



# A PLAN FOR UPSKILLING AND RESKILLING IN THE DIGITAL TECHNOLOGY SECTOR

.

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**IT Professionals**  
NEW ZEALAND

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Te Pou Hangarau Ngaio

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# INTRODUCTION

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## A PLAN FOR UPSKILLING AND RESKILLING IN THE DIGITAL TECHNOLOGY SECTOR

The Skills Steering Group for the Digital Technologies Industry Transformation Plan identified a mismatch of skill supply and demand at different stages of the skills pipeline. One of the recommendations in its 2021 [Skills and Talent Plan](#) was to increase upskilling and reskilling at the mid-career level as a way to address the mismatch, and fill demand for the senior roles where we have the greatest shortage.

The Group has now undertaken a [deep dive into upskilling and reskilling in the New Zealand digital technology sector](#), exploring opportunities that currently exist, the barriers to them being taken up, and the gaps or limitations in the current training offerings.

This plan sets out its recommendations on what needs to be done to upskill our digital technology workers to be able to take on more senior roles, reskill them into areas where there is the greatest demand, and reskill people from other industries who could be awesome in digital technology.

There is a short and a long list. The short list sets out the things that should happen first, will address the more commonly experienced problems, and can build on work already underway. The things on the long list also need to happen. But we need to prioritise.

### THE SHORT LIST

Action 1: help digital technology workers get the upskilling and reskilling support they need from employers by providing resources and training for employers

Action 2: create a “directory” that makes it easy to know what upskilling and reskilling training options are available

Action 3: embed the SFIA skills framework by providing resources and self-service tools to help digital technology workers and employers map skills and training needs

Action 4: collaborate on *earn while you learn* and work integrated learning options, starting with what a number of people are calling a digital technology apprenticeship

Action 5: resource Māori organisations to design and deliver initiatives that target the upskilling and reskilling of Māori.

## THE LONGER LIST

Action 6: conduct an awareness-raising campaign highlighting opportunities and how to move into the digital technology sector

Action 7: government agencies leading by example in sharing experience on supporting staff to reskill when going through a major transformation project

Action 8: collect and map information on skills that are in demand (and soon to be in demand), match it against training and experience needed to move into these areas, and provide to people working in the sector, employers and training providers

Action 9: amend government procurement rules and contracts for digital technology services to require commitments to upskilling and reskilling (and diversity and inclusion targets)

Action 10: develop a greater range of “right sized” top up training options for those already in the sector.

Read on to find out more about the recommendations and the findings that led to them. Appendix two provides information on existing options for upskilling and reskilling. More detailed information on the issues and options can be found in the deep dive [consultation document](#).

