trends-2021/](https://www.cbinsights.com/research/report/blockchain-trends-2021/)

<sup>10</sup> [www.gartner.com/en/newsroom/press-releases/2019-10-23-gartner-identifies-the-four-phases-of-the-blockchain-spectrum](https://www.gartner.com/en/newsroom/press-releases/2019-10-23-gartner-identifies-the-four-phases-of-the-blockchain-spectrum)

<b>Table 6: Indicative impacts of blockchain on productivity and wellbeing</b>			
Likely benefits (✓) and challenges (✗) that need to be/are being addressed, or may limit adoption			
<b>Properties of blockchain</b>	<b>Features / impacts</b>	<b>Relevance to productivity</b>	<b>Relevance to broader outcomes and wellbeing</b>
<b>Decentralised / peer to peer transactions</b>	<ul style="list-style-type: none"> <li>✓ Lowers the transaction and coordination cost of activities</li> <li>✓ Reduced need for intermediaries and increased system resilience</li> <li>✗ Could limit the effectiveness of other whole of system approaches</li> <li>✗ Requires change from current systems, with jobs/tasks lost and gained</li> </ul>	<ul style="list-style-type: none"> <li>✓ Business efficiencies</li> <li>✓ Network and system efficiencies</li> <li>✓ Can allow for less wastage of energy and materials (if low energy / green blockchains used)</li> <li>✗ Adoption / switching costs may be prohibitively high for some firms</li> </ul>	<ul style="list-style-type: none"> <li>✓ Empower community led solutions and participation</li> <li>✓ Reduced inequality if adoption is board-based</li> <li>✓ Increased data sovereignty</li> <li>✓ Reduced transaction costs, eg fees</li> <li>✓ Support coordination of action toward grand challenges</li> <li>✓ Increased resilience with no single point of failure</li> <li>✗ Change may outpace social license</li> <li>✗ Lose benefits of traditional intermediaries</li> </ul>
<b>Immutable records</b>	<ul style="list-style-type: none"> <li>✓ Reliable and robust data records</li> <li>✓ Reduction in human error</li> <li>✗ Irreversible, so not suited to all data management needs</li> </ul>	<ul style="list-style-type: none"> <li>✓ Business or service efficiencies, eg, less mistakes, faster traceability and product stewardship</li> <li>✓ Digital identity</li> </ul>	<ul style="list-style-type: none"> <li>✓ Increased consumer / citizen trust and confidence if used appropriately</li> <li>✗ Reduced confidence if adoption impacts the right to forget</li> </ul>
<b>Encrypted / anonymous data / Transparency</b>	<ul style="list-style-type: none"> <li>✓ Security, trust</li> <li>✗ Vulnerabilities, eg losing private blockchain reference key</li> </ul>	<ul style="list-style-type: none"> <li>✓ Reduced fraud</li> <li>✗ Fraud or losses can still occur through hacks or scams</li> </ul>	<ul style="list-style-type: none"> <li>✓ Support inclusion in low trust environments</li> <li>✓ Provide confidence and high trust relationships</li> <li>✗ Huge energy cost and environmental impact of current commonly used 'proof of work' blockchains</li> </ul>
<b>Platform for applications</b>	<ul style="list-style-type: none"> <li>✓ Flexibility of use, eg smart contracts supporting automation and efficiencies</li> <li>✗ Complex and immature technology, new skills required</li> </ul>	<ul style="list-style-type: none"> <li>✓ Reduced labour inputs, faster processes</li> </ul>	<ul style="list-style-type: none"> <li>✓ Enable new ideas and innovation to respond to opportunities and challenges</li> <li>✓ Economic diversification</li> <li>✗ May increase digital divide if not inclusive</li> <li>✗ Loss of human agency through automation</li> </ul>

### 3.5.3. Improving functionality

Blockchain is still an emerging technology with many technical challenges like speed, scale and interoperability, security, and adoption costs. In recent years, many new types of blockchain have been developed to overcome these challenges. There are now over 80 types of blockchain.<sup>11</sup>

As one example, most current types of blockchain, including Bitcoin and Ethereum, have very high energy consumption. This issue is being addressed by newer computing approaches (eg proof-of-stake) through blockchains, such as Cardano, with much lower energy usage (Sedlmeir, Buhl, Fridgen, & Keller, 2021). These lower energy types of blockchain are at early stages of adoption but are anticipated to grow in use.

### 3.5.4. Hype, risks and challenges

The development of uses of blockchain is being accompanied by the sort of experimentation, market turbulence and hype that is typical of early-stage technology adoption. Some people consider these patterns as evidence of a risky, 'wild west' of blockchain; others accept them as typical of the hype cycles that accompany emerging technology.

An example of this is what is known as the 'The DAO hack' in 2016. This high-profile incident occurred three months after the 2016 launch of 'The DAO', a venture capital initiative, and involved US \$50 million of ether stolen (then later recovered).

Another example is the popularisation of NFTs, particularly for art. In 2021, sales of NFTs grew from US \$1.3 billion in the second quarter to US \$10.7 billion in the third.<sup>12</sup> COVID-19 lockdowns have been one driver for this growth, as artists used this new technology to reach new audiences and markets. At the same time there are concerns that NFTs are a bubble and the need for measures to manage financial risks.

More generally, commentators and researchers have associated the following risks and challenges with blockchains (Frizzo-Barker, 2020) (Bodo, Brekke, & Hoepman, 2021):

- distributed data systems like blockchain can inhibit the policing and prevention of criminal activities like money laundering, (although, contrarily, it can be easier to track criminal usage of cryptocurrencies than it is to track usage in banking systems)
- potential for increased inequality if limited digital skills impacts on business development or employment options, or through algorithmic execution of blockchain activities that could reinforce inequities in societies and privilege certain demographic groups over others
- unstable cryptocurrencies and asset speculation can pose financial risks, particularly for less experienced investors
- hacks and scams can still occur on a blockchain system, for example through fraudulent data or users, or lack of consumer knowledge
- inability to change or delete data means blockchain is unsuitable for all data storage systems and sensitive information needs to be held off-chain, and can conflict with rights-to-forget
- private blockchains could become a tool for consolidating power, and could lead to, or reinforce, inequities

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<sup>11</sup> Blockchain Consensus Encyclopedia: <https://tokens-economy.gitbook.io/consensus/blockchain-consensus-encyclopedia-infographic>

<sup>12</sup> [www.reuters.com/article/fintech-nft-q3-idCAKBN2GU298](https://www.reuters.com/article/fintech-nft-q3-idCAKBN2GU298)

- reduced use or changing nature of intermediaries (eg there may be less or no role for banks) arising from decentralisation could impact negatively on things such as consumer protections and conflict resolution that are typically part of the role of conventional intermediaries.

Reflecting these risks as well as opportunities, some jurisdictions have developed policies and regulation for the uses of blockchain as part of their economic strategies. For example, Switzerland has established a legal framework for cryptocurrency and cryptoassets; Japan has a 'sandbox' programmes to support innovation and associated regulatory change, and Australia announced a National Blockchain Roadmap in 2019.

