What will New Zealand be known for in 2050?

A BCG Investigation into the Future of NZ Inc

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Introduction

Aotearoa—the land of the long white cloud or, more recently, the land of dairy herds, hobbits and globally renowned great walks. Over the last 50 years, New Zealand's economy has been reshaped and bolstered by growth as export industries, such as dairy, film and tourism, benefit from a prospering middle class, particularly in Asia, that wants safe nutrition, rich cinematic experiences and beautiful places to holiday.

However, as we look ahead, economic growth will need to come from new industries. The local dairy industry says that New Zealand has reached peak milk production, film and television production is limited to serving the outsourcing needs of US-based studios, and travellers are choosing more affordable and lower-carbon holiday options. Additionally, global headwinds such as climate change, the war for talent, technological innovation, and global fragmentation will threaten New Zealand's current and future industries.

If we imagine New Zealand in 2050, what will it be known for? And what will foster growth in its existing and upcoming industries?

Globally, nations are focusing resources and investment on specific, high-potential industries to create vibrant ecosystems interconnected businesses, research institutions and government bodies collaborate to share resources and create synergies. In this article, we explore what makes a successful ecosystem and which ecosystems New Zealand is best placed to play in.

This report is the first stage of BCG's investigation into the future of NZ Inc.

Drawing on the robust expertise of our New Zealand team and the wealth of resources and access enabled by BCG's global network, we identified 5 ecosystems for further exploration:

1. Agriculture 4.0
2. Space and satellites
3. Green tech
4. Future of medicine
5. Creative industries

This report is not an end in itself. It is an invitation from BCG to decision-makers in business, government, and other institutions that comprise the fabric of NZ Inc, to engage with the material presented in this report.

We welcome your discussion, debate, and dialogue, as progress with this ongoing investigation and look to share further insights and findings.

Ngā mihi,

Kelly Newton
Managing Director & Partner
BCG New Zealand

The NZ Inc of today

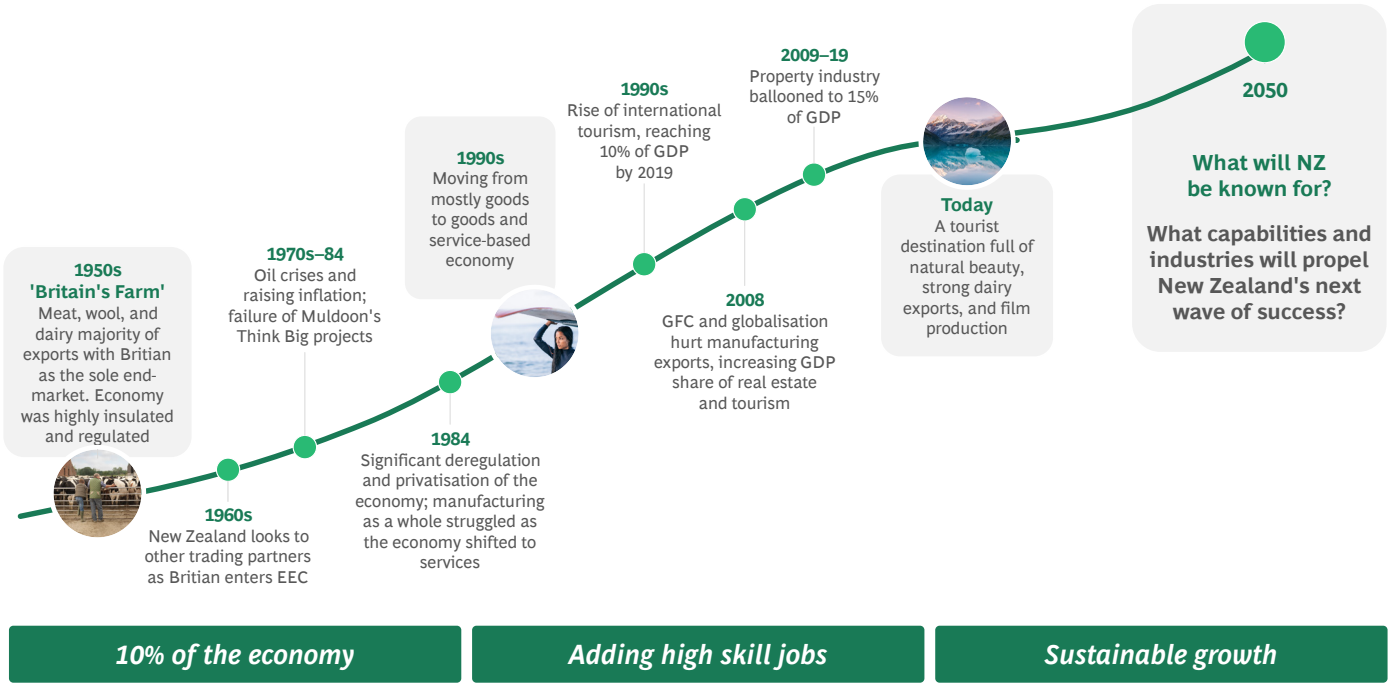
'NZ Inc' is a term used in New Zealand to refer to players across government, export businesses, and industry organisations who promote and enhance New Zealand's economic interests globally. As our economy has evolved, so has what NZ Inc is known for.

