



TECHLEADERS
EXECUTIVE.

BRIEFING PAPER

TECHLEADERS EXECUTIVE DISCUSSION PAPER

*How Government and industry can accelerate
digital advancement in regional New Zealand*

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TechLeaders Executive Discussion Paper How Government and industry can accelerate digital advancement in regional New Zealand

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This TechLeaders discussion paper provides insights from the recent TechLeaders Executive and NZTech CEO Forum event in Auckland. It includes insights from the Minister of Regional Economic Development, a case study from Hack Tairāwhiti and key observations from group discussions with senior technology and digital transformation executives from New Zealand's largest corporations and agencies.

EXECUTIVE SUMMARY

The rise in digital technology has created a disparity between metropolitan and regional New Zealand. New Zealand cities are connected, engaged and digitally innovative, while regional New Zealand has not seen the same level of progress.

TechLeaders and CEOs from some of New Zealand's largest organisations met in Auckland with the Minister of Regional Economic Development, the Honourable Shane Jones, to discuss how to accelerate digital advancement in provincial New Zealand.

As financial investment is vital, Minister Jones highlighted the key regional initiatives the Government is funding, including the \$3 billion Provincial Growth Fund and \$100 million to boost connectivity in the regions.

Hack Tairāwhiti founder Teresa Pollard shared her experience of bringing tech professionals to Gisborne for a 48-hour hackathon to solve local business problems. This example highlighted how people are the key to turning financial investment into growth and progress.

Following the conversation with Minister Jones about the Government's financial investment, further discussion focused on the way in which the technology industry can also invest in the regions.

It was identified that there is a need for more tech companies to be located in regional New Zealand in order to help develop local tech ecosystems and support regional industries. To ensure that there are the personnel required for these ecosystems it is vital that there are more educational opportunities that will create tech career pathways in the regions.



Some of the solutions suggested to help meet these needs were:

- Invest in regional New Zealand in ways that will make it an attractive place to live.
- Partner tech projects with existing local industries.
- Establish regional digital aggregation hubs as a centre point for the local tech ecosystem.
- Create tech apprenticeships to provide educational options in the regions.

INTRODUCTION

Digital technology is penetrating all aspects of our lives, changing not only the way we work, but also the way we live and interact with the world and people around us.

These digital developments are happening rapidly in New Zealand cities, but regional New Zealand is lagging behind. Some parts of regional New Zealand lack basic connectivity through limited internet and mobile coverage, while other parts are connected but are yet to embrace the full potential of digital technology. These limitations mean that New Zealand's technology ecosystem is largely based around the main centres.

If no investment is made to help regional New Zealand catch up, they risk being left behind, meaning that technology will continue to concentrate and advance in the cities, further broadening the gap between the two.

It is imperative that investments are made in regional New Zealand to ensure all New Zealanders can take advantages of opportunities available through digital technology.

To tackle this issue, members of the TechLeaders Executive and the NZTech CEO Forum gathered to discuss ways in which the Government and Industry can work together to accelerate regional technological growth. The Honourable Shane Jones, Minister of Regional Economic Development, opened the discussion by outlining the Government's plans for regional development.



GOVERNMENT INVESTMENT

The Government wants New Zealanders to thrive in the digital age, and the key to this is ensuring that all Kiwis have access to, and the skills to engage with, digital technology, no matter where they live in New Zealand.

While digital connectivity and technology are prevalent in metropolitan areas, regional New Zealand is further behind.

The scale of the Government's technology spend in regional New Zealand isn't to be underestimated, said Minister Jones.

There are three significant ways in which the Government is investing in connectivity and technological advancements in the regions:

1. The \$3 billion Provincial Growth Fund, which was established in 2018 to drive economic growth in the regions with a focus on resilience, productivity, employment and connectivity, is funding projects such as Regional Digital Hubs which will offer services like free wireless internet and co-working spaces.
2. They have allocated \$100 million to boost connectivity in the regions, which is divided into:
 - \$40 million for the West Coast of the South Island;
 - \$40 million for projects in the five surge areas – Northland, Bay of Plenty, Tairāwhiti, Hawke's Bay and Manawatu-Whanganui – which will enable Government to deliver on their target of providing broadband and mobile coverage to 99.8 percent of the population;
 - \$20 million to connect the marae of New Zealand with wireless internet.



"If we are governing only for metropolitan areas, we are missing a substantial part of our writ. Are there a lot of votes in doing it? Probably not... But it is an ethical and empowering thing to do in those parts of New Zealand."

MINISTER JONES

3. There is \$300 million to be managed by the New Zealand Venture Investment Fund (NZVIF) to support venture capital investments in technology startups and businesses in order to help reduce pressure on companies to sell prematurely to overseas buyers.

Minister Jones acknowledged that while the financial investment is there, progress in some areas, such as rolling out digital connectivity to the regions, is hampered by access to skilled people and entities who are able to deliver it. While it is proving to be a challenge, it's not something that they are giving up on.

A key concern identified by Minister Jones, and echoed by the TechLeaders in the subsequent discussion, was ensuring regional New Zealand is an appealing place for people to live. If regional New Zealand is to prosper and attract technology professionals from metropolitan areas, they need to be able to provide a comparable standard of living and advantages not seen in the cities.