Many other countries are at earlier stages of developing regulation (New Zealand included). The US, for example, issued an executive order in March 2022 to develop policy on cryptocurrency, covering aspects such as consumer protection, and responsible innovation, and an assessment of the potential for central bank digital currency that could encompass cryptocurrency. A few countries, including China, are more restrictive and have introduced bans on cryptocurrency transactions.

### 3.5.5. DAO enable more networked approaches to governance

Another key development in recent years has been the advent of decentralised autonomous organisations (DAOs), based around blockchain smart contracts. First created in 2015, DAOs are a new organisational form for business or economic activity.

In a conventional firm, a board of directors makes decisions. In DAOs, agreement on proposals is reached through token-holders representing a wider network community, and to rules set and enforced by a smart contract. A fully automated version of DAOs would eliminate managers and directors from any operational or corporate governance decisions allocated to the DAO. At present, full decentralisation rarely occurs as some roles still require central involvement (eg in dispute resolution).<sup>13</sup>

DAOs now exist in many industries, but are particularly represented in decentralised finance for investment, charitable fundraising, and NFT purchase.<sup>14</sup> Usage is not limited to controlling digital assets and can be used to control real world assets, such as water rights.

DAOs are currently being used to extend the capabilities and reach of corporate and network governance, reducing transaction costs and allowing more participatory governance and operations (Sims, 2021). The challenges of DAO governance are being worked through as removing centralised governance and allowing more participatory decision-making are complex. It is possible that, over time, DAOs will compete with traditional organisations, and will also create new markets and opportunities for participation.

As DAOs do not fit with current governance practice and regulatory regimes, they are turning to legal recognition to allow them to fully operate as businesses and to limit their liability (Sims, 2021).<sup>15</sup>

In April 2022, there were 92 DAOs world-wide with investments over US \$1 million. This group of DAOs had a total of 1.7 million members, and assets valued at US \$11.2 billion.<sup>16</sup> Amongst these is Metacartel DAO, which was founded by New Zealanders and supports app-development, and Decentraland DAO, which supports governance of the Decentraland virtual world.

<sup>13</sup> Although in time as AI becomes more sophisticated, a increasing number of disputes will be adjudicated through AI.

<sup>14</sup> See [DAO Landscape](#) for a visual of DAO's grouped by purpose -

[https://coopahtroopa.mirror.xyz/\\_EDyn4cs9tDoOxNGZLfkL7JjLo5rGkkEfRa\\_a-6VEWw](https://coopahtroopa.mirror.xyz/_EDyn4cs9tDoOxNGZLfkL7JjLo5rGkkEfRa_a-6VEWw)

<sup>15</sup> A number of US states, such as Wyoming and Vermont, enable DAOs legal registration and in late 2021 Australia's parliament recommended that government establish a new DAO company structure (Parliament of Australia, 2021).

<sup>16</sup> [deepdao.io](https://deepdao.io)

### 3.5.6. Use of blockchain in Aotearoa New Zealand

In Aotearoa New Zealand, blockchain is being used mainly by entrepreneurs and early-adopter businesses in the technology and creative sectors. There is much less use in the wider business community and in government, but interest and use is growing. BlockchainNZ<sup>17</sup> has seen membership numbers grow from 16 in 2019, to 73 in 2022. Their membership includes blockchain technology developers and solution providers, government agencies, artists, individuals, and larger New Zealand businesses, banks and law firms.

Table 7 outlines several current uses of blockchain in New Zealand, some in the market, while others in development stages. Blockchain won't be useful for any or all business activity, but there are trends of growing use and a broadening range of applications.

Table 7: Examples of 'present' uses of blockchain		
Domain	Role of blockchain	New Zealand examples
<b>Supply chains and logistics</b>	Used to optimise performance, by saving time and reducing risk, through smart contracts, which support traceability and transparency for quality and provenance assurance, accessing finance, and increasingly also environmental and social sustainability.	Trust Alliance New Zealand (TANZ) is New Zealand's first national blockchain consortium and supports data sharing and collaboration across the sector. TrackGood is a supply chain tracking solution using blockchain to display and share sustainability impact data (Trackgood, 2021).
<b>Energy</b>	Enabling direct to consumer (peer to peer) transactions to reduce the need and number of intermediaries for sector level efficiencies, and the shift to distributed and renewable energy to support decarbonisation.	Vector have trialled Australian-owned Powerledger's blockchain-based platform to allow consumers to trade surplus energy from solar panels and batteries directly with each other without using an electricity retailer.
<b>Finance, digital assets</b>	Supports start-up financing, eg through Initial Coin Offering (ICOs), digital money / cryptocurrency use and trading, and a basis for digital assets, such as NFTs, for trading.	Centrality supports startups with the tools and resources to create digital assets and applications using the CENNZnet New Zealand based public blockchain and decentralised application platform.
<b>Banking</b>	Cryptocurrency can allow faster transactions, especially across borders. Like physical cash, provides anonymity and convenience.	The Reserve Bank of New Zealand is exploring the future of money and the potential role that blockchain could have in currency, eg central bank-issued cryptocurrency, and settlement services. ANZ Bank NZ has developed a proof-of-concept blockchain for reconciliation of data for insurance policies.
<b>Voting</b>	Enable transparent and immutable data where the public can track and scrutinise their votes, submissions, and engagement.	Horizon State uses a blockchain platform to provide voting services that reduce tampering and promote democratic participation and trusted elections.

<sup>17</sup> A not-for-profit membership organisation, part of the NZTech Alliance.

### 3.5.7. Regulation of blockchain use in Aotearoa New Zealand is developing

A 2018 Law Foundation paper recommended that New Zealand continue to allow cryptocurrencies to be traded, to build regulatory capability,<sup>18</sup> to enable benefits, manage risks and maintain New Zealand's reputation as an 'innovative, agile and nimble country'.

There is not yet a whole of system approach to regulating uses of blockchain. However, Aotearoa New Zealand does regulate some uses classified as financial services or products (regulated by the Financial Markets Authority), virtual asset service providers,<sup>19</sup> and cryptoassets, for taxation. Cryptocurrency and NFTs are not directly regulated.

#### Box 12: A local approach to technology governance

Aotearoa New Zealand's Veracity Lab is developing local approaches for a 'digital public infrastructure' that can support trusted, secure, inclusive, and human-centred use of data and digital tools (Lab, Veracity, 2021). Their approach is not just about minimising risk but also about reflecting who we are as people, building wellbeing, and helping to ensure that we live well alongside an increasing amount of technology in our lives.

While not specific to blockchain, this initiative is part of a growing dialogue about the need for governance of digital and other technologies with a national or whole system approach, underpinned by a social contract, that enables digital innovation that is values-based and equitable.

#### Question 6: Are there any other aspects to the present-day development and use of blockchain that you are aware of?

### 3.6. Pae tawhiti / the future

With the current patterns of investment and adoption in blockchain globally, we anticipate that the use of blockchain will continue to grow, rather than decline in use or development.

While there is a lot we don't know about how the use of blockchain will develop and impact our future, we have drawn insights from how current trends have developed and New Zealand's past experience with technological development. The remainder of this section outlines the following four probable developments in blockchain technology<sup>20</sup>, with a focus on the Aotearoa New Zealand context:

- blockchain becomes more embedded in business, dependent on skills
- DAOs are a growing part of the business landscape
- blockchain becomes an enabler for social and environmental impact
- blockchain is increasingly used by and for Māori.

