**MINISTRY OF BUSINESS, INNOVATION & EMPLOYMENT**
HĪKINA WHAKATUTUKI

# COVERSHEET

| **Minister** | Hon Ginny Andersen | **Portfolio** | Digital Economy and Communications |
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| **Title of briefing** | Release of the Digital Technologies Industry Transformation Plan | **Date to be published** | 15 May 2023 |

| **List of documents that have been proactively released** | | |
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| **Date** | **Title** | **Author** |
| 7 December 2022 | Release of the Digital Technologies Industry Transformation Plan | Office of the Minster for the Digital Economy and Communications |
| 12 December 2022 | Final Digital Technologies Industry Transformation Plan: Public Release<br><br>DEV-22-MIN-0293 Minute | Cabinet Office |

| **Information redacted** | **YES /** ~~**NO**~~ |
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Some information has been withheld for the reasons of free and frank opinions and confidential advice to Government.

Office of the Minister for the Digital Economy and Communications

Cabinet Economic Development Committee

# Release of the Digital Technologies Industry Transformation Plan

## Proposal

1      This paper seeks agreement to approve and publicly release the Digital Technologies Industry Transformation Plan (ITP) that has been co-designed and refined with industry.

2      Subject to Cabinet approval, I plan to release the Digital Technologies ITP in early 2023.

## Relation to government priorities

3      There are eight ITPs underway across government. ITPs are a key delivery tool for our refreshed Industry Strategy, which aims to accelerate the transformation of certain sectors to support the Government's economic strategy and priorities [DEV-21-MIN-022 refers].

4      The Digital Technologies ITP supports the Government's overarching priorities to accelerate the economic recovery and rebuild from COVID-19 to achieve a high wage, low emissions economy. The digital technologies sector was selected for an ITP not only because of its innate growth potential, but also because of the broader role it can play across our economy [DEV-19-MIN-0139 refers].

5      Digital technology exports have limited reliance on natural resources and typically do not need physical transportation. This can lead to more sustainable growth opportunities. Additionally, the digital technologies sector supports other sectors to be more productive through provision of innovative products and services and enablement of new business models.

6      The Digital Technologies ITP is a key tool for implementing the Mahi Ake - Growth pillar of the Digital Strategy for Aotearoa. It also aligns with and reinforces other government priorities including progressing the actions under other ITPs.

## Executive Summary

7      The Digital Technologies ITP aims to bring together industry and government to drive long term growth in the digital technologies sector, which will increase export revenue and provide high-quality jobs in the sector.

8      The digital technologies sector is an important contributor to the economy. There are economic and social spill-over benefits, given the potential for digital technologies to improve productivity, enable access to global markets, and provide innovative solutions for environmental sustainability.

9      The Digital Technologies ITP is a collaborative effort between government and industry that has been in development since 2019. Consultation feedback on the draft ITP in early 2022 was supportive of its direction and actions to accelerate long term growth in the sector. The final ITP reflects a consistent and high degree of engagement from the sector.

10     The Digital Technologies ITP has a vision of "*The world looks to Aotearoa New Zealand as a leader in ethical, innovative, inclusive and sustainable digital technologies. These technologies enable our economy to prosper, help our businesses to grow stronger and compete internationally, and contribute to the wellbeing of all New Zealanders*".

11     The ITP sets out a suite of actions to transform the sector, some of which have already received support through Budget 2022. The key focus areas include:

      11.1. **Growing export success** - growing the export potential of New Zealand's digital technology companies, with an initial focus on Software-as-a-Service (SaaS) firms (and game development as a future priority sub-sector); and

      11.2. **Telling our tech story** - showcasing the scope and potential of digital technologies in New Zealand to both overseas and domestic audiences;

      11.3. **Enhancing the skills and talent pipeline** - equipping more New Zealanders, from a wider variety of backgrounds, with the technical and soft skills needed to work and thrive in the digital technologies sector, and to grow businesses in the sector; and

      11.4. **Enriching Māori inclusion and enterprise** – promoting and supporting activity that enhances Māori leadership and participation in the digital technologies sector and appropriately builds on mātauranga Māori.

12     Free and frank opinions

13     I am seeking agreement from Cabinet to publicly release the Digital Technologies ITP (refer **Appendix One**). I anticipate launching the ITP in early 2023.

## Background

*Overview of the digital technologies sector*

14     The digital technologies sector contributed $7 billion to the New Zealand economy in 2021 and employs 38,100 people. As economies are becoming

more digitally enabled, it will be increasingly important that we build the expertise within New Zealand to create solutions that work for us both as a country and as an exporter to the world.