In the 1950s, New Zealand was colloquially known as 'Britain's farm', exporting wool, meat, and dairy products to Britain. Post-war demand for these products rose to an all-time high and New Zealand was one of the world's wealthiest countries, with a per capita income 88% of the United States.[1]

As global markets evolved in the 1960s and 70s, New Zealand diversified its economy. It shifted away from its reliance on Britain and expanded into forestry, fishery, and manufacturing. Deregulation and privatisation reforms in 1984 further opened New Zealand to the world, seeing it pivot from goods to services, particularly in tourism and real estate. However, manufacturing began to wane due to intense global competition.

In the early 2000s, the launch of the Lord of the Rings catapulted New Zealand's stunning vistas and special effects expertise to the global stage, bolstering an already thriving international tourism industry and laying the groundwork for ongoing film industry growth.

Exhibit 1: New Zealand's evolution on the global stage



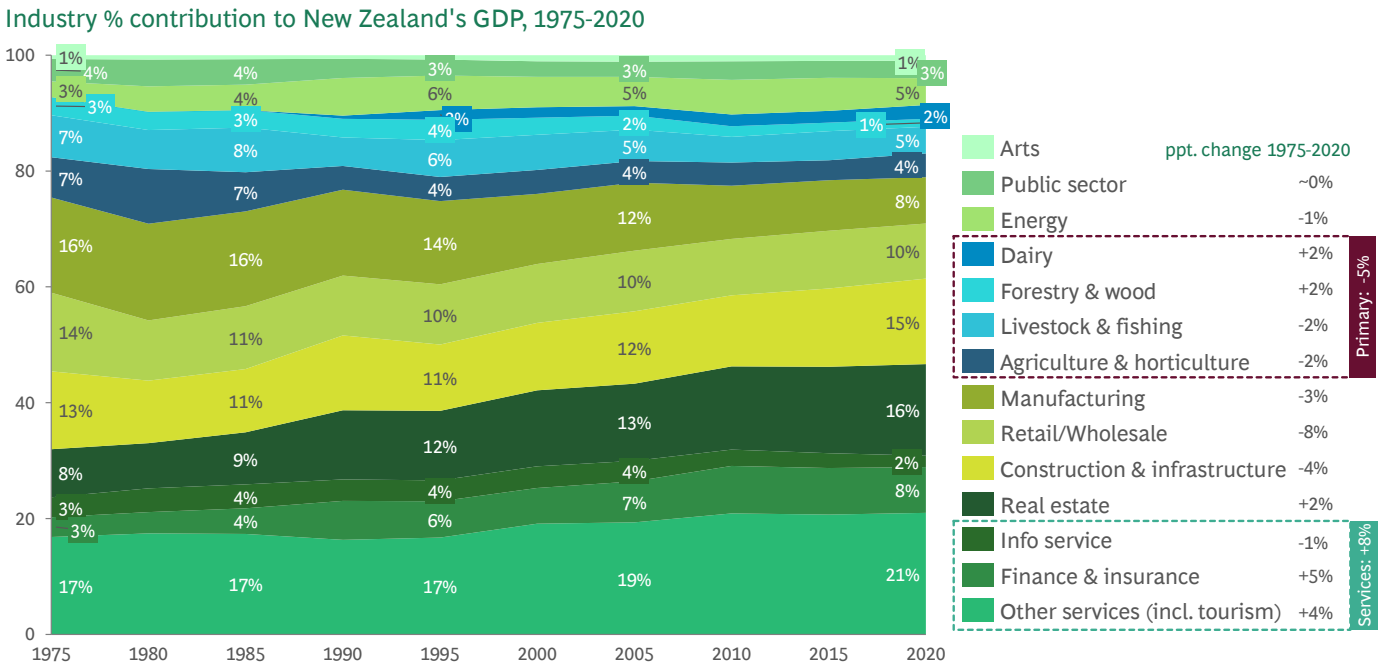
Source: BCG research and analysis
1. The Reserve Bank of New Zealand, The Reserve Bank and New Zealand's Economic History, 2007

