Accelerating Aotearoa businesses one technology generation forward

Report from Spark and NZIER
Foreword

Aotearoa New Zealand’s productivity challenge is well documented. New Zealanders work longer and harder than their counterparts in other developed countries, and we face scale challenges due to our smaller population and geographic isolation.

This is a persistent challenge that has seen little change over many decades. What is changing, however, is the urgent need to address it.

Aotearoa is getting bigger, older, and more diverse. Inflation is forcing a greater focus on efficiency and cost control within the business community, and we are operating in the context of environmental volatility, with frequent and extreme weather events becoming our norm.

The good news is that the pace of technological advancement globally is accelerating alongside these challenges. Advanced digital technologies are now reaching a level of maturity that have the potential to solve business challenges, where it wasn’t possible in the past.

Exploring these challenges and opportunities is the purpose of this report.

In conjunction with the New Zealand Institute of Economic Research (NZIER), we have studied how we can become more productive by helping to move Aotearoa forward one technology generation.

Technology has the potential to create new opportunities for people to do what only people can – think creatively and innovate boldly.

Off the back of these findings, we will be investing in New Zealand businesses to support them to grow, become more productive through technology, and aim to ‘move one technology generation forward’.

Our country may be small but it can be mighty, and we back our business community to rise to this challenge.

Ko te pae anamata whakamaua. Hello tomorrow.

Ngā mihi nui,

Jolie Hodson
Spark CEO

“Technology has the potential to create new opportunities for people to do what only people can – think creatively and innovate boldly.”

Jolie Hodson
The New Zealand Institute of Economic Research (NZIER) is an independent economic consultancy and forecasting organisation that has been informing and encouraging debate on policy and economic issues affecting Aotearoa New Zealand for over 65 years. Our purpose is to help our clients and members make better business and policy decisions and to provide valuable insights and leadership on important public issues affecting our future.

This study shows the importance of digital technology in transforming the business landscape in Aotearoa. There are many business and policy decisions that need to be made to ensure that we benefit from the opportunities that digital transformation provides. We have identified in our analysis the significant benefits in adopting digital technology and applications.

We are pleased to partner with Spark on this study and to support its initiative to help move Aotearoa one technology generation forward. It is an important initiative, for New Zealand’s businesses to meet the challenges of a rapidly changing world.

On this project with Spark, we have used data to understand the sectors and solutions where digital technology offers the greatest potential to help move Aotearoa forward on the technology spectrum.

We have also recommended a set of measures and we will work together with Spark to determine a baseline and measure ongoing progress of digital maturity of New Zealand businesses.

The study has national implications and we are excited to be part of the conversation. We look forward to continuing to support Spark with its initiative to move Aotearoa one technology generation forward on its digital transformation.

Ngā mihi nui,

Jason Shoebridge
NZIER Chief Executive
Executive Summary

Aotearoa’s productivity: Our need for change

“New Zealand’s economy has gone from being one of the most productive to one of the least productive in the OECD. Working more hours and putting more people into work has been the main way that production and income have grown over the last decades.” – Productivity Commission, 2023

If one thing is clear from many years of productivity research in Aotearoa, it is that New Zealanders are working harder, not smarter.

Digital transformation is a key enabler of productivity improvements – but it must be integrated into business strategy to deliver business results. Adopting a new technology will not drive change, in and of itself. It’s about starting with the business challenge and working back to the technology solution.

Advanced digital technologies, such as AI, are developing rapidly and opening up new opportunities that were unimaginable just a few years ago. These advanced forms of technology are underpinned by foundational technologies, which provide the basis for this innovation.

There are other emerging technologies beyond the advanced digital technologies identified here on this page, which require further exploration and discussion as we move along the spectrum of digital maturity such as 5G standalone and wider adoption of converged technologies.

Advanced digital technologies:
- Artificial Intelligence (AI)
- Internet of Things (IoT)
- Data analytics
- Advanced robotics
- 3D printing

Foundational digital technologies*:
- 5G connectivity
- Fibre connectivity
- Cloud computing

*These technologies underpin and supercharge advanced digital technologies – enabling new capabilities, such as private networks, networking slicing and multi-access edge computing.
Executive Summary

The economic opportunity is significant

There are clear and compelling benefits from modernising our economy and making better use of technology to grow productivity and transition New Zealanders to smarter ways of working.

Based on a 20% uplift in the use of advanced digital technologies, NZIER’s research and international modelling provides the following estimates:

- Industry output would increase by a range of 0.7% to 1.3%.
- An increase in industry output of between $14.5 billion and $26 billion over 10 years.
- GDP would increase by a range of 1.15% to 2.08% per annum.