15    Our digital technologies sector plays an important part in the diversification of our economy and as a driver of future sustainable economic growth. Having a strong digital technologies sector will offer important spill-over benefits to other industries, including through the provision of productivity-enhancing business solutions and the growth of digital skills capabilities in the workforce. It will help lift our cyber security and resilience, ultimately improving New Zealand's national security.

16    The rising demand for talent within the sector represents an important opportunity for the growth of high-value jobs. The sector has opportunities for New Zealanders of a wide variety of backgrounds to advance a rewarding and future-focused career path. It will enable them to become creators, users and deliverers of digital technologies, products and services, including in applications such as data innovation, cyber security, blockchain and cloud.

17    Concurrently, a key challenge in realising the sector's potential is to attract and retain a workforce with the right skills and experience, and to address identified issues in the skills pipeline, including at the entry-level. Like many industries, firms in the digital technologies sector are currently finding it difficult to hire the skilled people and specialists they need to thrive and grow, and have had an over-reliance on immigration rather than upskilling and reskilling domestic workers. The workforce also reflects a lack of diversity, with women, Māori and Pacific peoples (amongst others) underrepresented.

*The Digital Technologies ITP has been developed in partnership with industry*

18    The Digital Technologies ITP has been in development since 2019, led by the Ministry of Business, Innovation and Employment (MBIE). Reflecting a collaborative approach, MBIE worked alongside a number of stakeholders to prepare a draft ITP that was released for public consultation in February 2022.

19    The consultation aimed to test and provide views on the work programmes proposed in the draft ITP. 48 written submissions were received and there was strong support for the ITP including its vision and the potential breadth of actions.

20    Stakeholders thought the draft ITP focused on the right areas to explore, and strongly endorsed the partnership approach of the ITP process. For the final ITP, submissions suggested more specificity around the proposed actions and funding status of initiatives, and more details on measuring progress. All of these aspects have been addressed in the final ITP.

21    There has been extensive involvement from industry to contribute to the ITP process. The final Digital Technologies ITP has been refined after taking into consideration stakeholder feedback, Budget outcomes, and the current level of resources available for government and industry to effect transformation.

**Vision and focus areas of the Digital Technologies ITP**

22    The Digital Technologies ITP sets out a sector overview including challenges and trends, vision and actions across focus areas to support the transformation of the digital technologies sector.

23    The vision of the ITP is "*The world looks to Aotearoa New Zealand as a leader in ethical, innovative, inclusive and sustainable digital technologies. These technologies enable our economy to prosper, help our businesses to grow stronger and compete internationally, and contribute to the wellbeing of all New Zealanders*".

24    The ITP identifies the following four focus areas to advance in the immediate term:

    24.1. Growing export success;

    24.2. Telling our tech story;

    24.3. Enhancing the skills and talent pipeline; and

    24.4. Enriching Māori inclusion and enterprise.

*Growing Export Success*

25    Much of the activity in the digital technologies sector is export-oriented, generating new revenue and helping to diversify New Zealand's exporting base through innovative, weightless exports. MBIE has been working with industry to explore the growth potential of two sub-sectors: SaaS and game development.[1]

26    New Zealand's SaaS sector generated $2.2 billion in revenue in 2021, has grown on average 15% per year, over the last five years.

27    Work underway to support the SaaS sector and accelerate its growth includes:

    27.1. **kiwiSaaS community platform** – a community-building initiative to connect the businesses working in New Zealand's SaaS sector. The key purpose is to improve the learning environment for business leaders, founders and employees, by providing them with easy access to relevant networks and information;

    27.2. **SaaS focused short courses** - the courses will enable the upskilling of the talent pool and equip more SaaS firms with the skills needed to scale up a business/product and enter the global market, meeting skills shortages identified by the sector; and

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[1] Software-as-a-Service businesses create and sell software services that can be accessed anywhere and anytime over the internet. The software is hosted in the cloud, with users paying an ongoing subscription.

27.3. **SaaS database** - the development of a dataset for the SaaS sector and an interactive dashboard will respond to the limited data currently available about the sector.

28  Confidential advice to Government

In the meantime, the Cabinet has recently agreed to fund the expansion of the Centre of Digital Excellence (CODE) beyond Dunedin and this development is reflected in the final ITP.

