FUTURE SKILLS ORGANISATION
Finance Technology Business

Technology Industry

Workforce Plan 2024

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Letter From the CEO

I am delighted to present the second edition of the Future Skills Organisation's Workforce Plan for the Finance, Technology and Business Support Services.

As a Jobs and Skills Council (JSC), our role is to make vocational education and training (VET) a preferred choice for learning finance, technology and business skills by partnering with industry and the vocational training sector to fast-track innovative training solutions that meet the demand for the most important skills.

To do this, we actively engage with industry, unions and government to amplify their voices and facilitate engagement with the education and training system.

Workforce planning is one of our core responsibilities as a JSC, setting the context for everything else we do.

It provides the evidence base to understand current and future workforce challenges and opportunities. It is used to drive the program of projects designed to strengthen the skills needed by the finance, technology and business sectors.

Our Initial Workforce[1] Plan highlighted an opportunity for our VET system to play a greater role in developing innovative solutions to meet future skill demands.

We identified five key challenges. These are training suitability, the digital capability gap, the impact of new technologies, the need to increase understanding of pathways into careers and occupations, and the need to support teacher and trainer currency.

As we build on these findings through Workforce Plan 2024, we aim to further understand the key workforce challenges and skills gaps in finance, technology and business. We dive deeper into key concepts such as the potential impact of Artificial Intelligence (AI) on occupations and skills across the sectors; diversity, equity and inclusion; the impact of regulatory reforms; and the effectiveness of career and learning pathways.

Our work will only be successful when we have authentic partnerships within our community. Your active participation helps us to amplify your voice and co-design solutions to drive positive change across finance, technology and business.

We welcome your insights and feedback.

Patrick Kidd OBE OAM
Chief Executive Officer
Future Skills Organisation

Can be retrieved from:: 1. https://www.futureskillsorganisation.com.au/initial-workforce-plan

About the FSO

The Future Skills Organisation (FSO) is a Jobs and Skills Council funded by the Australian Government Department of Employment and Workplace Relations. The FSO aims to address the current labour and skills shortages while future-proofing the country's Vocational Education and Training (VET) sector.

The FSO seeks to ensure there are opportunities for everyone to access finance, technology and business skills needed across the economy, irrespective of background.

We focus on advancing current and future skills for successful businesses of any size and industry, that need FTB skills.

From Occupation-Focused to Industry-Centred: A New Approach in this year's Workforce Plan

This year's plan builds on the Initial Workforce Plan (IWP) and moves from an occupation-based approach to industry-centred reporting. This allows for a more nuanced understanding of workforce needs within the Finance, Technology, and Business Support (FTB) sectors. While the IWP focused on FTB occupations across the entire economy in every industry, this year's plan reports on industries which count occupations within the direct FTB sectors, whether those are FTB occupations or not.

Further definition of these sectors is provided at page 6 of each individual plan. The new plan contains detailed sector profiles, including sub-sector analyses and comprehensive profiles of the 18 largest FTB occupations.

This amendment results in significantly different workforce data. The IWP found that the number of people employed in Finance occupations were: **842,000, in Technology occupations: 749,300 and in Business Support occupations: 1,400,000.** The IWP correctly identified that the majority of FTB occupations sit outside the direct Finance, Technology and Business Support sectors.

Accordingly, this year's Plan reports far fewer working in the direct Finance, Technology and Business industries **(Finance: 596,789, Technology: 338,277 and Business Support: 526,549)** as it does not count those in FTB occupations outside these industries. However, this data remains consistent with industry reported data, such as the Tech Council of Australia report on Getting to 1.2 million tech jobs which counts digital workers within and outside the direct tech sector. (Source: Getting to 1.2 million jobs – Our roadmap to create a thriving Australian tech workforce, Tech Council of Australia, 2022: https://techcouncil.com.au/wp-content/uploads/2022/08/2022-Getting-to-1.2-million-report.pdf).

Further, it should be noted that this year's Plan uses the Australian Bureau of Statistic (ABS) 2021 Census data as the basis for reporting, and therefore does not reflect increases to each of the sector workforces since that time. Next year's Workforce Plan will be updated using more recent ABS Labour Force data as relevant.

Source: Getting to 1.2 millionmilliion jobs – Our roadmap to create a thriving Australian tech workforce, Tech Council of Australia, 2022

Technology Industry Profile

The Information Media and Telecommunications industry is responsible for a wide range of activities, including publishing, print publications and the management and storage of information.