By 2019, international and domestic tourism contributed over $25 billion to the economy each year, both directly and indirectly, amounting to nearly 10% of GDP.[2] The property industry also saw significant growth, with its contribution to GDP increasing from $21.6 billion in 2009 to $50.2 billion in 2022.[3] While real estate is often a large economic driver for developing nations to establish infrastructure, in an advanced economy such as New Zealand it can be misleading if it is only associated with land which will not be developed.

Today, New Zealand is known for 100% Pure New Zealand landscapes,[4] home to the world's top milk exporter[5] and famous for Peter Jackson's Lord of the Rings.

The dairy, film, and tourism industries have supported New Zealand's wealth creation and reinforced its reputation as a stable and eco-friendly economy.

Exhibit 2: Industry contribution to the New Zealand economy over time



Source: Stats NZ; BCG analysis

2. Stats New Zealand, Tourism satellite account: 2019, 2019
3. Property Council New Zealand, Property Industry Impact Report, 2024
4. 100% Pure New Zealand, 2024
5. Statista, Leading exporters of milk worldwide in 2023, 2024

Challenges now and into the future

In recent years, New Zealand's economic outcomes have lagged global peers. In the 1950s, New Zealand's per capita income was 88% of the US, while today it is 64% compared to 69% for Canada and 79% for Australia.[6] This decline is driven by:

- **Declining productivity:** While New Zealand's productivity growth averaged 1.4% per year between 1993 and 2013, it has dropped to 0.2% per year over the last decade. In addition, New Zealand's GDP per hour worked is now more than 20% below the average of OECD peers; in 2000, it matched the average.[7]
- **Eroding comparative advantage:** In just the last 5 years, IMD's World Competitiveness Rankings have seen New Zealand's overall rank drop from 22nd to 32nd out of 67 countries, with declines across all IMD's key metrics including Economic Performance (40th to 46th), Government Efficiency (8th to 15th), Business Efficiency (30th to 42nd), and Infrastructure (25th to 31st).[8]
- **Growing talent gap, particularly in highly skilled industries:** A significant number of skilled immigrants, including doctors and engineers, are choosing to move to countries such as Australia and Canada over New Zealand. Furthermore, emigration of New Zealand citizens to other countries has steadily increased over the past 5 years. In the EMA's 2023 Skills Shortage Survey, 90% of New Zealand employers said they are struggling to fill vacancies and 71% said that highly skilled jobs were the hardest to fill.[9] This talent drain has left New Zealand with a gap of around 60,000 people in net migration over the last 4 years versus pre-Covid levels. Of this, 70% are 15–34 year-olds, posing a long-term risk to the economy.[10]

