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TECHLEADERS EXECUTIVE DISCUSSION PAPER

Preparing for the Digital Disruption of Work

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TechLeaders Executive Discussion Paper Preparing for the Digital Disruption of Work

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This TechLeaders discussion paper provides insights from the recent TechLeaders Executive Event in Wellington. It includes insights from the Minister of Government Digital Services and key observations from roundtable discussions with the TechLeaders Executive, senior technology and digital transformation executives from New Zealand's largest corporations and agencies.

EXECUTIVE SUMMARY

Digital transformation, including automation and artificial intelligence (AI) is expected to impact many current jobs and the income of many New Zealanders. It is predicted that automation alone, will quickly change both the number of jobs and types of available employment.

Tech leaders from some of New Zealand's largest organisations recently met in Wellington with Minister Curran to discuss how we can best prepare for the imminent digital disruption of work. At the forefront of technology change, these senior executives have particular insight to its rapidly evolving impact in New Zealand's workplace.

Following conversation with Minister Curran, the Minister of Broadcasting, Communications, Digital Media and Government Digital Services, further discussion identified where tech leaders and industry could play an active role in helping secure the future of work for New Zealanders. A number of approaches were suggested, including:

- to focus on people, not jobs, to nurture agility, adaptability and reskilling within the workforce;
- to articulate disruption and change in a way that makes sense to everyone, rather than scaring everyone;
- to actively support and promote lifelong learning with higher priority for training and subsequent increases in training budgets;
- to encourage and support more business startups and innovation with technology for those with an entrepreneurial mindset;
- to create apprenticeships and internship programmes for those looking toward practical skills.

TechLeaders agreed that leaders and industry have a pivotal role in helping prepare New Zealand for digital disruption. This includes guiding and supporting initiatives to retrain New Zealanders for the new skills paradigm presented by technology change.

INTRODUCTION

Digital technology is expanding rapidly into all aspects of our lives including communication, education, entertainment, finance, health, recreation, travel and work. Technology has the power to improve our living standards and raise productivity. However, it also brings the potential risk of social and political upheaval if its advantages are not shared fairly.

Digital transformation, including automation and artificial intelligence (AI) is expected to impact many current jobs and the income of many New Zealanders. It is predicted that automation alone, will quickly change both the number of jobs and types of available employment. During the transition, automation will temporarily displace workers as new processes replace human tasks, both cognitive and physical. Recent research by the Artificial Intelligence Forum of New Zealand (AIFNZ) has found that around one million jobs will be displaced over the next twenty years in New Zealand due to AI and automation. Additionally, while other roles won't be displaced by AI, it will change them, requiring different skills and capabilities.

Fundamentally, TechLeaders believe that a future where thousands are unemployable doesn't have to be the reality for New Zealand. As individual organisations continue to make decisions to increase productivity through the use of emerging technologies, there is no doubt of job losses. However, new technologies will also create new work opportunities. Over time, history has repeatedly shown that the introduction of new technology tends to create more jobs and work opportunities than it destroys. As a result, the immediate challenge of industry and Government is how to prepare a future workforce which is highly adaptable.

In the previous discussion paper, [Industry, Education and the Workplace of Tomorrow](#), the TechLeaders Executive observed numerous opportunities for our workforce. How can we increase awareness of automation? How can we help shape career pathways? How can we connect better with the education? What can be done to develop practical skills? If unaddressed, these opportunities will increasingly become potential threats to our society.

Following the publication of our Workplace of Tomorrow paper, technology leaders from some of New Zealand's largest organisations recently met in Wellington to discuss how we can best prepare for the imminent digital disruption of work. The Minister of Broadcasting, Communications, Digital Media and Government Digital Services opened the discussion. Minister Curran was impressed that industry is taking the initiative to discuss the important issues regarding the changing workforce. She reiterated that technology is disrupting everything, from how we interact to how we work. It is occurring at an exponential rate and we do not yet fully understand what it may mean for diverse communities and our economy, she said. The Government is eager to collaborate and engage with industry on this significant issue.

THE FUTURE OF WORK

The Government takes the impact of digital technology seriously and is looking to investigate all aspects, says Minister Curran. Members of Parliament who were previously involved in the [Future of Work](#) (2016) report are now active decision makers in Government. In particular, these members understand the impact that digital technology is having on education, the economy, certainty of income, and impact on Maori and Pacific communities.

Driven by emerging technologies, changes in employment including less full time, stable work seem likely. As reported in the Future of Work, the uptake of technology is at a pace estimated to be ten times that of the previous industrial revolution and three hundred times the scale. The impact of

technologies like AI, Internet of Things (IoT), 3D printing and robotics is likely to be just the beginning of what is possible.

Minister Curran explained that the Government is aiming to create a fair economy where we work better and use our resources efficiently. Where everyone who wants to work, can work. While boosting productivity is a core objective, increasing the level of wellbeing is also an important focus area.

Several key principles underpin the Government's direction including being adaptable, agile, inclusive, investing in innovation and resilience. Transition will also need to occur in a way that is fair and equitable to avoid creating shockwaves throughout our society, she said.

The first decision as a new Government was the announcement of the introduction of [Free Fees](#). From January 2018, education was made 'fees-free' for the first year, for eligible first-time post school training and education. This policy will also enable those who want to retrain to be able to do so, in order to access the changing workplace, said Minister Curran. While some professions are already being automated quicker than others, the Minister acknowledged that the Government has more work to do with regards to apprenticeships as a pathway. Meanwhile, automation is enabling some professions, for example law and accountancy, to focus on higher value work.