In telecommunications, the industry is responsible for designing, constructing, installing and servicing of telecommunications equipment, systems and facilities. The industry also encompasses activities related to software development, analytics, cyber security, business applications, technology infrastructure, e-commerce, digital media and online payment solutions.

The Australian tech sector is a critical part of the economy. In 2021, it was estimated that the industry contributes $167bn to Australia's GDP per year, making it the country's third biggest industry. By 2030, tech sector activity has the potential to contribute more to GDP than primary industries or manufacturing.[2]

The industry employs more than 338,000 people and is projected to grow by 7.4% in the next five years. Five of the 10 largest occupations are forecast to grow by more than 12% during that period.[3]

For the purposes of this workforce plan, the technology sector constitutes the following sub-sectors[4]:

- **Publishing (excluding internet and Music Publishing).**
- **Telecommunications Services.**
- **Internet Service Providers, Web Search Portals and Data Processing Services.**
- **Library and Other Information Services.**
- **Computer System Design and Related Services.**

The increasing ubiquity of digital tools across all roles and industries has meant almost all workers now require at least baseline digital literacy to perform their job. This has been driven by increasing digital transformation of business and the non-market sector, with associated trends in automation, artificial intelligence, big data and the growing threat of cyber-attacks. More acutely, the forced and rapid transition to remote work accelerated the need for all workers to leverage a degree of cyber literacy in using and interacting with digital communication and collaboration platforms. These trends have increased the demand for digital skills across the economy and growth in the level of digital skills required.

2. Tech Council of Australia (2021) The economic contribution of Australia's tech sector, Tech Council of Australia.

3 2021 Census - employment, income and education, 4-digit level INDP Industry of Employment, Counting: Person Records

4 Derived from the ANZSIC 2006 Division of Information, Media and Telecommunications Industry and TCA definition of the Tech Industry.

Regulatory requirements for tech occupations vary, with stringent registration requirements in telecommunications.

The Australian Communications and Media Authority (ACMA) regulates communications and media infrastructure, services and content.[5] Within telecommunications, specified cabling work must comply with the Telecommunications Cabling Provider Rules 2014. Cablers must have the right registration for the type of work they perform.

ACMA oversees the registration process for cablers but does not manage registrations or renewals. It has authorised five registrars to manage cabling registrations on its behalf. Registrars also manage applications for recognition of prior learning (RPL).[6]

Training requirements for registration can be met through training such as the Basic Open Cabler Registration Skill Set. This skill set addresses the skills and knowledge required to install, maintain and modify telecommunications customer cabling in domestic and commercial premises in accordance with ACMA requirements.

The Information and Communications Technology (ICT) training package is a nationally recognised set of qualifications, skill sets and units of competency that cover a diverse range of occupations. Units from the ICT package provide specialist technical skills for students seeking employment in technology occupations, as well as foundational digital skills which are widely applicable across the economy.

5 https://www.acma.gov.au/what-we-do

6 Australian Communications and Media Authority (2023) Contact a Cabling Registrar. https://www.acma.gov.au/contact-cabling-registrar.

Employment Story: Status, Growth, and Challenges

About the Industry: Industry Snapshot

Median Age: 40

338,277
Total number of people employed in Technology Sector

2.7%
This is 2.7% of the total national workforce (Total 12.7 million in 2021).

15.7%
(53,110) of the Technology workforce work part-time.

7.4%
Projected growth by 2028.

$1,630
Median weekly earnings per week (gross)

18.5%
of the Technology sector workforce have a VET qualification as their highest qualification.

The median worker age is 40.

30.7%
of the Technology workforce are women.

63.9%
of the Technology sector workforce have a university qualification as the highest level of qualification.

13.7% of the Technology workforce are aged 55 or above.

<1%
of the Technology workforce with disability.

<1%
of the Technology workforce identifies as First Nations.

36.3%
of the Technology workforce is linguistically diverse.

6.2% of the Technology workforce are aged between 15-24.

These figures do not account for technology occupations outside the direct technology sector. However, the 2024 Workforce Plan should be read in conjunction with the FSO's Initial Workforce Plan which includes data from technology occupations outside the direct technology sector.

Source:
2021 Census - employment, income and education, 4-digit level INDP Industry of Employment, income and education 4-digit level INDP Industry of Employment by 1-digit level HEAP Level of Highest Educational Attainment, 4-digit level INDP Industry of Employment by 1-digit level HEAP Level of Highest Educational Attainment, LFSP Labour Force Status, 1 Digit Level by ASSNP Core Activity Need for Assistance, 4-digit level INDP Industry of Employment by INGP Indigenous Status, 4-digit level INDP Industry of Employment by ENGLP Proficiency in Spoken English, 4-digit level INDP Industry of Employment by AGEP Age in Single Years. 4-digit level INDP Industry of Employment by AGE5P Age in Five Year Groups. Counting: Person Records

Victoria University Employment Projections – May 2023 to May 2028 for Jobs and Skills Australia.