This in turn would generate compounding benefits for New Zealand society as a whole, as well as kick start a bold ambition to ‘move one technology generation forward’.

“The key message for New Zealand organisations across the private and public sectors, is that digital transformation is not a matter of choosing ‘if’ but ‘when’ to proceed and that it is a continuous process. Organisations choosing not to integrate digital technology into their operations will fall behind in their ability to meet their customers’ expectations.”

Christina Leung,
Principal Economist, NZIER
Our Methodology

- Global literature review
- International models
- Combine global intelligence with local insights to assess the productivity benefits of technology adoption for New Zealand organisations
- Establish current state of digital transformation in Aotearoa
- Propose industry scorecard and benchmarks
- Quantify the benefit of moving one technology generation forward
- QSBO supplementary survey*
- New Zealand data and previous research
- Expert interviews

*NZIER’s Quarterly Survey of Business Opinion is New Zealand’s longest running and most comprehensive business survey. The resulting indicators are a valuable tool for assessing the current state of the economy and forecasting short-term economic activity.
Three Opportunities

1. Measuring progress
Measurement of digital adoption among New Zealand businesses can unlock and target investment in productivity improvements.

2. Harnessing artificial intelligence
Artificial intelligence can enable productivity gains beyond labour productivity alone.

3. R&D in an innovation ecosystem
To improve our rate of innovation, investment in research and development, and therefore productivity through technology, New Zealand needs an effective ecosystem with stronger collaboration between business, academia, and government.
Measurement of digital adoption among New Zealand businesses can unlock and target investment in productivity improvements.
Unlike the European Union (EU) or other developed countries, New Zealand has no robust or sustained way of measuring digital adoption among businesses. This leads to a lot of talk, and tactical stop-start initiatives, but no way of really knowing how we’re improving, if at all.

New Zealand does not rank highly in international comparisons of digital adoption and digitalisation.

In 2022, New Zealand dropped four places in the IMD World Digital Competitiveness Ranking from 23 to 27. [3]

Countries that have achieved a higher level of digital transformation have established clear goals and measures to ensure that they are progressing. While New Zealand has one of the highest rates of digital infrastructure development, and has formulated digital strategies and action plans [4], we have not been able to capitalise on the productivity benefits of digital technologies (see graph on right). Without clear goals and measures to monitor progress and compare ourselves to other countries, we are flying blind.
The ‘Digital Decade’ is a policy programme to achieve a successful digital transformation in Europe by 2030. The programme has four key focus areas:

1. Digital skills
2. Digital infrastructures
3. Digital transformation of business
4. Digitalisation of public services

The EU has stated that it “must now strengthen its digital sovereignty and set standards, rather than following those of others – with a clear focus on data, technology and infrastructure”. The programme identifies the current state and sets specific targets and objectives that are measurable. The focus is on getting >90% of SMEs (small and medium enterprises) to a basic level of digital intensity, as well as significant uptake of advanced digital technologies.

### From the EU’s Digital Decade: Digital Transformation of Business

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<tr>
<th></th>
<th>Cloud computing services</th>
<th>Big data</th>
<th>Artificial Intelligence</th>
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<tbody>
<tr>
<td><strong>Now</strong></td>
<td>34%</td>
<td>14%</td>
<td>8%</td>
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<tr>
<td><strong>Target</strong></td>
<td>75%</td>
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SMEs with at least a basic level of digital intensity

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<td><strong>SMEs with at least a basic level of digital intensity</strong></td>
<td>55%</td>
<td>90%</td>
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Double the number of unicorn startups in Europe

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**Case Study**

The European Union’s ‘Digital Decade’
Measuring progress: Benchmarking

Digital maturity spectrum

A measure of digital intensity provides a comprehensive assessment of a country, sector, and individual organisation’s use of digital technology.

At Spark, we support the need for a digital transformation benchmark for New Zealand. We believe this benchmark should be part of the next Digital Strategy for Aotearoa and developed collaboratively between the public and private sectors.

In the meantime, NZIER and Spark have created a spectrum of digital maturity to provide New Zealand businesses with a basis for assessing their place on the adoption curve (see diagram on the right).

To create the spectrum, we included several measures from the EU’s digital intensity index to identify the current digital technologies with the strongest potential to accelerate digital transformation and, ultimately, business productivity.

We have modelled digital technology adoption from foundational through to advanced.