The Government is eager to make further investment in regional technological developments and Minister Jones urged those present to approach him with their ideas. Government has the willingness and the pūtea to invest in the regions, what they need are the technology innovators to partner with.



EMPOWERING REGIONAL NEW ZEALAND

HACK TAIRĀWHITI CASE STUDY:

"If we can connect and enable our regions then they benefit, and New Zealand benefits, and that's good for everyone," said Teresa Pollard, founder of [Hack Tairāwhiti](#).

Hack Tairāwhiti is a 48-hour hackathon which was held in Gisborne in May this year, following a pilot event in 2018. The event was created by Pollard with her colleague Barry Soutar after the realisation that many parts of regional New Zealand aren't aware of the opportunities technology could provide for them.

In addition to Soutar's Ngati Porou connections, Gisborne was chosen to host the event as it is an area which has high unemployment, low wages, limited productivity, but most importantly, huge potential.

The hackathon's aim was to bring together designers, programmers, developers and project managers to use technology to solve challenges for local businesses. For the local businesses, the aim was to learn about the possibilities technology could unlock for their companies; for the technology professionals, the aim was to share their skills while engaging with and being inspired by regional New Zealand.

Eighty participants and seven local businesses worked together over the course of the weekend to tackle real-world problems.

The project that was judged the winner was an Internet of Things (IoT) solution to help grower LeaderBrand tackle supply chain volatility. LeaderBrand can lose up to 4,000 crates of vegetables every week, which has a huge impact on their bottom line, water irrigation and use of land. Their hackathon team created a fully developed IoT programme and platform to connect farm growers, managers and sales teams to help them manage volume and supply. This prototype was built in 48 hours and was functional and live on its own site at the end of the weekend. LeaderBrand was astonished by what could be achieved in such a short time, with this solution able to save them half a million dollars in the first year alone. Not only has this brought them economic benefits, but it has left them eager to explore other ways technology can enhance their business.

The hackathon can be as life-changing for the tech professionals involved as much as it is for the businesses. Straker Translation, a software translation company that utilises artificial intelligence, was involved in the Hack Tairāwhiti pilot in 2018. They were so inspired by Gisborne that they created a satellite office there and have moved 15 staff from Auckland to Gisborne in the last six months. This is estimated to have brought a value of \$10 million to the region.

Pollard attributes the success of the event to he tāngata – the people. Whereas Minister Jones outlined the infrastructure the Government is aiming to provide regional New Zealand, Pollard drew attention to the fact that without people, technology will never progress to its full potential.

Pollard's goal is that the Hackathon develops into a national event, where regions can learn and grow with the support of cities and experts.

“My challenge is to help us bring a prosperous outlook and future to our regions, help us unlock their potential, help us connect, support and enable the investment the Government has made in infrastructure. I need you to bring your talent, your capability and connection as guidance and expertise is everything. Innovation can come from anywhere in New Zealand. It can start here, and it can grow anywhere.”

INDUSTRY INVESTMENT

The Government's investment in connecting and enabling technological developments in regional New Zealand provides a good foundation, but for the regions to really advance and meet their full potential, there needs to be investment from the tech industry as well.

While there are many barriers to technological growth in regional New Zealand, the TechLeaders and CEOs' discussion focussed on two main ones: the need for there to be more tech companies located in regional New Zealand in order to help develop local tech ecosystems, and for there to be more educational pathways to ensure there are skilled people to staff these companies.

As Minister Jones had mentioned in his presentation, regional New Zealand is different from its metropolitan counterparts, so it is remiss to think that what works in a city will translate in our smaller communities. As such, it is hard to grow and nurture technology in regional New Zealand without people who understand the intricacies of the regions. This means there need to be companies who are willing to physically base themselves in the regions. For this to happen, provincial New Zealand needs to be seen as an appealing location for businesses to use as a base – not just as an area in which to do business, but also as an attractive location for people to live.

While regional towns offer many benefits not seen in cities, such as easy access to nature, less traffic and a strong sense of community, there are other areas which could be improved. Government investment is needed in areas such as education, housing and healthcare, so that they the regions are seen on par with, or better than, city life.

Furthermore, while the internet facilitates remote work, the distance to market, and to the rest of their business, is still a factor for many companies. The TechLeaders suggested two ways in which these problems can be solved. The first is to use a prominent local industry to form the basis of the tech industry in that community. For example, technology solutions for forestry or fisheries could be the starting point for tech companies and investment in an area where they are a key primary industry. This focus can be used as an exemplar for the regions of what can be achieved with technology. Once this ecosystem has been established, it can tackle other projects.

Another solution is to create regional digital aggregation hubs that have a concentration of talent with broadly useable skillsets (for example, artificial intelligence and standard platform software development). These services would be white-labelled at cost for multiple matched businesses to access. These would differ from the regional digital hubs that Minister Jones alluded to as they would have a strong business focus. However, Government could support help underwrite these, with the idea that they would be self-funding but not profit generating, meaning businesses would be able to

tap into the capability when needed. By aggregating multiple businesses, sustainability can be achieved through load-balancing demand, thereby avoiding boom or bust nature of many of these previous initiatives. This sort of environment will also enable resources to be pooled, which will help with the scales of economies which would be an issue for many organisations.