ABS, Characteristics of Employment, Australia, August 2023.

4-digit level INDP Industry of Employment by 1-digit level HEAP Level of Highest Educational Attainment, Counting: Person Records.

2016 Census - Employment, Income and Education

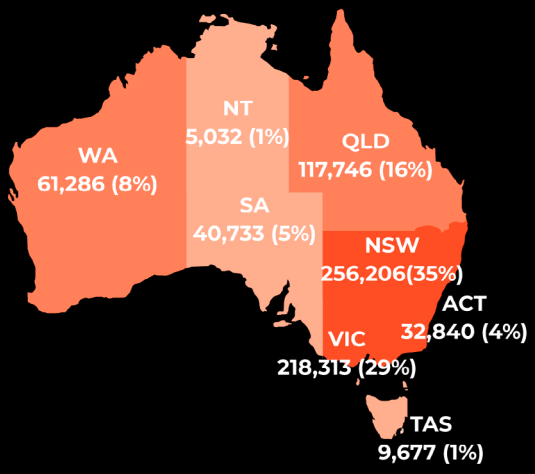
INDP - 4 Digit Level by SEXP Sex

ABS, Labour Force Survey, 2022, four-quarter average data, customised report based on ANZSCO 4-digit occupations

2016 Census - Employment, Income and Education INDP - 4 Digit Level by AGE5P - Age in Five Year Groups. Counting: Person Records.

2016 Census - Employment, Income and Education INDP - 4 Digit Level by AGE5P - Age in Five Year Groups Counting: Person Records.

Employment in Technology



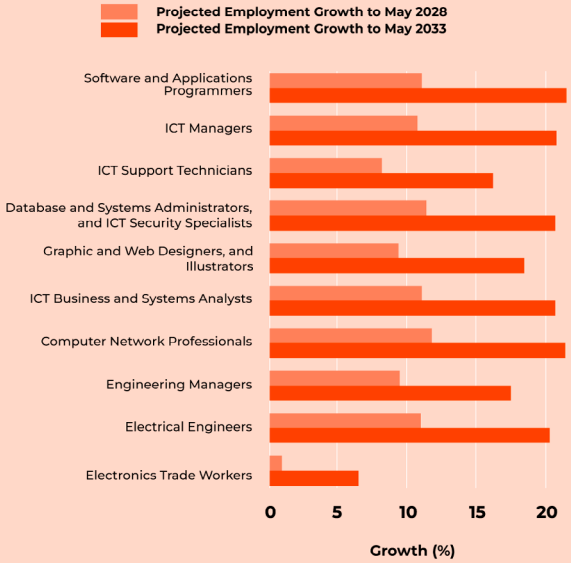
This includes technology occupations within and outside the direct technology sector.
Source: Map data uses Labour Force Survey data and is proportioned by state/territory using historical ABS Census 2021 state splits.

Occupations In Shortage Nationally

- Engineering Manager
- Actuary
- Illustrator
- Multimedia Designer
- Electrical Engineer
- Electronics Engineer
- Engineering Professionals nec
- System Analyst
- Multimedia Specialists
- Web Developer
- Analyst Programmer
- Developer Programmer
- Software Engineer
- Software Tester
- Cyber Security Engineer
- DevOps Engineer
- Penetration Tester
- Cyber Governance Risk and Compliance Specialist
- Cyber Security Advice and Assessment Specialist
- Cyber Security Analyst
- Cyber Security Architect
- Electronic Equipment Trades Worker
- Electronic Instrument Trades Worker (Special Class)
- Cabler (Data and Telecommunications)
- Telecommunications Cable Jointer
- Telecommunications Linesworker / Telecommunications Line Mechanic
- Telecommunications Technician
- Aeronautical Engineer
- Agricultural Engineer
- Biomedical Engineer
- Engineering Technologist
- Environmental Engineer
- Naval Architect / Marine Designer