<sup>18</sup> An approach to this is the regulatory sandboxes used by other countries that allow regulators to work alongside companies.

<sup>19</sup> This includes activities such as cryptoasset wallet provision, investment services and exchanges but does not cover cryptocurrency and NFTs which are not viewed as financial products. Virtual asset service providers have responsibilities as part of the Anti-Money Laundering and Countering Terrorism Act, and are supported in meeting these by the Department of Internal Affairs.

<sup>20</sup> Note that these are only some of the aspects of a probable future and focus mostly on potential positive implications – a full risk assessment is out of scope for this Briefing.

### 3.6.1. Blockchain becomes more embedded in businesses, dependent on skills

As the range of blockchain applications increases, we anticipate growing uptake from businesses, government services and communities, worldwide and in Aotearoa New Zealand. This will be part of a general trend of increasing digitalisation. A growing use of blockchain in global supply chains is likely to drive uptake, as will the development of digital skills generally, both in the tech sector and society-wide.

Even with these developments, low or slow uptake of blockchain in Aotearoa New Zealand could become a barrier to firms that rely on global markets and supply chains. Uptake of advanced digital technologies is already relatively slow among New Zealand firms, with the provision of digital services (including cloud computing services) comprising only 1% of value added, half the OECD average.

International research has indicated that only 20% of adoption barriers with blockchain are technology related, with 80% due to current business practices and models that result in costs of switching and lack of familiarity with blockchain (Frizzo-Barker, 2020). Those we spoke with indicated that without marked improvement in adoption, the same is likely to be the case in New Zealand, noting that the biggest challenge is implementing blockchain solutions across supply chains and in systems, and building workers' familiarity with this new technology.

The development of blockchain solutions requires business skills in two main areas: First, a *general understanding* of its potential, the situations where it can, and cannot, add value, and how suppliers and customers are using the technology. Secondly, *technical* skills in software development of applications. Internationally, these skills are in high demand from business, and a lack of talent has been reported as a persistent barrier for business. Findings from a study in Europe, suggests that demand for technical skills (such as software engineering and coding) will continue (ESRI, 2021).

Extending the current patterns of development and policy, we can anticipate that the growth of skills in blockchain in the future is likely to be supported through a range of training and qualifications that include integrated learning, place-based and online courses, and informal learning. Training that is focussed and designed around the needs of industry and learners will help ensure businesses have access to the skills they need to grow (NZ Digital Skills Forum, 2021).

### 3.6.2. DAO business forms are likely to be a growing part of our business landscape

In the years ahead, we anticipate DAOs to become more prevalent, both as stand-alone business forms and integrated with current business operations. The emergence of DAOs is likely to lead to:

- growing numbers of distributed and network-based organisations
- more liquid governance, with more decisions made in real-time, and less need for auditing (as unauthorised actions cannot take place)
- more decentralised systems that can support people to work together with a common purpose, developing their own customs and rules, and managing resources through a token economy
- changes in work, with loss of some administrative tasks as well as new or different jobs, like establishing or working for DAOs.

Research into the governance and legal regulation of DAO is at very early stages. New Zealand researchers suggest government should monitor the developments in DAO and build capability to advise and regulate appropriately (Jayasuriya, 2020) (Sims, 2021). This approach would enable consideration of the strategic opportunities that DAO may present to New Zealand if allowed to register here.

### 3.6.3. Blockchain is used for social and environmental impact

There are early signs of growing use of blockchain for environmental sustainability and climate change. Examples include supply chain transparency for the fishing industry, decentralised resource management, sustainable finance, and incentivising circular economies (UNEP, 2020) (PwC and World

Economic Forum, 2018). Blockchains are also being applied to support outcomes from the Sustainable Development Goals, such as financial inclusion for unbanked people, healthcare, improved access to energy, and legal identity (UNDP, 2019).

We learned of several innovative examples of blockchain and distributed data application in Aotearoa New Zealand that are supporting wellbeing through social, cultural and environmental goals (see Box 13).

### Box 13: Aotearoa New Zealand initiatives

- **The Wellbeing Protocol** is exploring approaches to empower communities to solve their own problems through bottom-up blockchain-enabled approaches. In 2021 a trial in Porirua's Cannons Creek used a digital wallet on a smartphone, loaded with 'Cannon Coin', for participants to spend on fruit and vegetables, trade among themselves, or to put towards community initiatives.
- **Āhau** provides an archive tool, designed to enable individuals, whānau and iwi to keep secure records of whakapapa, and with wider applications for digital identity. By using distributed data technology (similar to blockchain), the data is held by the users and marae and stored in Aotearoa, consistent with Māori data sovereignty principles.
- **Toha** is developing an investment platform for regenerative climate solutions for New Zealand and global application. This platform is enabled through a blockchain-based Toha Network Token and involves data collected from a network of landowners that have made and demonstrated environmental impact, that then incentivises capital investment into regenerative projects.

Some proponents anticipate that, over coming decades, the decentralised nature of blockchain could help transform international production systems to a 'design global, manufacture local' model that combines blockchain and other digital technologies with advanced and distributed manufacturing (Bauwens, 2018). As well as this global scale use, blockchain can also be used in hyperlocal settings, for example through a local token economy that enables wellbeing in communities through more autonomy and efficient use of resources (Wellbeing Protocol, 2021).

These early-stage developments reveal some possibilities for New Zealand approaches to societal challenges enabled by values-driven, zero-carbon blockchain solutions.

#### 3.6.4. Blockchain by Māori, for Māori, with Māori

In preparing this draft Briefing we heard about the potential of blockchain for Māori. These included insights from Āhau (which provides digital archiving of whakapapa; see Box 13) and Blockchain Māori (an early-stage enterprise supporting rangatahi to build capability for creative and safe use of blockchain technology through the development of Aotearoa-focused NFT art).

They were both motivated by the potential of distributed data technology for Māori and the desire to ensure Māori are seizing opportunities to develop and own technology businesses.

Aotearoa New Zealand's Māori digital sector is growing. There are successful businesses that are embedding Māori values into creative and high-tech ventures. Like Māori business generally, many Māori digital start-ups can be described as purpose-led, with a distinctive focus on environmental, social

and cultural outcomes as well as commercial bottom lines. While the sector is growing, it is proportionally small — Māori constitute only four percent of the IT workforce.<sup>21 22</sup>

Being decentralised, blockchain and other distributed ledger technologies have potential to enable Māori-led initiatives, including the ownership of data, consistent with Māori needs and interests in data.<sup>23</sup> There is also potential for blockchain technology to enable iwi-owned or Māori business to support the security and provenance of supply chains, for example in fisheries and agriculture.

Realising these opportunities will require efforts to ensure equitable access to opportunities and capability development, consistent with Te Tiriti o Waitangi and Māori aspirations that enable ambitious success. These opportunities should build on strengths, as well as recognise the socio-economic context for many Māori, which may have limited their ability to fully participate.