In the advanced stages of digital transformation, investment is incorporated into the overall business strategy with a long-term vision. Advanced digital technologies are expected to have a significant impact on business productivity and performance, and investment requires leadership from senior executives and decision-makers.

*There are other emerging technologies beyond the advanced digital technologies identified here, which requires further exploration and discussion as we move along the spectrum of digital maturity, such as 5G standalone and the wider adoption of converged technologies.
In the absence of a national digital transformation benchmark for New Zealand, to help businesses understand the state of their current adoption within the ‘advanced’ digital technologies, Spark has provided digital maturity frameworks to help New Zealand businesses assess their current use of advanced digital technologies.

To develop a more accurate understanding of New Zealand’s adoption of advanced digital technologies, we will be working with NZIER and its next QSBO* survey to benchmark New Zealand businesses’ current uptake of advanced digital technologies, and will endeavour to monitor this progress on an annual basis.

The initial benchmarking will help establish a baseline for working towards the bold ambition of helping Aotearoa businesses move one technology generation forward through the strategic adoption of advanced digital technologies.

*NZIER’s Quarterly Survey of Business Opinion is New Zealand’s longest running and most comprehensive business survey. The resulting indicators are a valuable tool for assessing the current state of the economy and forecasting short-term economic activity.

Measuring progress: Action

Digital maturity frameworks

Access Spark’s digital maturity frameworks for these technologies [here](#).
Harnessing artificial intelligence

Artificial intelligence can enable productivity gains beyond labour productivity alone.
In pursuit of productivity, the historic focus of New Zealand businesses has been labour achieving gains through engaging, recruiting, and developing people. What has been lacking is an adequate link between business strategy and the role of technology in the pursuit of productivity. With the rapid development of generative AI, this needs a rethink.

The need to shift our focus from labour productivity alone is not new. What is new, is the rate of technological advancement we have seen over the last year in artificial intelligence and, specifically, generative AI. This is a technology that has wide applicability across industries and sectors and one that cannot only synthesise and analyse but create.

Global studies estimate that the use of generative AI could raise labour productivity by up to 0.6% annually. Combining it with other technologies could raise productivity by up to 3.3% annually. [6]

As part of its QSBO*, NZIER asked businesses about their knowledge gaps when it comes to digital technology. Advanced digital technologies came out on top, with generative AI, data and analytics and computer vision chief among them. When used well, and responsibly, AI has huge potential to improve how we work in New Zealand and the results we deliver. The world is already moving on this opportunity, and quickly, and if New Zealand lags behind we will undermine our competitiveness.

Harnessing artificial intelligence: **Context**

The potential of generative AI to lift productivity

*NZIER’s Quarterly Survey of Business Opinion is New Zealand’s longest running and most comprehensive business survey. The resulting indicators are a valuable tool for assessing the current state of the economy and forecasting short-term economic activity.

Source: NZIER QSBO September 2023
The opportunity cost of AI for business is growing  
“Gen (generative) AI is set to become a ‘supercharger’ that not only lends itself to the largest productivity increase in decades but also holds the potential to vastly improve the quality of final products when it’s used well.”

Deloitte Australia [9]

Harnessing artificial intelligence: Case Study

Australia’s AI Action Plan


The plan sets out a vision for Australia to be a global leader in the development and adoption of trusted, secure and responsible AI. It includes actions the Australian Government is taking to realise this vision and ensure all Australians share the benefits of an AI-enabled economy.

The plan identifies four focus areas to:

• Lift the development and adoption of AI to create jobs and boost productivity
• Grow and attract world-class talent and expertise
• Harness world-leading AI capabilities to solve national challenges and benefit all Australians
• Ensure AI technologies are responsible, inclusive and reflect Australian values

A key feature of the Australian Government’s Digital Economy Strategy [8], the action plan aims to deliver a modern and leading digital economy by 2030.
New Zealand should create its own AI strategy, to ensure we take advantage of the significant growth this technology will deliver.

The development of a nationwide AI strategy would support AI growth and innovation and help ensure we support our local AI industry to thrive - so that New Zealand remains a creator of AI, not only a consumer or net importer of it.

This strategy could also consider how New Zealand’s legal and regulatory framework needs to adapt to incorporate this new technology.

To encourage consistent responsible use of AI across the business community, New Zealand could consider the ‘ethics by design’ approach taken in Australia - where nationally consistent and recognised AI governance principles have been established for organisations to adhere to.

In doing so, it is also important to consider how this approach would complement, and not duplicate, existing protections and regulation around security, privacy, and human rights that are already in place in New Zealand.