*Telling Our Tech Story*

29  There is a need to better tell the story of what digital technology capabilities we have as a country to attract international investment and talent, and inspire more New Zealanders (from a variety of backgrounds) to want to participate in digital roles and career paths.

30  Work underway includes:

30.1. **International tech story** - the focus is to influence international perceptions of New Zealand's technology and innovation capabilities and to associate it with an exciting culture of tech and creativity that people want to be part of. It also complements other sector stories shared about New Zealand for a cohesive all-of-country positioning in overseas markets.

*30.2.* **Domestic tech story** - the core goals are to inspire more New Zealanders (from a variety of backgrounds) to participate in digital roles and career paths, demystify what a "tech job" is, showcase different pathways into the sector, and create visibility of different role models who are not currently well represented or supported in the sector.

*Enhancing the Skills and Talent Pipeline*

31  Integral to the success of the digital technologies sector is access to the right skills and talent at the right time. Actions to increase numbers entering the tech sector workforce and upskill and reskill its workers will have spill-over benefits for other industries as well, including those needing workers with technical digital skills, such as agritech or advanced manufacturing.

32  The Digital Skills and Talent Plan (DSTP) was developed by industry and outlines initiatives to enhance the skills and talent pipeline, and address its existing gaps and challenges. This focus area will deliver a targeted implementation of the DSTP initiatives, taking the partnership approach integral to the ITP, and based on coordinated action and investment from both industry and government, working with providers and communities.

33  Priority areas include:

33.1. Enhancing awareness and understanding of digital technology roles and skills;

33.2. Building and improving pathways into digital technology careers;

33.3. Growing the maturity and professionalism of the digital technologies workforce;

33.4. Embedding the Skills Framework for the Information Age (SFIA) in education, training, employment and career development;[2] and

33.5. Increasing the diversity of the workforce and ensuring workplaces are welcoming and safe to that diversity.

*Enriching Māori Inclusion and Enterprise*

34     Māori business creators and owners are currently under-represented in the digital technologies sector. Given the increasing role of digital across the economy and society, it is vital Māori are empowered to be active participants in the sector.

35     The Digital Technologies ITP will promote and support activity that enhances Māori participation in the sector, with a scope and purpose that gives effect to Te Tiriti o Waitangi principles. A mātauranga Māori-centred approach, supported by a "by Māori for Māori" paradigm, will help build Māori participation in the sector over time. A Te Ao Māori approach draws on a diversity of thought, indigenous values, ways of being and a deep-seated entrepreneurial mind-set.

36     MBIE supported Stage One of Tokona Te Raki's Digital "Apprenticeship" prototype design.[3] The resulting insights report delivered in September 2022 provides a framework and roadmap to further develop a digital apprenticeship-like model, to encourage more rangatahi Māori into the digital technologies sector.

37     Work underway in this focus area includes:

37.1. **Māori in tech ecosystem research** – this research will highlight the range of existing activity promoting Māori perspectives within the sector, to better understand the current Māori technology sector.

37.2. **Māori Tech Annual Report** - the report will provide an analysis of near-future trends that Māori technology companies could monitor or make use of.

*Future Focus Areas*

38     Other work areas have been identified where further policy planning, development and/or dedicated funding would be required to shape up work programmes in the future. This includes the following:

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[2] SFIA is an internationally recognised framework for describing and managing skills and competencies for the tech sector.

[3] Tokona Te Raki is a Ngāi/Kai Tahu led organisation with a vision that all rangatahi are inspired by their futures, thriving in education, confident in their culture and determining their own path.

38.1. **Data-driven innovation** - the i4 Data-Driven Innovation Education Pilot created a platform to share resources, including key tools that businesses can draw from to better understand the value of data and the opportunities that can be provided from the sharing and pooling of data. These resources will be updated and further developed as the i4 Group continue this work.[4]

38.2. **Artificial Intelligence (AI)** - some initial work was developed by MBIE in conjunction with the AI Forum, on draft "cornerstones" to underpin a future AI Strategy for Aotearoa New Zealand. Future work could look to advance development of an AI Strategy that helps New Zealand leverage the economic opportunities of this technology in a trustworthy way. Future work on this issue has relevance beyond the scope of the digital technologies sector.

38.3. **Government procurement** – Cabinet has approved a comprehensive work programme to position government procurement for the future and ensure that it is a strong lever for advancing the Government's priorities and contributing to New Zealand's well-being. The work programme has a core focus on improving data and transparency.