# BACKGROUND

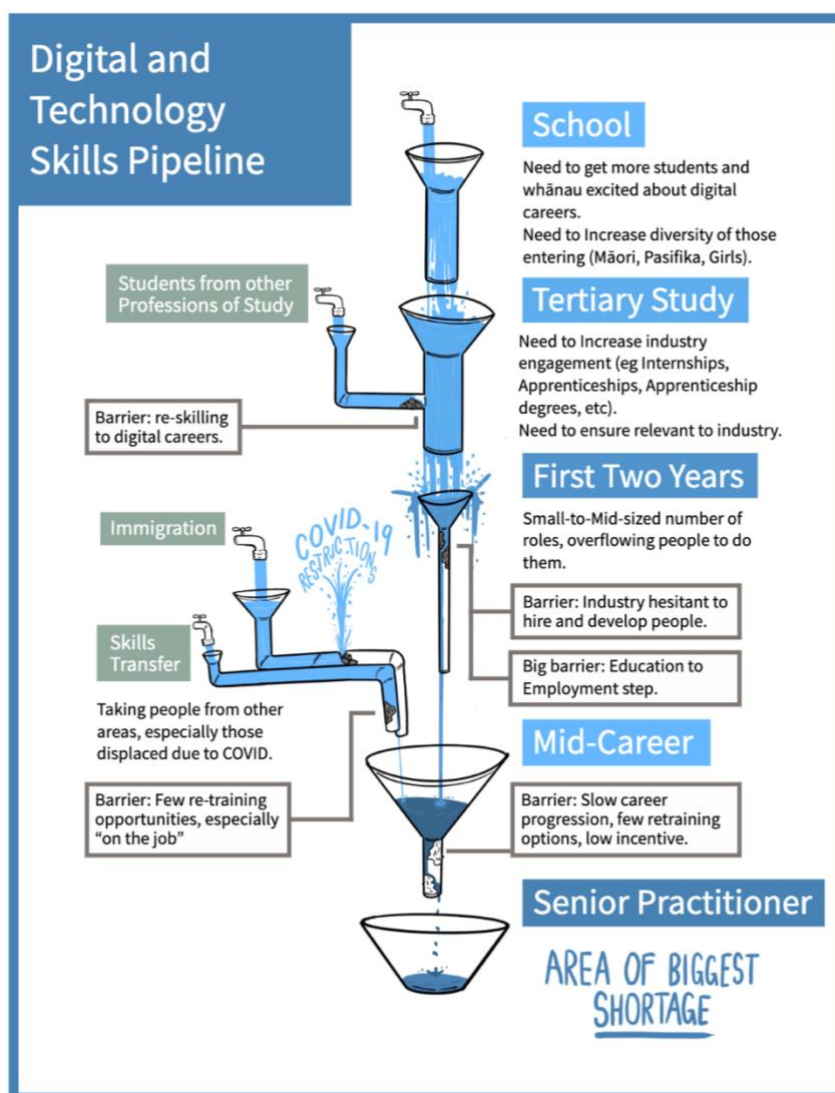
## THE INDUSTRY TRANSFORMATION PLAN AND THE SKILLS STEERING GROUP

The deep dive into upskilling and reskilling is part of the skills workstream of the Digital Technologies Industry Transformation Plan, a partnership between industry and government to transform and grow the sector. The [draft transformation plan](#) was released for feedback earlier in the year. A revised plan that reflects this feedback will be published in August/September 2022.

In 2021 the Industry Transformation Plan Steering Group, made up of representatives from government and industry, convened the Skills Steering Group to provide input on digital skills issues, led by IT Professionals NZ.

Its Skills and Talent Plan recommended 10 actions (set out below) to ensure the digital technology skills pipeline flows. The diagram to the right shows the stages of the pipeline, from school based learning, tertiary education, first jobs, mid-career then senior roles, and the blockages that can occur.

The research undertaken by the Skills Steering Group found that the pipeline isn't just about increasing the numbers and skills of those entering the digital technology profession. It's also about career flow-through to the areas of greatest shortage – senior and specialist roles. So addressing the slow rate of career progression compared with



other professions had to form part of the solution.

Given the huge disruption to New Zealand's labour market as a result of COVID-19, there is also a significant opportunity for the digital technologies sector to welcome displaced workers from other industries.

## THE TEN ACTIONS IN THE INITIAL SKILLS AND TALENT PLAN

Action 1: A strong strategic focus on reskilling and upskilling

Action 2: Rapidly expand pathway options to industry

Action 3: Refine the immigration system to be more targeted

Action 4: Industry to step up and lead the transformation

Action 5: Māori to be a crucial partner in skills

Action 6: Expand the Tech Story to a local audience

Action 7: An All-of-Government strategic approach to skills

Action 8: Increased support for digital tech learning in schools

Action 9: Radically re-defined standardised job "roles"

Action 10: Strengthen the tech sector through greater diversity

## SCOPE

The deep dive into upskilling and reskilling in the digital technology sector has focused on specific parts of the skills pipeline:

- **Upskilling people already working in the digital technology sector** to be able to accelerate their careers and take on more senior roles that are in greater shortage
- **Reskilling people already working in the digital technology sector** to be able to make sideways moves into the areas of higher demand
- **Reskilling people to move into digital technology from other sectors.** The focus for this component is on people already in the workforce with transferrable skills who could be awesome in digital technology.

Looking at the skills pipeline image above, the focus is on **the upskilling and reskilling of mid-career tech professionals, and the reskilling of people from other industries** with work experience. Pathways from school are an important part of the bigger picture, but were not in scope for this project.