In the absence of such a framework, at Spark we created our own AI Principles that guide the ethical and responsible use of this technology, which are published online.

Spark welcomes the opportunity to support the development of an AI Strategy through collaboration across the public, private, and community sectors.
Harnessing artificial intelligence: **Case Study**

**AI in action: automated road inspection**

AI can play a part in boosting productivity benefits across every sector. By re-imagining day-to-day processes, productivity gains can change the trajectory of a business or industry.

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**The challenge**

Manual road inspections, covering 15km a day, present safety risks, high costs, limited coverage, and delays in maintenance. This inefficiency underscores the need for automated inspection technologies to enhance safety, reduce expenses, and expedite road maintenance and repairs.

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**The solution**

A platform that harnesses AI and computer vision technology, reviewing footage of road surfaces captured by a video camera fixed to a road assessor’s vehicle. The platform reviews millions of images of road surface damage, classifying defects and providing a maintenance schedule and severity rating to estimate the scope of repairs. Real-time processing ensures datasets for each piece of road can be assessed and compared as road inspectors capture video.

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**The result**

A road assessment that once took 66 days to complete now takes just seven days. Road assessors can cover 300kms a day compared to the 15kms a day achievable using the traditional approach.

The solution aims to reduce an inspector’s exposure to dangerous road conditions and traffic. Non-labour based efficiencies result in significant cost savings.
Harnessing artificial intelligence: Action

AI upskilling

To help kickstart the AI learning journey for New Zealand businesses, Spark will be launching an AI for business mini MBA programme in 2024. A collaboration with Section, this programme will provide 150 scholarship places for New Zealand business leaders.

Section was founded by NYU Stern Professor, entrepreneur, and thought leader Scott Galloway in 2019. For the first time, in partnership with Spark, Section is offering a country-only cohort for business leaders in New Zealand Standard Time.

The AI for Business Mini-MBA will help business leaders assess the potential of AI for their organisation, develop an AI strategy for their organisation or department, develop a proposal for an AI project, and have the right conversations with stakeholders to harness the competitive advantage AI can bring. The programme has been designed for senior business leaders in a position to influence change within their organisations.

Learn more about the AI Mini-MBA here.
To improve our rate of innovation, investment in research and development, and therefore productivity through technology, New Zealand needs an effective ecosystem with stronger collaboration between business, academia, and government.
Fostering an effective ecosystem through collaboration between the corporate, academic, public, and private sectors will help to accelerate innovation, R&D, and productivity.

Looking to the experience of other small advanced economies (SAEs), one of the key characteristics synonymous with innovation and productivity is that businesses operate within a deep cluster or ecosystem. Governments have a key role in innovation ecosystems by improving the incentives for research, development, and innovation, and funding for research institutions. They can also support innovation ecosystems by maintaining a consistent and supportive policy environment.

But the private sector and other research institutions must also play their part in driving innovation ecosystems.

Over the past 20 years, R&D spending in New Zealand has been consistently below the OECD average, with business expenditure on R&D particularly low. This means our ability to transform businesses with technology is under-leveraged.

If New Zealand invested in R&D at the same rate as the OECD average, this would have equated to $8.4 billion in 2020 - nearly double the actual spend, which totalled $4.5 billion.
R&D in an innovation ecosystem: **Context**

**Key features in the world’s strongest economies**

Across many successful economies, R&D, funding and investment are supported by other common factors, including a strong focus on education and research partnerships.

**Strong focus on education**
- Countries with high levels of R&D have strong education outcomes at secondary and tertiary levels. This helps to develop human capital to contribute to research capability.
- The OECD PISA \(^{(1)}\) ranks Japan and Korea at the top of mathematics performance. Aotearoa ranked 19 (out of 81 countries) in 2022, continuing the decline of the past decade.
- Japan and Korea also lead the science performance rankings. New Zealand is one of eight countries that are ranked 7, along with the United States and Australia.

**Fostering research partnerships**
- Universities and research organisations interact with businesses and public sector organisations on shared outcomes.
- Collaboration between businesses and research organisations is often a prerequisite for access to public funding.
- In Finland, about 90% of innovating businesses collaborate with researchers from university and other research institutes.

**Investment in R&D**
- To achieve higher levels of investment in R&D there is strong private sector investment, supported by government investment in research, grants and tax incentives.
- In Korea, total spending on R&D is 4.9% of GDP.
- From 2024, businesses in Singapore will be able to secure a 400% tax deduction on expenses incurred for R&D projects for the first $400,000, and 250% on remaining qualifying expense.
- Here in New Zealand, businesses can access a 15% tax credit on approved R&D activity.