In order for there to be successful technology businesses in the regions, there need to be the staff to service them. Some staff may be inspired or incentivised to move from the cities to these regions, hopefully bringing their families with them which will contribute to the local economy. It was suggested that more could be done to encourage migrants to consider regional New Zealand as a place to settle, with technology jobs in the regions helping to attract them.

The larger need and opportunity is to employ local people in order to grow the ecosystem and give them tech career pathways that don't require them to move to the main centres.

The TechLeaders identified that a tech apprenticeship program could be a way to encourage capability growth in the regions. This will allow tech businesses to ensure that the students are gaining the necessary skills and experience that can't be learned in a classroom. To do this, there would need to be a strong relationship between educational providers and the industry to ensure that what they are learning is relevant and that students can remain in the regions while they are learning. The apprenticeship pathway will allow people to earn while they are learning, which will hopefully attract more people into tech careers.

For the apprentice program to be successful there needs to be enough businesses willing to employ them, which can be a risk for businesses. Incentives, such as tax breaks provided by the Government, may help. It was also mentioned that businesses should commit to taking on apprentices not solely for their benefit, but also to ensure the success of the program and the development of talent for the New Zealand tech industry as a whole. Part of the remit of the regional digital aggregation hubs mentioned earlier could be to take on apprenticeships.

It was noted that the Government's provincial growth fund recently funded a project in Northland that provides a 12-month digital technology programme for 16-24 year old's and combines life skills, NCEA credits, and work experience. The programme is similar to an apprenticeship and provides on-going pastoral care to support participants during training and beyond.

In addition to the apprentice program, it is vital that the industry continues to work with education providers to ensure that those already employed are able to upskill easily and on-demand. Micro-credentials, which were introduced by the current Government in 2018, offer the chance to upskill people who are already in adjacent roles, but without forcing them to do an entire apprenticeship. It is important to ensure that these micro courses can either be completed online or delivered in the regions.

CASE STUDY:

The Spark Foundation has been working with the Digital Natives Academy to create a tech career pathway in Rotorua.

They identified a need for this after discovering that tertiary qualified people were unable to find local jobs relating to their qualifications so they ended up in minimum wage jobs because they couldn't afford, or didn't want, to move to Auckland. Spark is developing a proof of concept to have an IT squad based in Rotorua in order to provide apprenticeship opportunities there.



CONCLUSION

For regional New Zealand to become connected and prosperous it is imperative that there is co-investment from Government and the tech industry.

Minister Jones outlined the financial investments that the Government is making, and invited proposals for collaborative projects from the tech community.

Discussions from the TechLeaders Executive and CEOs identified the two main barriers which are currently hindering technology businesses setting up in regional New Zealand and explored possible solutions to these.

By establishing of tech ecosystems in regional New Zealand, and ensuring there are the educational pathways to develop local talent, regional New Zealand should, over time, be able to thrive in the digital age.

RECOMMENDATIONS:

The following recommendations are for the industry:

1. Design projects to work in partnership with Government

Minister Jones is open to discussing and developing regional projects that grow digital investment – with a strong emphasis on co-investment from industry.

2. Experience regional New Zealand by participating in Hack Tairāwhiti

Tech companies are urged to engage with regional New Zealand, and a low risk, high reward way to do this is by being part of Hack Tairāwhiti.

3. Create Tech Apprenticeship opportunities

The industry should engage with tertiary education providers to discuss the feasibility of a tech apprenticeship program.

Tech companies should consider how an apprenticeship could be incorporated into their talent development strategy.

The following recommendations are for Government:

1. Government to invest further in regional development to make these communities appealing places to live

The Government should continue to invest in regional New Zealand, particularly in areas which would make it a more attractive place to live, such as housing, healthcare, education, and business infrastructure.

2. Develop Regional Digital Aggregation Hubs

When considering the Regional Digital Hubs, investigate how these could be developed to incorporate and foster tech businesses.

For more information on the Government's investments:

- [Provincial Growth Fund](#)
- [Broadband and mobile coverage for 99.8% of the population](#)
- [\\$300 million Venture Capital - NZVIF](#)



TECHLEADERS ATTENDING

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Angela Nash
Chief Technology Officer
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David Godfrey
Chief Technology Officer
NZX

David Kennedy (chair)
Group Chief Information Officer
TRANSACTIONAL SERVICES GROUP

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NZTech CEO Forum members attending:

Aaron McDonald
CENTRALITY

Alex Bouma
OPTIMATION

Andrew Fox
HPE

Andrew Pirie
SPARK

Chris Trigg
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Darren Hopper
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Valerie Walshe
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Guests in attendance:

Hon Shane Jones
MINISTER OF REGIONAL ECONOMIC DEVELOPMENT

Teresa Pollard
HACK TAIRĀWHITI

NZTech representatives in attendance:

Brigitte Morten

Julie Gill

Nick Elias