In the coming decades, numerous global challenges could also threaten New Zealand's trajectory or limit its ability to innovate:

- **Climate change is threatening major New Zealand sectors and industries,** including agriculture, tourism, and property. Agriculture will continue to be vulnerable to increasingly common natural disasters and extreme weather events as evidenced by Cyclone Gabrielle in 2002. Climate-related insurance claim costs of $352.2 million in 2022 are just the beginning.[11] Tourism faces challenges as people look to reduce their carbon footprints by avoiding long-haul flights to New Zealand, and climate change is affecting the country's natural tourist attractions. In property, 20% of homes are on floodplains, and some homeowners can no longer afford the increasingly high insurance premiums required to protect their homes.[12]
- **Technological innovation is intensifying competition.** Digital and hardware innovation is transforming industries, reducing barriers to entry and intensifying competition in global markets. For example, smart and vertical farming could threaten New Zealand's agricultural advantage in fertile land mass, as it allows farming to move closer to demand or to areas with poor conditions.[13]

6. World Population Review, GNI per Capita by Country, 2024
7. Treasury, The productivity slowdown, 2024
8. IMD World Competitiveness Rankings, New Zealand Country Profile, 2024
9. EMA, Skills Shortage Survey, 2023
10. Boston Consulting Group, The 'Top 10' Focus Areas for New Zealand Executives in 2024
11. Insurance Council of New Zealand, 2022 Confirmed as Record Year for Climate Claims, 2023
12. RNZ, Australia, New Zealand property markets face creeping climate risks, 2024
13. Boston Consulting Group, Navigating Future Uncertainty in New Zealand with Megatrends, 2022

- **Rising geopolitical instability and reshoring are disrupting global supply chains.**[14] New Zealand must rethink its export market strategy in the context of today's geopolitics. Many New Zealand exporters are already recognising the need to diversify. As growth slows and local market execution remains challenging, many companies are shifting from a China-centric strategy to a China-plus export strategy and making an effort to win share in more nascent markets like South East Asia or the Middle East.

Where to next? The advantage of ecosystems

In the face of these challenges, NZ Inc can't rely on historically successful industries to drive wealth creation. NZ Inc must build new industries for its future, and the way we go about this matters.

Instead of spreading finite investment across a broad range of industries as it does today, NZ Inc needs a focused approach. By concentrating its efforts on 3 to 5 high-value **ecosystems,** NZ Inc can build and sustain an advantage in key industries.

An **ecosystem** is a dynamic environment in which businesses, research institutions and government bodies collaborate to leverage shared resources and synergies, often based in the same geographical area. Ecosystems are focused on industries and capabilities. They aim to accelerate economic development and create competitive advantages that lead to self-sustaining industry growth.

NZ Inc's approach to industry development

Historically, NZ Inc has underinvested in the innovation needed to drive sustained advantage in high-value industries. In 2019, New Zealand's total R&D expenditure as a proportion of GDP was 1.4%. This is well below the OECD average of 2.5% and even further behind innovation leaders such as Denmark (3%) and Israel (4.9%).[15]

In the private sector, limited resources are allocated to innovation. Industry participation is a key component of successful ecosystems but, of NZ Inc's leading businesses, only a few standouts—such as Fonterra, Fisher & Paykel Healthcare, and Rocketlab—actively contribute to their ecosystems.