#### **Box 14: Purpose-led and blockchain — how could these trends converge?**

Several of the people and businesses we spoke to noted that blockchain is already being used by some purpose-led business as a way to engage their networks/communities, and that they expected this trend to grow. In Aotearoa New Zealand we can anticipate many will be creative businesses, working in or across the arts, cultural sector, or innovative tech sectors, as these are known to often be early adopters and have a purpose beyond financial returns.

We heard that purpose-led businesses could use blockchain to:

- help with the ‘start-up’ of their business or enterprise — to raise finance more readily, reach a wide range of investors, and establish networked organisational forms such as a DAO
- support more efficient and/or inclusive governance, for example involving network members or communities in decisions about the use of funds
- support purpose-led business activities such as impact investment or supply chain transparency
- enable Māori-led solutions through decentralisation of information and governance
- enable ‘next-generation’ sustainability reporting through the ability to hold and use data on multiple dimensions of financial, social and environmental dimensions (or ESG) for investment or consumer decisions
- support impact at scale by enabling replication of business models.

‘DAOs have given us a way to wrap an economic model around open source. We can now create incentives for people to start and invest time into growing purpose driven “organisations” (or communities)’ (Wellbeing Protocol, 2021).

#### 3.6.5. Other possible futures for blockchain

Along with the probable developments discussed in this section, there are areas where there is more uncertainty about how blockchain will develop, influenced by drivers in the wider economic or social environment.

<sup>21</sup> Digital Skills for our Digital Sector, 2021

<sup>22</sup> One of the foundational goals of the draft Digital Technology Industry Transformation Plan is to build Māori participation in the sector.

<sup>23</sup> A Māori data governance model for government data is underway as part of the development of a digital strategy. This work is co-led by the Data Iwi Leaders Group and Stats NZ and aims to develop an approach to data governance that reflects Māori needs and interests in data.

One of these is the extent to which trust and confidence in blockchain may develop. Based on experience with other digital technologies in the past, it is likely that confidence in blockchain will gradually increase, with familiarity and improved functionality.

It is also possible though that blockchain suffers a major loss of trust and use. This loss could be a result of ongoing cryptocurrency market volatility, a security challenge (due to criminal activity) or developments in other technologies like quantum computing (that would challenge all systems that use encryption). Loss of trust could also arise if blockchain was used by corporations or other actors to strengthen control of data in ways that undermine privacy or autonomy.

Other areas of uncertainty are the pace of business adoption and how blockchain is used by businesses large and small, and the extent of whole system/economy impacts through blockchain-enabled decentralised approaches.

Scenarios are a way of exploring key uncertainties and have been created for blockchain by the Institute for the Future (summary in Box 15). We aim to develop further insights about different possibilities, even those unlikely, for blockchain through feedback and engagement on this draft Briefing.

### Box 15: Four possible scenarios

The [Institute for the Future](#) has created four possible scenarios to provoke imagination about Blockchain Futures. These provide insights about the range of ways in which blockchain and business could co-evolve, extending to more unlikely futures. Their scenarios are (in summary):

<p><b>The Commons Win</b></p> <p>Food, water, energy, healthcare and other 'commons' are managed by DAO and smart contracts.</p>	<p><b>Value is Everywhere</b></p> <p>Multiple cryptocurrencies and tokens express the value of everything in real time.</p>
<p><b>Humans Battle Machines</b></p> <p>Machines own most of global capital, and humans are struggling to coexist.</p>	<p><b>Supercorporations Rules</b></p> <p>Large corporates have consolidated blockchain into just two: FinCoin and LifeChain.</p>

**Question 7:** What else do you think may be probable or possible about future developments in the use of blockchain? Are there other opportunities or implications?

### 3.7. So what? Some strategic choices

The preceding discussion indicates the way in which blockchain is likely to develop globally and in Aotearoa New Zealand. We have also started to explore some of the uncertainties that broaden our sights to other possible outcomes, such as the ways in which public trust may develop.

These insights suggest that government could consider a choice about the level of ambition it has to realise and shape the potential benefits, and manage the risks, of blockchain technology. Potential benefits, indicated in this paper, include the role of blockchain (along with other technologies) as an enabler for business enterprise and across systems and sectors, the development of tech sector business and jobs, and its role in solutions to global challenges, such as climate change and inequities. Regardless of level of ambition, managing risks to prevent harms will need to be integral.

Here we have suggested, for discussion, a range of elements of any future policy. Your feedback will support the development of the final Briefing, which will summarise the key issues and provide some high-level guidance on possible choices and approaches.

### *Scanning and monitoring trends*

As a fast-developing technology with transformative implications, it will be important that MBIE and other government agencies are abreast of developments in blockchain. A watching brief could cover not only applications of blockchain, such as DAO, but also how it is combined with other established and emerging technologies (like AI, internet of things, and manufacturing technologies) and how a changing global context and challenges is influencing the use of technologies.

This sort of scanning capability helps government anticipate and respond in a timely and appropriate ways, and is especially important in a fast-changing and complex contexts. It is also a capability that helps business make good decisions about technology use. We are interested to hear from you about whether we need to be more effective at monitoring trends at a system level and how we could be more effective.

### *Skills and adoption*

Aotearoa New Zealand needs to have the skills to use and benefit from blockchain, and other emerging technologies. But we don't have a strong track record for adopting advanced technology. Although there are already some innovative uses of blockchain and distributed ledger technology amongst entrepreneurial and technology businesses, we expect uptake in the wider business community will be at a slower pace. Those we spoke with indicated that business capability to adopt and embed blockchain solutions are limited and skills in short supply (both worldwide and in New Zealand).

To meet any objective to strengthen skills and adoption of blockchain, there will be many approaches that could be taken, including through existing or new forms of digital skills training and upskilling. As an emerging and unfamiliar technology, there may for example be a role for government to support business with trusted advice to help identify useful and safe applications of blockchain and navigate the regulatory requirements. These approaches could be supplemented with skilled migration, and through engagement with international partners. We are interested to hear from you about other possible approaches.

### *Government adoption of blockchain*

The need for skills to support adoption of blockchain solutions applies also to government. In the years ahead, there will be opportunities for government to move to blockchain-based approaches to improve or streamline services for business.

One example of this is its emerging use in some overseas jurisdictions to support regulatory compliance and analysis through validated information viewable across parties, and through this provide costs and time-savings. Equally, effective use of blockchain to help solve societal challenges will require both regulators and business to work together.

### *System approach*

Our insights about how blockchain could develop underline the need for system approaches to policy that:

- can support opportunities as well as risks
- are flexible to both anticipated and unexpected developments
- allow participation from multiple stakeholders, including users.

This type of approach has been identified in OECD work on policy for blockchain (OECD, 2019), is broadly suited also to other emerging technologies, and in New Zealand can be supported at a high level by the

Digital Strategy for Aotearoa (currently under development) with its focus on Mahi Tika — Trust, Mahi Tahī — Inclusion, and Mahi Ake — Growth.

For policy and regulation particular to uses of blockchain, Aotearoa New Zealand is in the early stages. Some blockchain-based financial services and products are regulated. However, the expanding use of blockchain for applications, like NFTs and DAO, are raising new issues and opportunities. These sort of developments, coupled with blockchain's disruptive and inherently borderless nature, may warrant new policy and or regulatory measures.