## ENGAGEMENT

The deep dive into upskilling and reskilling has had input from a lot of people, including through:

- The Skills Steering Group for the Digital Technologies Industry Transformation Plan
- Workshops and meetings with stakeholders from the digital technology, education, community and government sectors
- Engagement with members of Te Matarau - the Māori Tech Association
- Submissions on a [consultation document](#), which provided an opportunity for those who hadn't been involved in the conversations so far to have their say.

Appendix one says thank you to everyone who contributed their time and insights.

# FINDINGS

## THERE ARE OPPORTUNITIES FOR UPSKILLING AND RESKILLING

There are various opportunities for upskilling and reskilling in the digital technology sector. These include:

- Tertiary qualifications or individual papers (offered by universities, polytechs and private training establishments)
- Accelerated training courses (including boot camps)
- Short courses (including online courses and vendor certifications)
- Structured on the job learning and support with career development
- Self-directed learning and development.

Appendix two provides a summary of what is available or possible, if people have funds, time and employer support.

## BUT THERE ARE BARRIERS AND LIMITATIONS

While there are some excellent initiatives, the current landscape is fairly ad hoc and uncoordinated. There are barriers to accessing the opportunities, and some gaps and limitations in what is being provided. Research and engagement suggests:

- Many employers and hiring managers are not focused on **career development** for their people, and not providing an environment that is supportive for upskilling and reskilling of a diverse workforce<sup>1</sup>. This may be because they don't have the skills, knowledge, resources or time. Or they don't have enough senior staff to mentor others. Some may simply choose not to invest, or don't know how this can benefit their business. As a result, structured and funded training and other support tends to be limited to some organisations – usually larger and better resourced employers, and those who recognise and understand the value of retaining and upskilling staff. Having to upskill on your own time, or at your own expense, is a barrier. It disadvantages groups already marginalised in the tech sector: women, Māori, Pacific, neurodiverse and people facing accessibility challenges.

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<sup>1</sup> A fuller commentary on these issues is set out on pages 18-20 of the [consultation document](#).



- Despite being a fast-changing industry, digital and tech workers often don't focus on upskilling and moving ahead in their career to the same extent as other more structured professions. This partly due to the contractor heavy aspect of the industry. Often workers only "move ahead" with a change of employer rather than within their workplace.
- There isn't good enough information on **the exact skills that are in demand** now (and ongoing), are actually needed (opposed to perceived need), and those needed to support emerging areas of digital technology. Employers can also be unaware of the skills their people already have. Without this information, employers, people working in digital technology, and education providers don't know what to invest in.
- It can be difficult to know **what upskilling and reskilling training is available**, what is good quality, and what is valued by employers. This information needs to be matched against the areas of demand, with information on the training and experience needed and guidance on the path to get there.
- There are **gaps and limitations in current training offerings** for people already in the industry and those looking to move into it. This includes a **shortage of**:
  - **Earn while you learn options**, which are needed to bring greater equity and diversity to the sector by making upskilling and reskilling affordable (and therefore accessible) for more people. There is significant demand for "work integrated learning" that allows people to learn while in employment. On the reskilling side, many people are in favour of some sort of digital technology apprenticeship.
  - **Programmes designed for, by and with Māori and Pacific**, which will better meet the needs of these cohorts, impact attraction and retention, and help address diversity in the sector.
  - **Bare minimum or "right sized" programmes** to allow faster upskilling and reskilling for people already working in digital technology. Many existing offerings are too broad or take too long, or are too introductory to be useful to people already working in the sector.
  - The **work experience opportunities** needed to go alongside reskilling training. This is especially important for those reskilling into digital technology from other sectors, but also an issue for those in the sector looking to move into another area.
  - **Accelerated training opportunities** (such as the Dev Academy model to retrain to become a software developer in 16 weeks) at scale and for a broader range of digital technology roles.

Addressing these issues will require both structural and more challenging cultural change. If a cultural shift to upskilling existing workers (rather than going to market and relying on immigration) doesn't happen we will not have a sustainable pipeline of experienced tech talent.

# THE PLAN FOR UPSKILLING AND RESKILLING

The objective of the deep dive was to come up with a plan for upskilling and reskilling. Set out below is a list of 10 actions that make up the plan. They are split into a short and a long list. The actions on the short list are the things that should happen first, will address the more commonly experienced problems, and can build on work that is already underway. The things on the long list also need to happen. But resourcing for this work is limited and there is a need to prioritise. Some of the things on the long list depend on work on the short list being done.