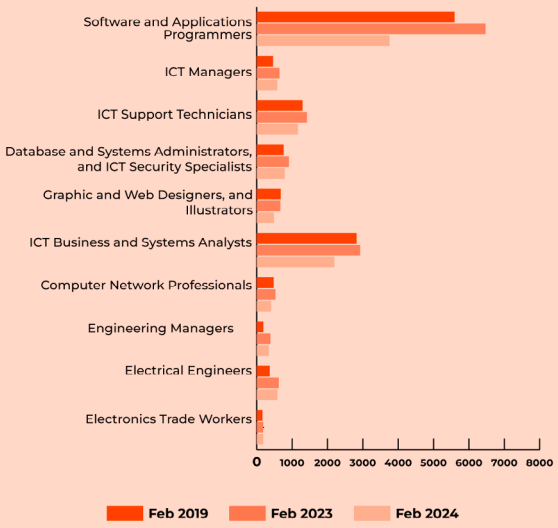
Source: Jobs and Skills Australia, Skills Priority List 2023

Projected employment growth in 10 largest occupations



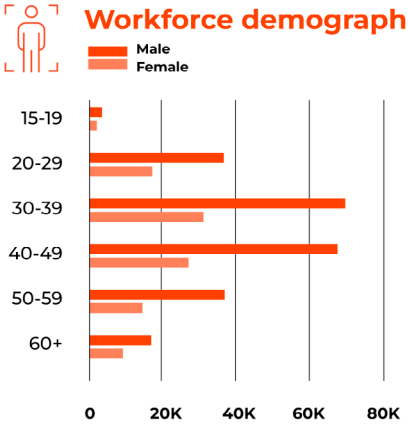
Source: Victoria University Employment Projections - May 2023 to May 2033 from the Job and Skills Australia website
Note: Forecast counts were derived by assessing occupation estimates from the Labour force Survey as for May 2023.

IVI Online Job Ad Count in 10 Largest Technology Occupations



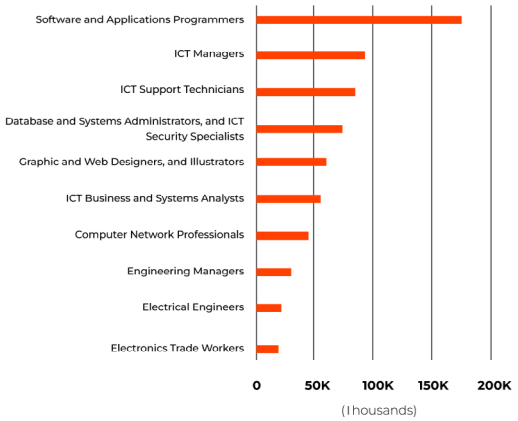
Source: Internet Vacancy Index, February 2024, Jobs and Skills Australia

Workforce demographics



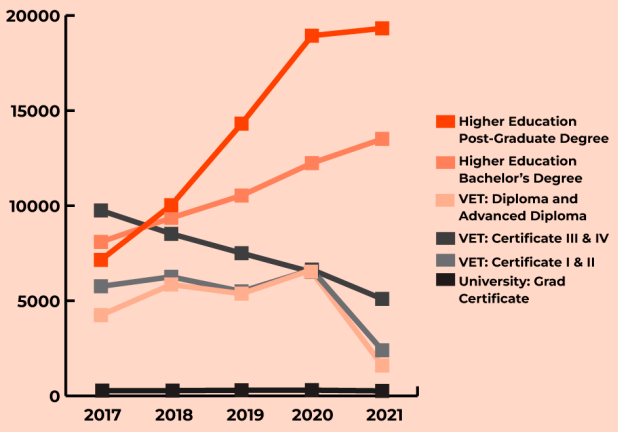
Source: 2021 Census - employment, income and education.
4-digit level INDP Industry of Employment by AGE5P Age in Five Year Groups and SEXP Sex. Counting: Person Records

10 Largest Technology Occupations

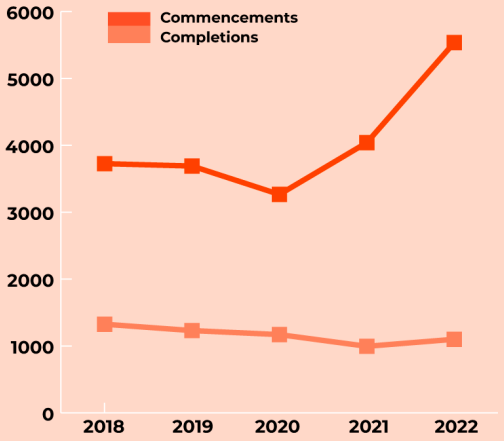


Note. This data includes employees in technology occupations across multiple industries.
Source: ANZSCO 4-digit occupations: ABS, Labour Force Survey, Detailed, November 2023, Jobs and Skills Australia (JSA) trend data.