Meanwhile, the historic approach to public sector investment drove fragmentation. For example, 15% of government research investment ($200 million) is spread across 7 Crown Research Institutes covering agriculture, environmental science, geology, land care, water, plant and food, and forestry. Furthermore, public investment, incubation and acceleration vehicles are largely industry-agnostic (e.g. New Zealand Growth Capital Partners, Callaghan Innovation). This approach likely spreads investment too thinly to unlock growth and makes it difficult for investors to navigate the landscape. Recently announced reforms take positive steps to simplify the architecture of the public innovation system, with 3 Public Research Organisations (PROs) replacing the 7 existing crown research institutes, and the disestablishment of Callaghan Innovation with functions moved into other public organisations.

The advantage of ecosystems

High-value ecosystems are not just for world super-powers; in fact, they are even more important for smaller nations to develop a specialty and focus innovation and investment in an ecosystem built around that specialty. By focusing on 3 to 5 high-value ecosystems aligned with its overall strategy, NZ Inc can more efficiently build scale and density in future industries, create comparative advantage and position New Zealand as a global leader while stimulating economic growth and skilled employment.

Geographically concentrated ecosystems have many advantages. Players can share specialised resources, including infrastructure, training programs, and venture capital. Proximity also concentrates talent, creating a common labour pool and making it easier to match employers to employees. All of this facilitates knowledge transfer between startups, established firms, universities, research institutions and investors, and keeps players up to date on the latest innovations and best practices.

This concentrated approach is a radical change for NZ Inc and will require coordination across government, universities and research institutions, established industry players, startups and incubators, and private investors.

14. Boston Consulting Group, The Unwinding of Global Tech Supply Chains, 2023
15. MBIE, The Research, Science, and Innovation Report, 2021

Exhibit 3: Components of a successful ecosystem?

Industry
Gives commercialisation and/or exit pathway; scale-up and industry access; collaboration on research
Takes breakout growth (acquisition/partnership), talent

Anchors ecosystem and sets focus for components

Universities
Gives talent development for target industries, research support and facilities co-investment
Takes Research funding, student job placements

Ensures talent is prepared to support the ecosystem

Research Institutions
Gives IP development; advancement of technology/processes
Takes research funding

Generates IP and experienced talent relevant to the ecosystem

Start-ups and Incubators
Gives breakout growth opportunities, IP development, acquisition opportunities
Takes funding, IP, talent for founders & employees exit and/or commercialisation pathways

Creates breakout opportunities using ecosystem resources

Investors
Gives funding, operational support
Takes share of growth potential

Provides funding mechanism and cross-venture expertise to support new ventures

Orchestrator
Connects ecosystem components by fostering collaboration, supporting navigation, and promoting the ecosystem globally

Case studies: Ecosystems in action

The following case studies provide examples of how these components have come together to create successful ecosystems across the globe.

United Kingdom's Life Sciences Golden Triangle and MedCity

In 2014, the City of London recognised the potential for deeper collaboration within the UK's Life Sciences Golden Triangle, which encompasses London, Cambridge, and Oxford. It established MedCity to orchestrate the region's world-class life sciences and medicine universities and clinical and commercial players. MedCity does this by providing advice and support to life sciences companies, promoting the region for inward investment, and supporting close collaboration between research, industry, and the NHS.[16] Since the introduction of MedCity in 2014, the region has established the Francis Crick Institute, a cancer and infectious diseases research and innovation hub, and attracted a significant presence from biomedial giants like AstraZeneca, which has its Global R&D Centre situated in Cambridge with 2,000+ employees.[17] Between 2017 and 2021, the Golden Triangle attracted $5.7 billion in investment—over 25% of Europe's health tech investment and 65% of the UK's.[18]

Switzerland's Medical Technology Ecosystem

Switzerland's longstanding expertise in precision engineering and high-quality manufacturing, such as high-end watches, provided a transferable skillset and competitive advantage that laid the foundation for the country's medical technology sector. Today medical technology accounts for ~5% of the country's exports, with over 1,000 active companies employing ~55,000. A number of factors have contributed to the growth of the sector, including facilitation support and promotion of 'health valley' from Geneva to Bern, government policy including the 2030 Health Strategy and Biomedical Research and Technology masterplans, significant research and development investment led by large multinationals including Roche, Medtronic, and J&J Medical.