## THE SHORT LIST

1. **Help digital technology workers get the upskilling and reskilling support they need from employers.** By providing training, guidance and tools to employers to help them realise the benefits of developing and supporting domestic talent and how to go about it. This should include:
  - o Guidance material such as a playbook, good practice journeys and testimonials from employers who are doing it and seeing the benefits
  - o Resources such as templates for career conversations, career plans tailored for digital technology roles, and how to approach mentoring etc
  - o Training on how to put things into practice (modules specifically designed for the sector or more general offerings)
  - o Opportunities for employers to support and encourage each other to develop and support talent (e.g. sharing experiences and good news stories)
  - o Pastoral care/wrap around support (especially for cohorts currently present in low numbers, such as Māori, Pacific, women, neuro diverse and people facing accessibility challenges).

On the pastoral care/wrap around side of things there is an opportunity to build on work that is already in development, including the Good Employer Matrix from [Uptempo](#), the pastoral care elements in a number of pilot programmes designed to support Māori and Pacific joining the digital technology sector, and the looking after people aspects of more traditional apprenticeship and cadet schemes (such as Māori and Pacific Trades Training). Any guidance or training

for employers on supporting their Māori and Pacific staff should be developed and delivered by people from those communities because they know their communities and understand their cultural needs.

It is recommended the focus initially be on the SaaS part of the industry, as there is alignment with funding in Budget 2022/23 for skills in SaaS. Resources and materials could and should be made available to the industry more generally, online, at no extra cost. Training (specifically designed or off the shelf) could be tested with SaaS firms during this process.

This work should be led by IT Professionals NZ (as the professional body) partnering as broadly as possible with business, government and Māori and Pacific organisations.

2. A simple, accessible and well organised **“directory” of digital tech training** that makes it easy to know what upskilling and reskilling training options are available, including for the in demand areas identified in the skills mapping exercise mentioned below. It should cover the full gambit of training options, formal and informal, not just those accredited by NZQA, including affordable options.

Funding would be needed for IT Professionals (as the industry body, working with others) to develop, populate and maintain the directory. As part of this mahi it would consider whether there is scope to build on any existing initiatives. Work could start with a minimum viable product for upskilling and reskilling and evolve into a more comprehensive portal mapping out roles, skills and training options (and their quality) across the digital technology sector. Along with the wide range of digital skills initiatives underway.

3. **Embedding the [SFIA skills framework](#)**<sup>2</sup>. DIA and MBIE have got the ball rolling with the purchase of the country licence for SFIA. A number of organisations have started talking about how to match the skills in SFIA against formal training and qualifications. DIA is turning its mind to how to roll out SFIA in the public sector. Next steps should focus on the private sector and include resources showing how SFIA can be used and self-service tools:

- for employers and workers to develop career and upskilling plans
- to identify skills that staff already have (rather than recruiting)
- to map the future skills needs of an organisation, and create a common language for describing skills needs across the sector
- for recruiters, to appropriately describe the skills needed (and also contribute to the common language).

Resourcing will be required to build the tools and resources and deploy them. This work should be led by IT Professionals (as the professional body) working in

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<sup>2</sup> SFIA describes skills by category and identifies what is needed at different levels of responsibility.

partnership with the Māori Tech Association, to ensure the SFIA framework translates well for Māori working in tech.

4. **Collaborating on *earn while you learn* and work integrated learning<sup>3</sup> options.** This will make reskilling into digital technology more attractive to those from other industries, and more accessible to a more diverse workforce that may not be able to afford to take time out for full time study. Learn while you earn is also needed for those already in the industry looking to upskill.

A number of options are being discussed. The key is to focus efforts on a couple of initiatives and get these over the line. The first is the Ngai Tahu co-design process and pilot for a digital technology apprenticeship. Several training organisations, government agencies, industry organisations and regional groups are interested in (or have been calling for) this sort of pathway. They should lend support to the pilot. Once the pilot has developed an approach that works for Māori, this can be used as a foundation for all. It is recommended that a taskforce work to develop and roll out the model more widely. Toi Mai, Te Pūkenga and IT Professionals NZ can bring this together, with involvement from NZQA, TEC and the Ministry of Education. Funding would be required to support the taskforce. TEC funding would be needed to develop the new qualification.