If Aotearoa New Zealand wants to advance the use of blockchain for positive outcomes, then there will be a need to provide the environment to enable that, particularly supporting the development of skills and settings that support innovation and adoption. The unfamiliarity of blockchain technology, coupled with the risks as well as the opportunities, underline the need for government to address these risks and opportunities in an integrated and socially connected way that can adapt to ongoing change.

**Question 8:** What approaches should or could Aotearoa New Zealand take with blockchain going forward to manage risks and take advantage of opportunities?

### 3.8. What are your insights?

This section has presented our findings about how the use of blockchain is likely to develop, and the implications and choices this may raise for government. Questions 6-8 invite your perspectives on these. We have asked these questions not to test any policy, but rather to gain a better understanding of the range of perspectives on the subject, to help us reflect on some of our assumptions, and to consider unknowns as well as knowns. Including these dimensions as part of our final Briefing, will help ensure it is an effective input to any future policy in this area.

*To recap on our questions:*

We are interested to hear about any experience you have had with considering or using blockchain-based solutions, for example in your own business.

Section 3.5 sketches some probable future developments, with a focus on those that may contribute to productivity and wellbeing for Aotearoa New Zealand. We would like to hear your ideas for other probable or possible ways in which the use of blockchain could develop, perhaps through convergence with other technologies, globally or locally. We are keen to use this engagement period to ask some 'what if' questions to test what could happen in the case of some unexpected or disruptive events.

Finally, we are interested to hear your views about what approaches government could play with respect to use of blockchain. This could include the level of ambition or effort you think may be appropriate as well as the sort of policies or roles that may be most effective.

## Annex One: Information use and protection

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The information provided in submissions will be used to inform MBIE's Briefing. MBIE may contact you directly if we need to clarify any matters raised in your submission.

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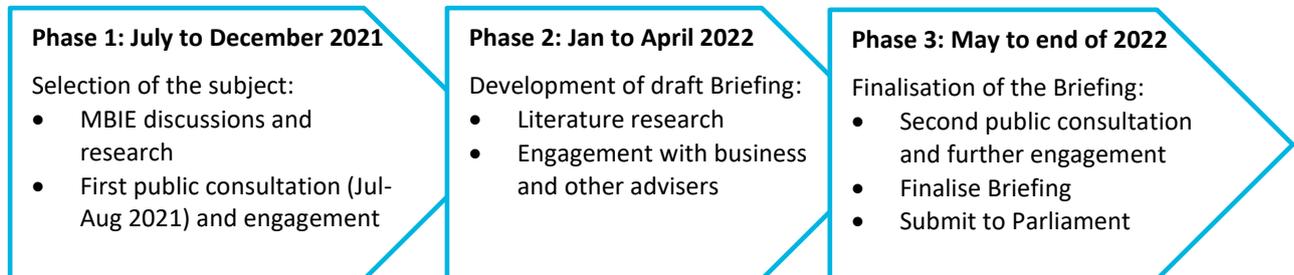
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## Annex Two: Process and methods for developing this draft Briefing

### Process of development

This draft Briefing was developed in accordance with the Public Service Act 2020 requirements for Long-term Insights Briefings, and informed by the [guidance prepared by DPMC](#).

We have grouped our work into three main phases:



The development of a Long-term Insights Briefing requires two steps of public consultation: the first on a proposed subject to inform the Chief Executive's selection of a subject, and the second on a draft Briefing.

Our approach to this has involved seeking written submissions during public consultation phases, as well as meeting in person with a range of people and organisations to inform our thinking throughout the process.

#### Selection of the subject of the Briefing (Phase 1)

MBIE began engaging on its proposed subject at the end of July 2021, supported by a [consultation document](#) published on MBIE's website. We had input from 31 individuals or organisations: 15 businesses or business groups; six Māori businesses; seven government agencies; one academic and two labour / population representative groups.

This engagement tested six potential trends that could be explored in the context of the Future of Business. These were stakeholder capitalism, Māori business, Pacific business, social/purpose-driven enterprises, circular business, and advanced digital businesses.

A summary of the feedback received is published separately on the MBIE website.

Following this process, MBIE chose the subject of Future of Business for Aotearoa New Zealand, with two 'deep dive' themes: purpose-led business and the use of blockchain technology. This decision took into consideration the feedback, as well as other factors such as resourcing, expertise and where MBIE could add the most value.

#### Development of the draft Briefing (Phase 2)

For the development of the draft Briefing (this document) we had input from an additional 32 individuals or organisations (mostly different to those involved in the subject selection stage): 12 businesses or business groups; eight Māori businesses; five government agencies; and seven academics/thought leaders.

## Futures thinking tools

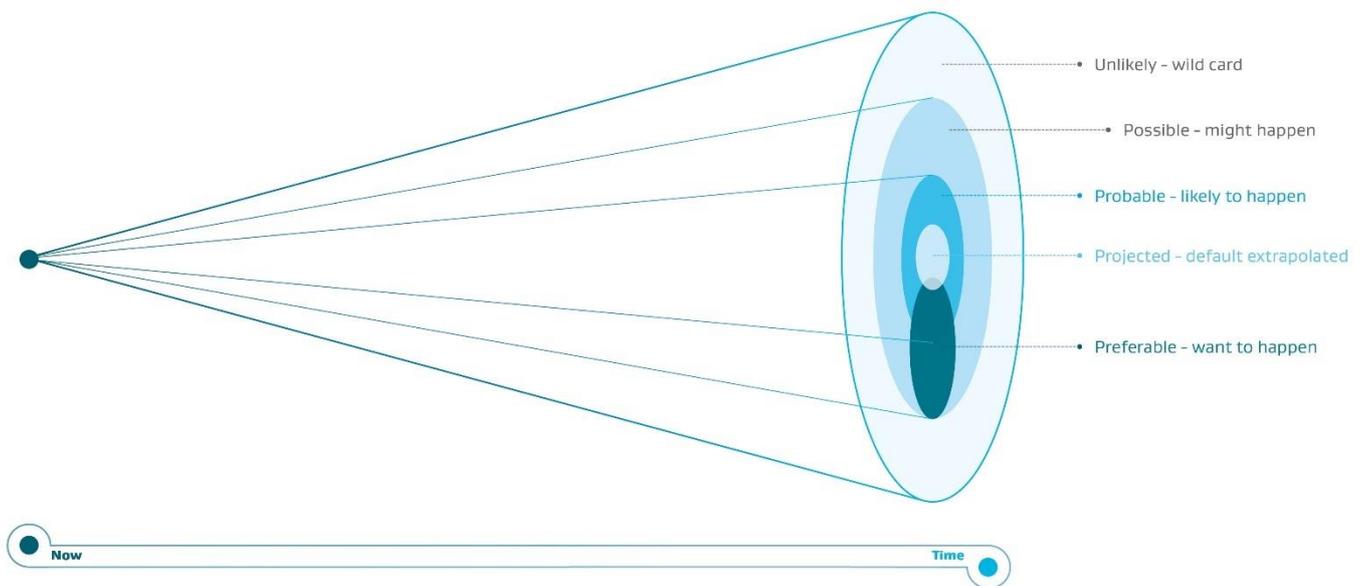
We have used a range of long-term or futures thinking tools to develop our insights<sup>24</sup>:

<b>Scanning framework</b>	Used at the early stages of the project to structure our identification of mega trends and business trends using a range of types of information, from formal to informal or speculative, and across 'STEEP' categories of 'social, technological, economic, environmental, political, and values'.
<b>Trend analysis</b>	Drawing on a LEnS model which recognises trends as being linear, cyclical or exponential/disruptive, the latter driving complex system-wide impacts (World Economic Forum, 2021)
<b>Futures triangle</b>	<p>We used an adaptation of the futures triangle,<sup>25</sup> to develop the following framework to support our thinking and to structure the Briefing:</p> <ul style="list-style-type: none"> <li>• Pae mahara / the past</li> <li>• Pae herenga / the present</li> <li>• Pae tawhiti / the future</li> </ul> <p>This framework helped us develop a time-based sequence of developments, with a horizon of 10+ years, as well as consider different perspectives on change and their interconnections (see also the section below on use of te reo Māori).</p>
<b>Futures cone</b>	The Futures cone model (Figure 5) is used to classify a range of alternative futures. This Briefing has a focus on trends that inform probable futures, as well as some wider possible or unlikely futures reflecting uncertainties and assumptions. We have not focused on projected or preferable futures.

<sup>24</sup> DPMC published guidance material on futures thinking and supported workshops that we attended on the use of futures thinking in the development of Long-term Insights Briefings.

<sup>25</sup> Our model is an adaptation of the 'futures triangle' foresight tool developed by Sohail Inayatullah that uses three forces: the weight/strength of history, the push of today, and the pull of the future.

**Figure 5:** Futures cone, a model of alternative futures. Adapted from Voros, 2003.



#### Use of te reo Māori

Ngā kupu i te reo Māori reinforce the interrelatedness of concepts of past, present and future, and have the following meanings in this work:

**Pae** means a platform, or horizontal surface. We think of this as a vantage point for considering the future.

**Mahara** means to remember or bear in mind. We have used this to reflect on how business has evolved over the past hundreds of years in Aotearoa, and recognise how this creates patterns of business practice that may have persisted or be changing. For Māori, the memory and mana of tīpuna is taken into consideration in decisions for the future, reflected in the whakataukī 'ka mua, ka muri' — walking backwards into the future.

**Herenga** means obligation, requirement, connection. This relates to the megatrends, like climate change and demographic change, that are influencing the context for business and can act as drivers for change.

**Tawhiti** means the distance, horizon, or in the long-term. The pae tawhiti sections draw on the thinking developed as part of pae mahara and pae herenga. Pae tawhiti is important to envision the future, as well as inform pae herenga, the decisions of today.

## References

- Adams, K. (2019, July 18). *The purpose-led business model: Do we really need to wait for millennials to be CEOs?* Retrieved from Verdict: <https://www.verdict.co.uk/purpose-led-business-millennials/>
- Allen, D. e. (2020). Blockchain and the evolution of institutional technologies: implications for innovation policy. 49.
- ANZ. (2021, May 27). *ANZ and Kathmandu Partner on A\$100 Millions Sustainability Loan*. Retrieved from ANZ: <https://news.anz.com/new-zealand/posts/2021/05/kathmandu-sustainability-linked-loan>
- APEC. (2021). *APEC 2021- New Zealand*. Retrieved from New Zealand Foreign Affairs and Trade: <https://www.mfat.govt.nz/en/trade/our-work-with-apec/>
- B Lab Global . (2022). *Make Business a Force For Good*. Retrieved from B corporation: <https://www.bcorporation.net/en-us/>
- B Lab Global. (2022). *Find a B Corp*. Retrieved from B corporation: <https://www.bcorporation.net/en-us/find-a-b-corp/search>
- Banhalmi-Zakar, Z., Boele, N., & Bayes, S. (2021). *Responsible Investment Benchmark Report Aotearoa New Zealand 2021*. Sydney: Responsible Investment Association Australasia.
- Bauwens, M. a. (2018). *P2P Accounting for Planetary Survival*. P2P Foundation.
- BDO. (2021). *Whakatere ngā rerenga hou: Charting a new course*. New Zealand: BDO.
- Beatson, I. (2021). A New Mission for Government and Business. *Public Sector - Journal of the Institute of Public Administration New Zealand*.
- Bebchuk, L. &. (2020, March 2). *The Illusory Promise of Stakeholder Governance*. Retrieved from Harvard Law School Forum on Corporate Governance: <https://corpgov.law.harvard.edu/2020/03/02/the-illusory-promise-of-stakeholder-governance/>
- BERL. (2019). *How many social enterprises are there in New Zealand*. Retrieved from BERL: [https://www.dia.govt.nz/diawebsite.nsf/wpg\\_URL/Resource-material-Our-Policy-Advice-Areas-Community-Development-Policy?OpenDocument#Social-Enterprise](https://www.dia.govt.nz/diawebsite.nsf/wpg_URL/Resource-material-Our-Policy-Advice-Areas-Community-Development-Policy?OpenDocument#Social-Enterprise)
- Better for Business. (2021). *Beyond business demography; the next step in understanding NZ businesses*. Retrieved from Better for Business: <https://www.betterforbusiness.govt.nz/dmsdocument/17655-better-for-business-beyond-business-demography>
- BlockchainNZ. (2022). Retrieved from [blockchain.org.nz](https://blockchain.org.nz)
- Bodo, B., Brekke, J., & Hoepman, J.-H. (2021). Decentralisation in the blockchain space. *Internet Policy Review*, 10(2). Retrieved from <https://repository.ubn.ru.nl/bitstream/handle/2066/233930/233930.pdf?sequence=1&isAllowed=y>
- Bowen, H. (1953). *Social Responsibilities of the Businessman*.