The Netherland's Top Sectors Policy

In 2011, the Netherlands recognised that it needed to revitalise its approach to fostering innovation. The government introduced the Top Sectors Policy, a framework of initiatives designed to foster growth in 9 key sectors with the potential to significantly contribute to the local economy and where the Netherlands had a strong right to win. Key support mechanisms included public-private partnerships, where the government matched private funding 50/50, and Top Consortia for Knowledge and Innovation (TKIs), which orchestrated government, private sector, universities, and research institutions in each sector. The policy also committed €1 billion in yearly government investment through grants, tax benefits, and innovation credits[19]. These measures cultivated a vibrant ecosystem, with Dutch startups raising US $2.2 billion in 2023 and creating more than 250,000 new jobs including 150,000 locally. The ecosystem is home to numerous local and global superstars including Bookings Holdings, ASML, Mosa Meat, and Priva.[20]

Taiwan's semiconductor ecosystem

In the 1980s, recognising the need to rapidly develop high-value industries, the Taiwanese government established the Hsinchu-Science Park near Taiwan's 2 top universities to concentrate Taiwan's high-tech manufacturing capabilities. The government attracted industry players with tax incentives and favourable land use policies, and established the Ministry of Science and Technology to coordinate between academia, investors, and industry in the region.[21] The park now houses over 500 manufacturers, including TSMC, which was founded in the park and is now the world's largest chipmaker. Today semiconductors contribute 15% of Taiwan's total GDP, with Taiwan producing 60% of all the world's semiconductors.[22]

16. MedCity website, 2024
17. MedCity, At a glance: Life sciences in London and the south east, 2015
18. UK Tech News, London becomes top hub for healthtech, investments increase to $1b, 2021
19. OECD, Innovation, Agricultural Productivity and Sustainability in the Netherlands, 2015
20. NZ Productivity Commission, Focused innovation policy: Lessons from international experience, 2021
21. Nikkei Asia, How a small Taiwanese city transformed the global chip industry, 2020
22. The Economist, Taiwan's dominance of the chip industry makes it more important, 2024

Defining where NZ Inc can play

To define its 3 to 5 target ecosystems, NZ Inc must understand the global market, growth rates, and New Zealand's right to win in key industries and capabilities.

The first step to cultivating an ecosystem is to define its scope; in particular the industries and capabilities that it will comprise.

We developed a framework to define and evaluate potential industries and capabilities (Exhibit 4). Industries are tied to a specific end-market (e.g. horticulture, geothermal, film) and capabilities are tied to a skillset (e.g. AI or biotech) with room for growth within New Zealand. An industry or capability has room for growth if it has the capacity to develop new higher-value products and services, access new markets with existing products and services, or upsell existing products and services.

Industries and capabilities are then evaluated against 3 selection criteria:

1. **Global market size:** The industry or capability's economic potential (even a high growth industry will not contribute significantly to New Zealand's GDP by 2050 if it is very small today)
2. **Global rate:** The industry or capability's future growth prospect
3. **New Zealand's right to win:** New Zealand's natural advantages (e.g. climate, landscape, strong indigenous culture) and existing infrastructure (e.g. dairy R&D centres, leading engineering and medical departments in universities)

By applying our framework to a preliminary list of industries and capabilities, **we identified 5 potential ecosystems** as a starting point for investigation.

1. **Agriculture 4.0:** Supporting more sustainable and efficient food production
2. **Space and satellites:** Designing and manufacturing componentry, launch vehicles and satellites
3. **Green tech:** Developing new technologies and expertise to support the global energy transition
4. **Future of medicine:** Improving medical outcomes with new practices, pharmaceutical discoveries, health IT advances, and novel medical devices
5. **Creative industries:** Leveraging New Zealand's unique talents and expertise to produce new content, products, and experiences for the world

Each of these ecosystems consist of several industries or capabilities in which New Zealand has a natural advantage or potential for competitive advantage, and which have the potential to be large global markets in coming decades.