Technology Education and Training



Apprenticeships/Traineeship commencements and completions in ICT training package



Source: NCVER 2023, Total VET students and courses 2022: program enrolments and completions DataBuilder, Total, Training package, Apprentice/trainee status by Year

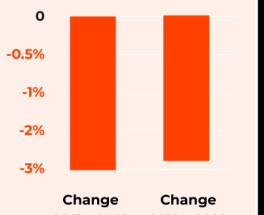
Number of Qualifications – ICT Training Package

11

FEMALE ENROLMENTS in ICT training package

ICT Enrolments in 2022

9,779

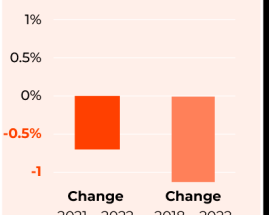


Source: NCVER VOCSTATS TVA program enrolments 2015-2022

ENROLMENTS OF PEOPLE with a disability in ICT training package

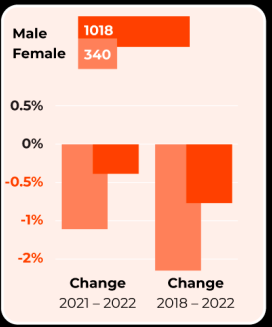
ICT Enrolments in 2022

290



Source: NCVER 2023, Total VET students and courses 2022: program enrolments DataBuilder, Total, Training package, Disability status by Year

FIRST NATIONS PEOPLES ICT Enrolments in 2022



Source: NCVER VOCSTATS TVA program enrolments 2015-2022

Top 5 ICT Qualifications by Enrolment:

	Enrolments	Completions
Certificate III in Information Technology	13,905	2,315
Certificate IV in Information Technology	7,980	1,120
Diploma of Information Technology	7,335	1,010
Certificate II in Applied Digital Technologies	5,775	1,365
Certificate III in Telecommunications Technology	3,125	650

	Employment Rate
Certificate III in Information Technology	61.6%
Certificate IV in Information Technology	68.5%
Diploma of Information Technology	69.3%
Certificate II in Applied Digital Technologies	42.6%
Certificate III in Telecommunications Technology	93.8%

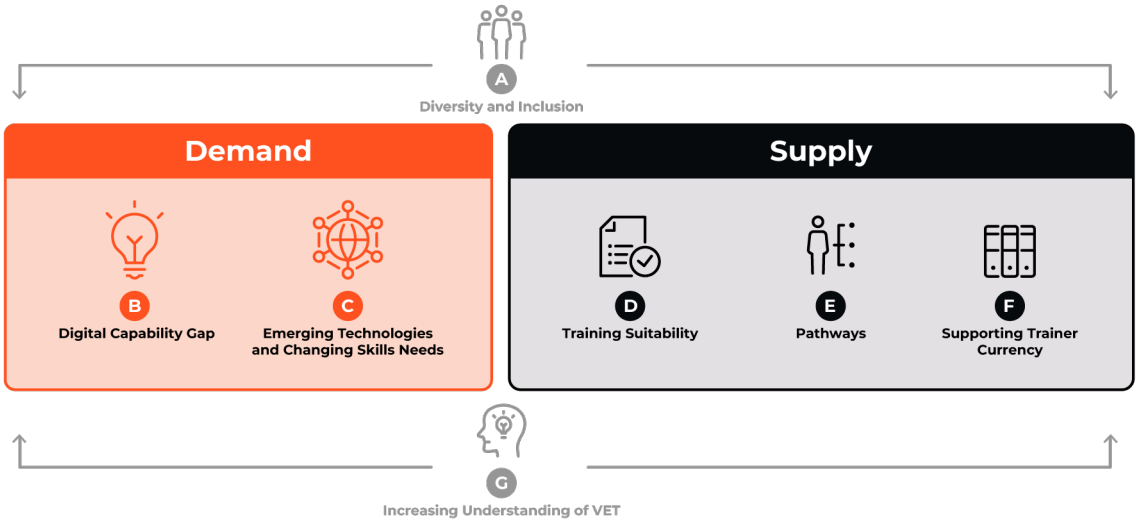
	Median Graduate Income
Certificate III in Information Technology	$27,475
Certificate IV in Information Technology	$37,948
Diploma of Information Technology	$38,521
Certificate II in Applied Digital Technologies	$22,565
Certificate III in Telecommunications Technology	$69,546