In doing this mahi it will be useful to take lessons learned from traditional apprenticeships, on how to mentor and be a good employer, and apply them to what folks are referring to as a digital technology apprenticeship. While the models will be different, some concepts can come across.

5. **Resourcing Māori organisations to design and deliver initiatives that target the upskilling and reskilling of Māori.** Māori led organisations such as Te Matarau – the Māori Tech Association – are better positioned to design and deliver such initiatives, as they inherently understand their communities and their cultural needs. Noting this this doesn't alleviate the need for employers to support the development of Māori staff.

## THE LONGER LIST

The actions on the longer list are:

6. An **awareness-raising campaign** highlighting opportunities and how to move into the digital technology sector. Funding has already been allocated for the domestic tech story as part of budget 2022/23 that could be used for a campaign or awareness raising material.

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<sup>3</sup> Work integrated learning is a mixture of theoretical leaning and work place practice. It can include work placements, internships, practicum and project work. More recently there has been a focus on “advanced” or “higher” apprenticeships for knowledge workers.

7. Government departments (such as IR) who have been through major transformation projects should lead by example, sharing their experience with others on how to support people to reskill into more up-to-date and in demand areas of digital technology. For the government audience this could be done without extra resourcing through meetings of CIOs arranged by the Government Chief Digital Officer (GCDO). Experience sharing could be done by any organisation, including those in the private sector. The suggestion here is for government to get the ball rolling. The GCDO at DIA should be responsible for coordinating this.
8. **Skills mapping.** Using SFIA to map out existing and future skill needs, Toi Mai (the workforce development council) and IT Professionals NZ (the professional body) - should be resourced to work in partnership to collect information from employers and recruiters on the skills that are currently mismatched, in over or under supply, and make this information available to education providers and people working in the digital technology industry.
9. **Amend government procurement rules and contracts for digital technology services** to require third party providers to commit to a certain amount of upskilling and reskilling of their staff. Government agencies signing these contracts with third parties should make the same commitment to upskilling and reskilling their internal digital technology staff. While the rules and contracts are being updated it would make sense to include diversity and inclusion requirements and targets at the same time. Government is already looking at how it can use “procurement for good” including through targets to support Māori businesses.
10. A greater range of **“right sized” top up training options for those already in the sector.** Small chunks of learning to keep them relevant and help them get to the next level. It is recommended that Toi Mai and IT Professionals NZ broker conversations between employers and training providers on exactly what is needed. Some other things will need to happen before this can be done, including the skills mapping mentioned above.

## NEXT STEPS

The recommended actions in this Upskilling and Reskilling Plan will be considered and progressed as part of the skills workstream of the Industry Transformation Plan for the Digital Technology Sector. Many of the recommendations align with existing priorities, including the implementation of the SFIA framework, work integrated pathways and widening diversity in the sector.

Government will need to consider the recommendations and the resourcing requirements.

# APPENDIX ONE

## Thank you ....

A huge thank you to everyone who helped with the deep dive into upskilling and reskilling.

### The Skills Steering Group

The Steering Group guided the work and provided insights from industry, education and government.

<a href="#">Paul Mathews</a> (Chair)	Former CEO, IT Professionals NZ
<a href="#">Astrid Visser</a>	Industry Relationship Manager, Toi Mai
<a href="#">Chandra Harrison</a>	Managing Director, Access Advisors
<a href="#">David Glover</a>	Principal, Creative Strategies NZ
<a href="#">Emily Baker</a>	Customer Success Manager, GreenLake Cloud Services
<a href="#">Kate Pearce</a>	Head of Security, TradeMe
<a href="#">Kris Dempster-Rivett</a>	Executive Officer, Taitokerau Education Trust
<a href="#">Malcolm Fraser</a>	Chief Data Steward, The Collaborative
<a href="#">Nic Quill</a>	Manager Operational Strategy, Policy & Insight, Tertiary Education Commission
<a href="#">Rata Kamau</a>	IRD (on group in individual capacity)
<a href="#">Robyn Henderson</a>	Policy Director, Ministry of Business Innovation and Employment
<a href="#">Rohan Wakefield</a>	Manukura, Dev Academy Aotearoa
Rose Jamieson	National Director – Parent Information and Community Intelligence, Ministry of Education
<a href="#">Ruth Green-Cole</a>	General Manager, Developers Institute
<a href="#">Sunit Prakash</a>	Principal Consultant, SunIT Ltd
<a href="#">Tim Croft</a>	Relationship Manager, Toi Mai
<a href="#">Kim Connolly-Stone</a>	Advisor to the project, IT Professionals