Exhibit 4: Industry and capability framework

	Name	Description	Examples
Category definition	Industry	Themed cluster of businesses or organisations that produce goods, services, or raw materials for a shared end-market	Horticulture, geothermal, film
	Capability	Proprietary expertise and capabilities around advanced hardware and software development can span industries	GenAI, advanced materials engineering, biotechnology
Criteria for Selection	Global CAGR	How fast the industry/technology is expected to grow on a year-by-year basis to 2050	e.g. Global CAGR for geothermal power is around 6.1%
	Global market size	Current addressable market size for the industry/ technology	e.g. Global market size for geothermal power estimated at $50-100B today
	NZ's Right to Win	Extent NZ has advantages in industry or capability • Innate/natural advantage • Strong reputation or standing in the field (or adjacency) • Existing leading firms • Existing academic, government, or sector led innovation 'hubs'	e.g. NZ has an advantage in geothermal technology as part of the Pacific 'Ring of Fire', with experienced firms that could scale in NZ and internationally

Source: Fortune Business Insights; BCG analysis

Exhibit 5: Summary of potential target ecosystems

	Agriculture 4.0	Space and Satellites	Green Tech	Future of Medicine	Creative Industries
	More sustainable and efficient food production	*Componentry, launch vehicles, and satellites*	*New tech and expertise to support the global energy transition*	*Improved medical outcomes through new solutions*	*Creative content, products, and experiences for the world*
	Ag Tech Agri Emission Agro-Chem Aqua Culture Geospatial Analytics Biotech	Advanced Materials Launch Systems Additive Manufacturing Satellites	Data Centers Green Fuels Carbon Sequestration Resource Management Clean Tech Renewable Energy	Advanced Materials Medical Devices Software Biotech AI & ML	Film Cultural Art & Tourism Animation Game Dev.
Global CAGR to 2050	**Medium** 10%	**Medium** 8%	**High** 17%	**Medium** 10%	**Medium** 8%
Global Market ($B)	**High** 1300	**Medium** 750	**High** 2000	**High** 1100	**High** 1200
NZ Right to Win	**High** Strong global standing, history of biotech innovation, anchor firms	**Medium–High** Favourable launch site, history of material and additive manufacturing innovation, anchor firms	**Medium** Strong implementation knowledge, natural sequestration, and green fuel capabilities	**Medium** Strong research and expertise base, F&P Healthcare as anchor firm	**Medium–High** World-leading FX, post-production, game dev firms, and capabilities

Capabilities Industries

Source: Market reports; Secondary research; BCG analysis

What next?

In 2001, Michael Porter, Professor and leader of the Institute for Strategy and Competitiveness at Harvard Business School, spoke to a room of New Zealand's business and political leaders at the Catching the Knowledge Wave Conference. He spoke about the importance of ecosystems and focused investment to transform New Zealand into an innovation-driven economy.[23] While New Zealand made great progress in technology, innovation and creative industries in the following 25 years, continuing decline in productivity, weakening comparative advantage, growing talent gap, and worsening global headwinds make Professor Porter's advice more relevant than ever.

NZ Inc needs to channel investment into high-value ecosystems where New Zealand has a strong right to win, and players across government and industry need to work together to set up the components required for these ecosystems to thrive. Applying New Zealand's capabilities to their highest potential now is essential to help Kiwis prosper in the future. NZ Inc has exciting opportunities ahead, and we cannot wait another 25 years to act on them.

Keep an eye on BCG's social media and website in 2025 for more to come on the future of NZ's economy.

23. *Professor Michael E. Porter, New Zealand Competitiveness: The Next Agenda, presented at Catching the Knowledge Wave, August 3rd 2001*

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