- Business Roundtable. (2019, August 19). Retrieved from [businessroundtable.org](https://www.businessroundtable.org/business-roundtable-redefines-the-purpose-of-a-corporation-to-promote-an-economy-that-serves-all-americans):  
<https://www.businessroundtable.org/business-roundtable-redefines-the-purpose-of-a-corporation-to-promote-an-economy-that-serves-all-americans>
- business.govt.nz. (2022). *Climate Action Toolbox*. Retrieved from [business.govt.nz](https://www.tools.business.govt.nz/climate/):  
<https://www.tools.business.govt.nz/climate/>
- Callaghan Innovation. (2018). *Distributed Ledgers and Blockchains Opportunities for Aotearoa New Zealand*. .
- Cappelen, A., & Kolstad, I. (2006). *When Is Profit Maximization Ethically Defensible*. Bergen: Chr Michelsen Institute.
- Carney, M. (2020). Past crises teach us to put people and planet first. *British Academy Summit on the Future of the Corporation 24 June 2020*. London: Thinking the Unthinkable.
- CB Insights. (2022). *65 big industries blockchain could transform*. Retrieved from <https://www.cbinsights.com/research/industries-disrupted-blockchain/>
- Centobelli, P. e. (2021). Surfing blockchain wave, or drowning? Shaping the future of distributed ledgers and decentralized technologies. *Technological Forecasting and Change*, 165.
- Cooperative Business New Zealand. (2021). *The New Zealand Co-operative Economy*. Retrieved from <https://nz.coop/nz-cooperative-economy-report>
- Digital Technologies Industry Transformation Plan*. (2022). Retrieved from <https://digitaltechitp.nz/wp-content/uploads/sites/31/2022/02/Digital-Technologies-Draft-Industry-Tranformation-Plan-2022-23.pdf>
- Eggers, W. D., & Macmillan, P. (2013, September 19). *Government Alone Can't Solve Society's Biggest Problems*. Retrieved from Harvard Business Review: <https://hbr.org/2013/09/government-alone-cant-solve-societys-biggest-problems>
- ESRI. (2021). *Chaise - blockchain skills for Europe. D2.3.1 Study on blockchain skills demand*. EC.
- Ethical Consumer. (2021). *Ethical Consumerism Report 2021*. Retrieved from [https://www.ethicalconsumer.org/sites/default/files/inline-files/EC\\_Market\\_Report\\_2021.pdf](https://www.ethicalconsumer.org/sites/default/files/inline-files/EC_Market_Report_2021.pdf)
- Ethical Consumer. (2022, January 4). *UK Ethical Consumer Markets Report*. Retrieved from Ethical Consumer: <https://www.ethicalconsumer.org/research-hub/uk-ethical-consumer-markets-report>
- European Commission. (2021). *Corporate Sustainability Reporting*. Retrieved from European Commission: [https://ec.europa.eu/info/business-economy-euro/company-reporting-and-auditing/company-reporting/corporate-sustainability-reporting\\_en](https://ec.europa.eu/info/business-economy-euro/company-reporting-and-auditing/company-reporting/corporate-sustainability-reporting_en)
- Fink, L. (2018). *Larry Fink's 2018 Letter to CEOs*. Retrieved from BlackRock: <https://www.blackrock.com/corporate/investor-relations/2018-larry-fink-ceo-letter>
- Friedman, M. (1970, September 13). The Social Responsibility of Business is to Increase its Profits. *New York Times Magazine*.
- Frizzo-Barker, J. e. (2020). Blockchain as a disruptive technology for business: A systematic review. 51.
- G7 . (2021). *Global Economic Resilience: Building forward better*.

- Global Impact Investing Network. (2022). *What you need to know about impact investing*. Retrieved from Global Impact Investing Network: <https://thegiin.org/impact-investing/need-to-know/#what-is-impact-investing>
- Government, N. Z. (2021). *Te koke ki tētahi Rautaki Matihiko mō Aotearoa: Towards a Digital Strategy for Aotearoa*. Wellington: New Zealand Government.
- Gupta, V. (2017, February 2017). *A Brief History of Blockchain*. Retrieved from Harvard Business Review: <https://hbr.org/2017/02/a-brief-history-of-blockchain>
- Hand, D., Dithrich, H., Sunderji, S., & Nova, N. (2020, June 11). *2020 Annual Impact Investor Survey*. Retrieved from Global Impact Investing Network: <https://thegiin.org/research/publication/impinv-survey-2020>
- IFRS. (2022). *Exposure Draft: IFRS Sustainability Disclosure Standard*. Retrieved from <https://www.ifrs.org/content/dam/ifrs/project/general-sustainability-related-disclosures/exposure-draft-ifrs-s1-general-requirements-for-disclosure-of-sustainability-related-financial-information.pdf>
- ITF. (2017). *Binding Commitments - the future of blockchain governance and distributed organisations*. Retrieved from [https://www.iftf.org/fileadmin/user\\_upload/downloads/blockchain/ITF\\_BlockchainFutures\\_BindingCommitments\\_Perspective.pdf](https://www.iftf.org/fileadmin/user_upload/downloads/blockchain/ITF_BlockchainFutures_BindingCommitments_Perspective.pdf)
- Institute for Strategy and Competitiveness. (n.d.). *Creating Shared Value Explained*. Retrieved May 2, 2022, from Harvard Business School: <https://www.isc.hbs.edu/creating-shared-value/csv-explained/Pages/default.aspx>
- IOD. (2021, July 30). *Stakeholder governance - A call to review director' duties*. Retrieved from Institute of Directors New Zealand: <https://www.iod.org.nz/resources-and-insights/research-and-analysis/stakeholder-governance/#>
- Jayasuriya, D. a. (2020). Blockchain-enabled corporate governance and regulation. *International Journal of Financial Studies*.
- Jennath, H. A. (2019). Parkchain: A Blockchain Powered Parking Solution for Smart Cities. *Front. Blockchain* . *Blockchain*, 2(6). doi:doi: 10.3389/fbloc.2019.00006
- Kim, M., & Chung, J. (2019). Sustainable growth and token economy design: the case of Steemit. *Sustainability*, 11.
- KPMG. (2020). *The time has come: the changing face of reporting in New Zealand*. New Zealand: KPMG.
- Lab, Veracity. (2021). *Digital Whenua, Sovereignty and Rights for Aotearoa*. Wellington: Veracity Lab.
- Lee, J. (2019). A decentralised token economy: how blockchain and cryptocurrency can revolutionize business. 62, 773-784.
- Li-Wen, L. (2020, November 20). Mandatory Corporate Social Responsibility Legislation Around the World. *The CLS Blue Sky Blog*. Retrieved from <https://clsbluesky.law.columbia.edu/2020/11/20/mandatory-corporate-social-responsibility-legislation-around-the-world/>
- Mayer, C. (2019). *Prosperity: Better business makes the greater good*. Oxford: Oxford University Press.