## **Workshops**

A big thank you to all the people who attended our workshops in February.

## **Conversations**

An extra special thank you to the people and organisations who took the time to meet with Kim and share your thoughts.

The Alo Vaka programme leads from Auckland

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Saia Mataele from PWC

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Geraldine Canham- Harvey and Ben Tafau from the Ministry of Business Innovation and Employment

Chris Muller, Dr Lily Belabun and Ana Fiu from the Ministry for Pacific Peoples

Graeme Muller from NZTech

Victoria MacLennan from NZRise (now CEO of IT Professionals)

Linda Glogau from NZQA

Danielle Masterton and Nina Ive from TEC

Ariana Te Whetu and Sonny Taite from Tokona/Ngai Tahu

Anna-Jane Edwards, Joel Umali and Sarah Sinnott from Uptemo

## **Respondents**

And last but not least, thanks to everyone who offered their thoughts on the consultation paper and responded to our surveys.

# APPENDIX TWO

## EXISTING OPPORTUNITIES FOR UPSKILLING AND RESKILLING

### TRADITIONAL TERTIARY QUALIFICATIONS

Across all three categories (upskilling in tech, reskilling in tech, and reskilling from another industry) there is the option of studying for a new tertiary qualification: degree, diploma, post graduate diploma, certificate or micro credential. These are available through universities, polytechnics (Te Pūkenga), and private training establishments.

This involves either:

- pausing work to study full time for a degree or diploma (perhaps more likely for those who haven't worked in digital technology before, but still a possibility for those in tech wanting to move into a new area)
- studying for a degree part time while working, although this can be logistically difficult for learners and could take 6-7 years
- part time study to top up an existing degree with an area of further or new specialisation (e.g. someone who has already worked in tech doing a diploma or micro credential in cyber security or data ethics)
- taking papers or courses to gain new knowledge and skills but not necessarily studying for a qualification.

Most qualifications in digital technology now have a practical or work experience component. Some providers (such as the [Developers Institute](#)) go further and continue to support their graduates as they start employment, which is especially useful for people who are reskilling into digital technology from another industry.

Limitations of this set of options for upskilling and reskilling include the costs of leaving employment for full time study, the equity issues inherent in this, the time it can take, the difficulty of getting the level of specialisation just right, and expectations of work experience from employers (the qualification is often not enough).

### SHORT COURSES AND VENDOR CERTIFICATION

There are a variety of short courses offered by private training establishments, IT vendors and online platforms and providers. These are useful for people already working in the digital technology sector to top up their skills. There are also online courses at an introductory level which can be useful for those in other industries

who want to build up skills in digital technology, although these usually won't be sufficient on their own.

For example:

- Vendor specific training and certification (e.g. AWS, Google and Microsoft). This can be offered by the vendors or local training providers.
- Massive open online courses (MOOCs) offered by organisations such as Free Code Camp, Udacity, Acumen, Stanford University and Harvard Business School. These can have high drop-off rates for those who haven't previously undertaken study.
- Other platforms that offer skills training, sometimes offering a combination of tertiary qualifications, short courses, and on the job experience. Examples include Udemy, Coursera, General Assembly, ITProTV, Pluralsight, and Skills Campus.
- Methodology training and certification in areas such as project management (e.g. Prince 2 and Agile), technology frameworks (such as TOGAF), and technology standards (e.g. ISO 27002 on security techniques). These can include vendor and professional-style certifications.
- Short courses offered by professional bodies such as IT Professionals NZ to cover soft skills and fill gaps in existing offerings.