**Focused innovation policy**
- Countries like Finland, Denmark and the Netherlands have sustained focused innovation policies over decades \(^{(13)}\).
- These innovation policies have been reviewed and adapted to changing needs but the underlying policies have remained consistent.
- Singapore is known for its strong IP regulations, cited as having the second best IP protections in the world. It also has processes to speed up patent granting and tools to simplify patent searching.
There are some outstanding ecosystems within New Zealand that have driven innovation and business value, but these are the exception, not the rule.

The kiwifruit industry illustrates the vital role of long-running research partnerships and the open innovation model of New Zealand growers and operators, along with the role of Zespri as an anchor for innovation in the industry.

2010s: The Psa disease is rife in New Zealand and destroying our existing golden kiwifruit variety

Zespri, Plant & Food Research and Kiwi Vine Health invest more than $11.5 million to research alternative Psa-resistant golden kiwifruit varieties

Researchers went from 50,000 varieties to a shortlist of 40, to four that made it to orchard trials

Gold 3 is growing in a Plant & Food Research orchard and appears to be Psa-resistant

Plant & Food Research fast track commercialisation with more than 2,000 hectares released to growers. This becomes a cornerstone in the industry’s Psa recovery

Plant & Food Research scientists share kiwifruit and Psa genome sequences for global collaboration, inviting the international science community to help solve the problems facing kiwifruit growers worldwide

R&D in an innovation ecosystem: Case Study

New Zealand’s kiwifruit sector
In a challenging macroeconomic climate, more than ever, businesses need to invest and innovate with technology to unlock productivity gains.

To help boost the adoption of advanced digital technologies and to support innovation among New Zealand’s large businesses and government organisations, we are committing $15 million to an Innovation Fund for Spark business customers over the next three years. $12 million is allocated to customers already, and an additional $3 million will be available for customers to apply for.

As part of this fund, organisations will also receive exclusive access to Spark expertise and content.

Learn more about the Spark Innovation Fund here.

In addition to Spark’s Innovation Fund, organisations can also access a number of innovation initiatives and case studies:

- Explore Spark’s Insight Engine, which shares insights and considerations through case studies and interviews with some of New Zealand’s largest enterprise leaders on how AI, computer vision, data analytics, and edge cloud computing can offer solutions to pressing business challenges.
- Take a hosted tour of the Spark Innovation Studio in Auckland, a purpose-built facility where interactive zones demonstrate how IoT and emerging technologies are helping vital sectors, such as transport, logistics, local government, agriculture, aquaculture, utilities, construction and health and safety.
- Book a team sprint with one of Spark’s technology specialists in the Spark Innovation Studio.
Digital foundations

To realise the benefits of advanced digital technologies, strong digital foundations must be built and maintained.

1. Cyber security
The potential disruption to business operations and loss of customer trust from security breaches make it imperative for businesses to proactively build their digital resilience.

2. Digital skills
Organisations need to offer opportunities for their people to learn and develop skills that will prepare them for the future of work and the technology skills required to boost productivity.

3. Digital equity
The acceleration of technology adoption will exacerbate the digital divide, particularly for smaller businesses and disadvantaged communities, making prioritising and driving towards digital equity even more important.
The World Economic Forum’s Global Risk Report 2023 identified widespread cybercrime and cyber insecurity as one of the top 10 most severe risks in the short and long term.

Despite this, data management and cyber security considerations are often overlooked in the rollout of digital technologies. But the potential disruption to business operations and loss of customer trust from security breaches make it imperative for businesses to proactively build their digital resilience.

Based on international models[14], NZIER estimates that the total economic cost of cybercrime in New Zealand is about $5.5 billion per annum.

In the year ended June 2023, the National Cyber Security Centre disrupted over 250,000 malicious cyber events[15]. A recent survey has found that 55% of New Zealand businesses have been subject to a cyber-attack and of those, 25% had commercially sensitive data or IP accessed or stolen[16].

The same technology services that improve economic productivity in businesses can also be used by cyber criminals to deliver cyber-attacks against individuals, as well as businesses and government.

Cyber security cannot be compartmentalised from other risks. It is multi-layered, with interdependencies and cascade effects across society and the economy. Advanced digital technologies, like AI, will supercharge IT security capabilities, just as it will the efforts of cyber criminals.

Cyber security cannot be an afterthought.