- MBIE. (2021). *International Developments in Sustainability Reporting*. New Zealand: MBIE.
- MBIE. (2021). *Maori economy emissions profile*. Retrieved from Ministry of Business, Innovation and Employment: <https://www.mbie.govt.nz/dmsdocument/17448-maori-economy-emissions-profile>
- McKinsey & Company. (2020). *Diversity Wins; How inclusion matters*. McKinsey & Company.
- Mill, A. &. (2021, April 20). *He Manukura - Insights from Māori frontier firms*. Retrieved from The New Zealand Productivity Commission: <https://www.productivity.govt.nz/research/he-manukura/>
- Moana Research. (2020). *Pacific prosperity through social enterprise – a policy and practice rubric*. Auckland: Commissioned by the Ministry of Social Development in partnership for the Ministry for Pacific Peoples.
- Nakamoto, S. (2008). *Bitcoin: a peer to peer electronic cash system*. Retrieved from [www.bitcoin.org](http://www.bitcoin.org)
- Nesta. (2011). *Growing Social Ventures*. Retrieved from [https://media.nesta.org.uk/documents/growing\\_social\\_ventures.pdf](https://media.nesta.org.uk/documents/growing_social_ventures.pdf)
- New Zealand Business Council for Sustainable Development. (2010). *The Social Role of Business*. Retrieved from [https://www.sbc.org.nz/\\_\\_data/assets/pdf\\_file/0004/99490/Part-1-The-Social-Role-of-Business.pdf](https://www.sbc.org.nz/__data/assets/pdf_file/0004/99490/Part-1-The-Social-Role-of-Business.pdf)
- NZ Digital Skills Forum. (2021). *Digital Skills Aotearoa: Digital skills for our digital future*. Retrieved from [https://nztech.org.nz/wp-content/uploads/sites/8/2021/01/Digital-Skills-Aotearoa-Report-2021\\_online.pdf?msclkid=5a177096b13c11ecb2f06ae1e2085496](https://nztech.org.nz/wp-content/uploads/sites/8/2021/01/Digital-Skills-Aotearoa-Report-2021_online.pdf?msclkid=5a177096b13c11ecb2f06ae1e2085496)
- NZTech. (2021). *About the Tech Sector*. Retrieved from <https://nztech.org.nz/info-hub/about-the-sector/>
- NZX and Wright Communications. (2019). *ESG reporting uptake in S&P/NZX 50 Index and Investor Perspective 2019*, . Auckland: NZX and Wright Communications.
- OECD. (2018). *Blockchain Primer*. Retrieved from <https://www.oecd.org/finance/OECD-Blockchain-Primer.pdf>
- OECD. (2019). *The Policy Environment for Blockchain Innovation and Adoption*. Retrieved from <https://www.oecd.org/finance/2019-OECD-Global-Blockchain-Policy-Forum-Summary-Report.pdf>
- Parliament of Australia. (2021). *Australia as a Technology and Financial Centre*. Canberra.
- Perez, C. (2022). Carlota Perez on how governments have brought golden ages in previous revolutions. IIPP-MOIN series. Retrieved from <https://www.youtube.com/watch?v=uFwWkDHuYYQ&t=724s>
- Policy Horizons Canada. (2021). *Reflections - the potential impacts of digital technologies on the economy*. Retrieved from <https://horizons.gc.ca/en/2021/02/22/reflections-the-potential-impacts-of-digital-technologies-on-the-economy/>
- Polman, P., & Winston, A. (2021). *Net positive: How courageous companies thrive by giving more than they take*. Boston: Harvard Business Review Press.

Porter, M. E., & Kramer, M. R. (2011, January-February). Creating Shared Value: How to reinvent capitalism - and unleash a wave of innovation and growth. *Harvard Business Review*.

PwC. (2017). *The Long View - how will the global economic order change by 2050*.

PwC. (2022). *ESG Reporting*. Retrieved from PwC: <https://www.pwc.com/sk/en/environmental-social-and-corporate-governance-esg/esg-reporting.html>

PwC and World Economic Forum. (2018). *Building blockchains for a better planet*. Retrieved from <https://www.pwc.com/gx/en/sustainability/assets/blockchain-for-a-better-planet.pdf>

Rejeb, A. R. (2020). Blockchain and supply chain sustainability. *Logforum*, 16(3). doi:DOI: 10.17270/J.LOG.2020.467

Schwab, K., & Vanham, P. (2021). *Stakeholder Capitalism: A Global Economy that Works for Progress, People and Planet*. Hoboken: Wiley.

Sedlmeir, J., Buhl, H., Fridgen, G., & Keller, R. (2021). Recent developments in blockchain technology and their impact on energy consumption. *arXiv*, 2102.07886 [cs.CR].

Shafik, M. (2021). *What we owe each other: a new social contract for a better society*. London: Princeton University Press.

Sims, A. (2021). *Decentralised Autonomous Organisations*. Department of Accounting and Corporate Governance, Macquarie University.

Social Purpose Institute at United Way. (2020). *Open letter from business and civil society leaders calls for Purpose-led Recovery*.

Sustainable Business Council. (2019, November 22). *The influence of sustainability on New Zealand consumers*. Retrieved from Sustainable Business Council: <https://www.sbc.org.nz/news/2019/the-influence-of-sustainability-on-new-zealand-consumers>

The Impact Initiative. (2021). *The Social Enterprise Sector Development Programme*. Retrieved from The Impact Initiative: <https://www.theimpactinitiative.org.nz/about>

The International Financial Reporting Standards Foundation. (2021). *IFRS Foundation announces International Sustainability Standards Board, consolidation with CDSB and VRF, and publication of prototype disclosure requirements*. Delaware: IFRS.

The Treasury. (2018). *The New Zealand Pacific Economy*. New Zealand: Treasury.

Trackgood. (2021). *Empowering sustainability and transparency*. Retrieved from Trackgood: <https://trackgood.io/>

U4SSC. (2020). *Blockchain for smart sustainable cities*.

UN. (2020). *World Social Report*. Retrieved from <https://www.un.org/development/desa/dspd/wp-content/uploads/sites/22/2020/02/World-Social-Report2020-FullReport.pdf>

UN Economist Network . (2020). *Shaping the Trends of our Time*. UN.

UNDP. (2019). *Beyond bitcoin - using blockchain to advance the SDGs*. Retrieved from <https://feature.undp.org/beyond-bitcoin/>

- UNEP. (2020). *Blockchain Technology and Environmental Sustainability*. Early Warning, Emerging Issues and Futures. Retrieved from <https://stg-wedocs.unep.org/bitstream/handle/20.500.11822/34226/FB019.pdf?sequence=1&isAllowed=y>
- Volk, A. (2021, July). *Investing for Impact - The Global Impact Investing Market 2020*. Retrieved from International Finance Corporation: [https://www.ifc.org/wps/wcm/connect/365d09e3-e8d6-4da4-badb-741933e76f3b/2021-Investing+for+Impact\\_FIN2.pdf?MOD=AJPERES&CVID=nL5SF6G](https://www.ifc.org/wps/wcm/connect/365d09e3-e8d6-4da4-badb-741933e76f3b/2021-Investing+for+Impact_FIN2.pdf?MOD=AJPERES&CVID=nL5SF6G)
- Voros, J. (2003). A generic foresight process framework. *Foresight*, 5(3). Retrieved from [https://www.researchgate.net/publication/235308871\\_A\\_generic\\_foresight\\_process\\_framework](https://www.researchgate.net/publication/235308871_A_generic_foresight_process_framework)
- Wellbeing Protocol. (2021). *The Wellbeing Protocol White Paper*. <https://www.thewellbeingprotocol.org/>. Retrieved from [https://docs.google.com/document/d/1X4aqz2SHc3AX2MNb7Ck30WIDpTOBx-5LSg3PSLgSD\\_c/edit](https://docs.google.com/document/d/1X4aqz2SHc3AX2MNb7Ck30WIDpTOBx-5LSg3PSLgSD_c/edit)
- Whelan, T., Atz, U., & Clark, C. (2021). *ESG and Financial Performance: Uncovering the Relationship by Aggregating Evidence from 1,000 Plus Studies Published between 2015-2020*. NYU Stern, Rockefeller Asset Manager, Center for Sustainable Business.
- World Economic Forum. (2021). *Technology Futures, projecting the possible, navigating what's next*. Retrieved from [https://www3.weforum.org/docs/WEF\\_Technology\\_Futures\\_GTGS\\_2021.pdf](https://www3.weforum.org/docs/WEF_Technology_Futures_GTGS_2021.pdf)