39    All focus areas proposed in the ITP will propel the digital technologies sector forward by supporting its growth and productivity, which will in turn improve the diversity and prosperity of the wider New Zealand economy.

## Implementation

40    The ITP is a living document and a partnership process that requires ongoing participation and commitment from government and industry. MBIE will continue to work with other agencies and industry stakeholders to implement the actions outlined in the ITP.

41    A Digital Technologies ITP Partnership Board is being established to support the ongoing implementation of the ITP. The Partnership Board will initially be governed by a diverse group of industry body representatives, Māori and other sector leaders plus government representatives.

## Financial Implications

42    There are no direct financial implications for the Crown from the release of the Digital Technologies ITP.

43    There has been extensive engagement with the sector since 2019 and stakeholders have high ambitions for the outcomes associated with the ITP. To achieve long term transformative change, additional investment is required.

44    Free and frank opinions

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[4] The i4 Group is a consortium of industry, academia, and not-for-profit stakeholders.

Free and frank opinions

45    Common barriers to growth include access to capital and access to skills. We think that there are some pockets where access to capital is challenging for digital technology companies (e.g. game development and Māori led tech firms), but overall access to skills is a far more significant problem for this industry as a whole. Confidential advice to Government

46    Digital technologies and the companies which create them evolve and develop quickly. They operate in highly competitive international environments, a situation keenly felt at the moment by New Zealand's game development sector. New Zealand studios are sensitive to support in other jurisdictions especially Australia. Confidential advice to Government

## Legislative Implications

47    There are no legislative implications arising from agreeing to release the ITP.

## Impact Analysis

### Regulatory Impact Statement

48    A Regulatory Impact Analysis is not required as there are no regulatory changes proposed in this paper.

### Climate Implications of Policy Assessment

49    A Climate Implications of Policy Assessment is not required for this paper. Actions to specifically reduce emissions are not a key policy objective of the ITP. However, growing the digital technologies sector will offer opportunities to support New Zealand's transition to a low emissions economy.

## Population Implications

50    The ITP encourages increasing diversity and inclusion within the digital technologies sector, particularly from those who are not currently well represented or supported, such as women, Māori, Pacific peoples, people with disabilities and the neurodiverse.

51    The ITP identifies opportunities for government and industry to better support people from these groups and ensure work programmes reflect the needs of a wide range of people and their backgrounds. It is anticipated that the proposed actions under the ITP will have a positive impact on these population groups.

## Human Rights

52      There are no human rights implications associated with this paper.

## Consultation

53      The following government agencies have been consulted: the Department of the Prime Minister and Cabinet, Ministry of Education, Department of Internal Affairs, Ministry for Pacific Peoples, Ministry for Women, New Zealand Trade and Enterprise, Treasury, Ministry for Primary Industries, Te Puni Kōkiri, Tertiary Education Commission, Ministry of Foreign Affairs and Trade, and the Ministry of Social Development.

## Communications

54      I propose to publicly release the Digital Technologies ITP in early 2023, pending identification of an appropriate public launch opportunity. MBIE will also publish a copy of the ITP on its website.

## Proactive Release

55      I intend to release this paper proactively, subject to any redactions consistent with the Official Information Act 1982, after the launch of Digital Technologies ITP.

## Recommendations

The Minister for the Digital Economy and Communications recommends that the Committee:

1       **note** that as part of the Government's refreshed Industry Strategy, Cabinet agreed that an ITP for the digital technologies sector be advanced;

2       **note** that the Digital Technologies ITP aims to bring together industry and government to drive long term growth in the digital technologies sector, which will increase export revenue and provide high-quality jobs in the sector;

3       **note** that consultation feedback on the Draft Digital Technologies ITP was supportive and informed a refined and prioritised final ITP.

4       **note** that the actions proposed in the Digital Technologies ITP will propel the digital technologies sector forward by supporting its growth and productivity, which will in turn improve the diversity and prosperity of the wider New Zealand economy;

5       **note** the Digital Technologies ITP has been updated to take account of the new funding for the game development incubator (Centre of Digital Excellence) announced on 28 November 2022.

6       Confidential advice to Government

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7     **agree** to publicly release the Digital Technologies ITP in early 2023;

8     **authorise** the Minister for the Digital Economy and Communications to approve final edits to the Digital Technologies ITP, Confidential advice to Government prior to public release.

Authorised for lodgement

Hon Dr David Clark

Minister for the Digital Economy and Communications

**Appendix One – Digital Technologies Industry Transformation Plan**