## ACCELERATED TRAINING

A number of providers offer accelerated training programmes, such as bootcamps. The aim is to learn a new set of skills quickly and get a job at the end. These are usually tailored towards individuals looking to reskill into digital technology from another career (but could work for someone in tech who is able to take time out to reskill into another area). Most are in the software development area. Examples include:

- [Dev Academy](#) (become a software programmer in 16 weeks)
- [Mission Ready](#) (12-19 week accelerator programmes to become a developer or UX designer). Mission Ready also collaborate with community organisations such as Haututu (in South Auckland) to run intensive training for Māori and Pacific with employment at the end
- [Industry Connect](#) (6 week intro courses with 3 month internships for software developers, business intelligence/data analysis, and software testing)
- [Toro Studios](#) (piloting a 16 week 3D animation and production course)
- [Rea Coach](#) (a new organisation offering employment after 6 months learning technical foundations and soft, cultural and project skills)
- [Tech Futures Lab](#) (more about the use of technology in other areas)

- [AUT Bootcamps](#) (12 week programmes for data science and AI, cyber security and software engineering, with a 24 week part time option)
- [NGEN Tech](#) (20 week programme for age 16-24, covering animation, coding, content creation, digital marketing, hardware, graphic design, game development, Kia Tū (soft skills) and Kia Māori)
- [Nohi Digital Hub](#) Digital Warrior Cadetship (a 6-week programme learning web development, social media marketing, and how to engage with people online)
- [Ka Hoa|Te Ao](#) e-commerce programme (supporting indigenous people to launch and foster the growth of an online store in 12 weeks).

## STRUCTURED “ON THE JOB” TRAINING AND CAREER DEVELOPMENT

Some employers offer **structured** in-house training and career development opportunities that can be useful for upskilling and reskilling. This is far from universal.

The support that is (or could be) on offer includes:

- **Training while on the job.** Larger organisations (such as Datacom, Xero and Spark) have structured in-house training programmes. Some also facilitate group study preparations for certifications and other external training that is being funded or supported.
- **Mentoring.** This can be part of an employer specific programme or an external programme. Examples of external programmes include the IT Professionals NZ Mentoring Programme, TechWomen Mentoring Circles, and the Canterbury Tech Mentoring Programme.
- **Career development.** This can include supporting staff to do career development plans, job rotations, secondments, acting roles, job shadowing, job enlargement, in house networking, learn how to coach others, and pastoral care. As part of career development planning, some employers are paying for external training to help with upskilling and reskilling.
- Learning **agile methodologies**, with peer or mentor support, as a stepping stone towards upskilling. These methodologies teach attitude, aptitude and amplitude in areas of interest.

## SELF-DIRECTED LEARNING AND DEVELOPMENT

Many take advantage of opportunities for self-directed learning (for example, online), gaining skills and experience from projects and working with others in an organisation. Self-directed learning can also happen outside of employment.

This could include:

- Upskilling and learning individually via online resources, such as “learn to code” websites and apps, online reference libraries, Youtube and other video channels, etc
- Learning about a new area from being on a multidisciplinary project team
- Befriending the team you want to work with, going to meetings and asking what skills are needed and where to build them
- Seeking coaching from a manager or someone in your team or another team
- Research collaboration as a way to learn about new areas
- Building a hobby project, to learn and show capability.

## **PROFESSIONAL CERTIFICATION**

There are organisations that award professional certifications based on an assessment of competency and prior learning. Certification helps put people on a path to ongoing upskilling and reskilling while both recognising those who have reached an industry-agreed level of competency and providing a target level for developing professionals.

These professional certifications differ from vendor or technology certifications in that they focus on how work is undertaken and ensuring that work meets expectations defined within a code of ethics, and competency within an area of practice. They also provide an opportunity to recognise self-directed and on the job learning.

Professional certification or licensing is a key component of almost every other profession and vocation, whether it be accountants, engineers, nurses, architects, builders and more.

In the digital technology sector in New Zealand, IT Professionals offers industry-wide professional certification through the Certified Technologist (CTech) and Chartered IT Professional NZ (CITPNZ) certification, both based on international standards and closely linked to similar initiatives in Australia, the US, the UK, Europe, part of Asia and elsewhere.

[document ends]