Learning is no longer solely the domain of students at school. The Government wants all New Zealanders to develop their knowledge and skills. This includes non-university education through training and apprenticeships. Everyone needs the space and ability to learn, says Minister Curran. The most important driver of inclusion, resilience and adaptability is education. If a 'learning for life' approach is fully adopted by our society, New Zealanders will be well positioned to transition at work and maintain their standard of living, she explained.

The Government has begun to address New Zealanders' understanding of automation, however Minister Curran encourages greater involvement from industry to ensure the Government prioritises it.

There is also a lack of research and evidence into the digital divide, including access to the internet, ability to use it and affordability. What we do know, she says, is that parts of the country are missing out and we need to provide solutions to breach the divide. Minister Curran says as a nation, we simply can't wait for the research, we need to act now. The Government aims to close the digital divide by 2020 and make tech the second largest contributor to GDP by 2025.

All New Zealanders should be able to access digital technologies and take advantage of the opportunities they offer, the Minister concluded.

PREPARING FOR DISRUPTION

For each workforce that may be disrupted, other areas of opportunity will certainly be created. With this in mind, the TechLeaders Executive discussed what industry can do to prepare for the disruption that automation and other emerging technologies will present. There is a clear need to demystify technology without oversimplifying it. While some jobs will be fully automated, new technology will not completely eliminate all functions. Jobs that are not fully automated are likely to change significantly and will require a different skill set.

The TechLeaders Executive discussed how business, Government and all New Zealanders will need to adapt to survive. The imperative is to act now as emerging technologies are already having an impact with many firms already planning staff reductions due to planned automation and process improvements.

There was consensus that the focus needs to be on people, not jobs, to nurture agility, adaptability and reskilling. It is important that New Zealand doesn't underestimate the impact that digital

disruption will have on individuals and their wellbeing. Therefore, we must build a clear narrative to raise awareness for better understanding. There is a need to articulate disruption and change in a way that makes sense to everyone. To foster an environment of curiosity where we can safely ask why and question if there are better ways of doing things. Ideally, the media should avoid sensationalising the most negative scenario of mass unemployment and dystopian robots. Both Government and industry should begin delivering the media more realistic stories and information to help the country prepare.

Regardless of the levels of awareness and understanding of forthcoming disruptions that technologies like AI may have on people's jobs, there will be disruption. Equally important is the work to be done to prepare the future workforce. The discussion focused on a need to somehow develop a learning culture within New Zealand. Businesses should actively support and promote lifelong learning with increased training budgets. The Government should look for ways to remove barriers for Kiwis so that they can take advantage of opportunities to retrain and reskill. The Fees Free programme may help some workers access retraining services, but does it go far enough?

Other methods for providing opportunities for new skills would be to encourage and support more business startups and innovation with technology for those with an entrepreneurial mindset, or to create apprenticeships and internship programmes for those looking toward practical skills.

While the importance of digital skills for the future workforce cannot be overstated, as automation increases, soft skills will become even more highly valued. This led to the reiteration of the importance of diversity. We must embrace digital inclusion, so all New Zealanders can participate and benefit from advances in technology, regardless of their background or where they live.

Following this discussion, the TechLeaders Executive agreed to create a tool for business and Government agencies to help prepare for digital disruption.

CONCLUSION

Following conversation with Minister Curran and in-depth discussion, the TechLeaders Executive, agreed that leaders and industry have a pivotal role in helping prepare New Zealand for digital disruption. This includes guiding and supporting initiatives to retrain New Zealanders for the new skills paradigm presented by technology change. The development of the next generation of workers is also critical.

RECOMMENDATIONS

1. Government review the alignment of the education system for Learning for Life

While it will be a major change, we believe there is enormous value in reviewing the New Zealand education system toward better alignment to the 'Learning for Life' ethos. The market will likely benefit from the provision of more opportunities for learning on the job such as apprenticeships and internships. Provision of new education opportunities for older employees will also be beneficial. Lowering the barriers to lifelong learning will be required, if this ethos is to become the norm.

2. Industry develop guiding digital principles

On behalf of industry, the TechLeaders Executive will begin a process to develop a tool to assist business and Government agencies in preparing and adapting to automation. This will include a set of shared principles for businesses to consider for their workforce in order to prepare for and mitigate the impact of disruption due to automation. These guiding principles will help business owners and managers evaluate how well prepared their organisations are and whether they are able to support their employees as their businesses become more automated.

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Learn more about TechLeaders at www.techleaders.nz



TechLeaders Executive is a network of influential leaders whose aim is to drive positive economic and social change. As a New Zealand Tech Alliance Member, TechLeaders Executive brings together senior executives who are passionate about better use of technology and the role it can play in making New Zealand more prosperous.

Collectively, we see a prosperous future for New Zealand underpinned by technology. TechLeaders is a not-for-profit membership organisation designed to provide an independent platform for bringing together leaders across industry and government involved in technology decision making to use their shared experience to help inform corporate and national policy.

DISCLAIMER

Any opinion and analysis presented in this Briefing Paper are the opinion of the author of the paper, not the opinion of the members of TechLeaders unless individually quoted in the paper. Any TechLeaders information that is to be used in press releases or promotional materials requires prior written approval from TechLeaders.

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