Digital foundations: Cyber security

Cyber security cannot be an afterthought

1. For the public sector
It is critical that New Zealand’s Cyber Security Strategy is updated to reflect the evolved risk landscape.

2. For business
Improve your cyber resilience with a well-documented and tested incident response process. To get you started, check out the National Cyber Security Centre’s Incident Management guide that sets out five key steps to help business leaders strengthen their organisation’s ability to manage cyber security incidents: https://www.ncsc.govt.nz/resources/cyber-resilience-guidance/incident-management/

3. What we’re doing
With New Zealand’s largest cyber security practice, we are working closely with our customers, and with key government agencies, to develop and improve cyber practices and protections across the private and public sectors.
Digital foundations: **Digital skills**

**Digital skills underpin a digital economy**

As outlined in *Digital Skills for Tomorrow, Today* - a 2023 report from NZTech – demand for people with advanced digital skills continues to grow globally \[1\].

In New Zealand, we face three specific challenges – a struggle to fill advanced digital roles that require experience and specific skill, challenges placing early-career technology workers into industry roles, and inspiring more rangatahi (youth) to consider technology as a subject or career.

The report also notes that low levels of upskilling existing employees remains an issue, as does equitable representation. Only 29% of employees in the digital technology sector are women, 4.8% Māori, and 4.4% Pacific peoples.

As a result of these challenges, immigration will remain critical to ensuring that the market can obtain specialist skills that cannot be sourced locally or immediately.

The scale of change that is required to effectively address these skills challenges necessitates a collaborative approach across the public, private, and education sectors.

“Business digitalisation is key to raising New Zealand’s productivity but it will also increase demand for digital skills.”

- Digital Skills for Tomorrow, Today

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**Actions**

1. **For the public sector**
   The recommendations of the *Digital Skills for Tomorrow, Today* report provide a roadmap for action – including the creation of an industry workforce plan with clear targets and increasing participation in supporting entry-level roles.

2. **For business**
   New Zealand organisations must work as an industry and with government to support the attraction of rangatahi into tech careers, and support and improve on-the-job learning.

3. **What we’re doing**
   Spark invests in a diverse digital skills pipeline through the Spark Foundation. We are now establishing Te Awe Skills Hub within Spark to upskill, re-skill, and cross-skill our employees in the digital skills of the future, such as cloud, data science, and AI. We will bring in underrepresented groups through our Spark Foundation partners, so that the talent pool we create at the end looks very different to the one we have today.
As we accelerate our country’s digitisation it is more important than ever that we take unconnected and underserved communities with us.

Right now, up to one in five New Zealanders may be digitally excluded in some way. The groups who are most at risk of exclusion include families on low incomes, seniors, Māori, Pacific peoples, people with disabilities, those new to Aotearoa, and our remote communities.

It is well recognised that digital equity is about more than having access to devices and a connection to the internet - it is also about having the skills to use technology, trust in the digital world, and the motivation to participate.

There are clear and compelling reasons for Aotearoa to bridge this digital divide. In May 2023, Spark Foundation and NERA Economic Consulting released a report that showed providing more homes with internet connectivity could benefit New Zealand’s economy by around $464 - $737 million per year [18].

It will take a coordinated effort across government, industry, and the community sector to take meaningful steps towards digital equity. Better coordination will also more effectively direct activity and resources to where the inclusion need is greatest.

### Digital foundations: Digital equity

**Without digital equity, technology’s benefits will be unevenly distributed**

**Actions**

1. **For the public sector**
   A digital equity strategy for Aotearoa is urgently needed. This strategy must be linked to Aotearoa’s Digital Strategy and plans for a Just Transition.

2. **For business**
   Consider how you can support digital equity goals through your operations by donating second-hand laptops or funding support to RAD - ‘Recycle a Device’, a programme that helps to get devices into the hands of youth. There is a range of STEM education initiatives that target under-represented groups, such as Māori, Pacific peoples, and women that would benefit from private sector support. Examples include Code Avengers, Aquabots, Digital Natives Academy, OMG! Tech, and House of Science (to name a few!).

3. **What we’re doing**
   Digital equity is a feature of our business strategy, the sole focus of our charitable arm, the Spark Foundation, and permeates our operations - from the products we create to how we do business. Over the last five years, we have invested a cumulative $5 million into community-led digital equity solutions through Spark Foundation. Our not-for-profit broadband solution – Skinny Jump – is supporting more than 29,000 homes. You can find out more about our commitment [here](#).
Ngā mihi