	Higher Education Progression	Further VET Progression
Certificate III in Information Technology	12.5%	44.2%
Certificate IV in Information Technology	16.0%	35.9%
Diploma of Information Technology	29.5%	8.4%
Certificate II in Applied Digital Technologies	2.1%	30.8%
Certificate III in Telecommunications Technology	1.5%	12.5%

Source: Jobs and Skills Australia (2023), VET Student Outcomes – Top 100 courses report

Key Findings and Opportunities

Graphic 1: Workforce Plan 2024 – Key Themes



Data limitations: Workforce intelligence needs improvement to help inform decision making. Current data gaps limit the ability to identify and track emerging skills and responses to skilling and workforce challanges. This includes the appropriateness of ANZSCO classifications as industry shifts toward defining workers by skill sets rather than increasingly outdated occupation classifications.

Table 1: Key Challenges Identified at the FSO National Forum - Technology

Key challenges identified at the FSO National Forum
Shortage of technology teachers in secondary schools.
Slow time-to-market for training updates, and length of training.
Inability to recruit and retain trainers with current tech expertise in the VET sector.
Lack of effective systems for Recognition of Prior Learning (RPL).
Minimal buy-in, commitment and investment for co-design and co-delivery from industry.
Ineffective balance of focus between skills and qualifications (including funding).
Lack of trust in the system, including the perception of VET as a learning and career pathway.
Flawed training designs focused on compliance rather than outcomes.
Limiting, overly linear pathways into tech jobs that do not cater to workforce re-entry.
Unmet need for transferable skills as jobs and careers evolve.
Limited understanding of the scope of available occupations.
Lack of diversity and inclusion.

A. Diversity and Inclusion

30.7% of the technology sector workforce are women[7], and 21% of people in tech occupations across all industries are women.[8] This is far lower than the average across all occupations (48%).[9]

In addition, <1% of the technology workforce has disability and <1% of the technology workforce identifies as a First Nations person.[11]

The Australian Government has stressed the importance of enhancing diversity in the workforce and improving access to work-based placements and micro-credential training to upskill current workers.[12]

The Australian Skills Guarantee,[13] which was implemented 1 July 2024, applies to direct Commonwealth procurements in the ICT sector with an estimated individual value of $10 million or more. Initially, targets for apprentices, trainees and paid cadets, and targets for women, will be negotiated with suppliers on a project-by-project basis. It is anticipated that the Skills Guarantee will see an increase in apprentices, trainees and paid cadets in the ICT sector as well as increasing the proportion of women working on ICT projects.

An evaluation of existing initiatives to promote women in tech found that successful programs were tailored to address intersectionality rather than defaulting to the mainstream perspective. Future designs should be informed by the experiences of underrepresented cohorts to effectively address systemic barriers.[14]

7 2021 Census - employment, income and education. 4-digit level INDP Industry of Employment by SEXP Sex. Counting: Person Records

8 Future Skills Organisation (FSO) (2023) Initial Workforce Plan, FSO.

9 ABS, Labour Force Survey, 2022, four-quarter average, customised report

10 ABS, 2021 Census - employment, income and education INDP - 1 Digit Level by ASSNP Core Activity Need for Assistance. Counting: Person Records

11 ABS, 2021 Census - employment, income and education, 4-digit level INDP Industry of Employment by INGP Indigenous Status. Counting: Person Records

12 Treasury (2023) Working Future: The Australian Government's White Paper on Jobs and Opportunities, Treasury, Australian Government.

13 Department of Employment and Workplace Relations (2024) Australian Skills Guarantee, Department of Employment and Workplace Relations, Australian Government.

14 ACIL Allen (2023) Women in STEM Evaluation Final Report, ACIL Allen.

Increasing Female Participation in Technology

21%

of enrolments in ICT training are female.[15]

24%

of Year 12 technology enrolments are female.[16]

Research has found that the top five barriers experienced by women in tech are:[17]

- **Lack of mentors.**
- **Lack of female role models in the field.**
- **Gender bias in the workplace.**
- **Unequal growth opportunities compared to men.**
- **Unequal pay for the same skills.**

Women's participation in the technology sector may also be affected by a lack of childcare options[18] and male-dominated teaching and VET ICT training workforces; several training providers highlighted the latter during consultation for this Plan.

Share your insights on Gender Equality and Inclusion in FTB[19]

Importance of Language

During consultation on this Plan, several stakeholders felt that technology job advertisements were skewed towards male audiences. An example was an advertisement for "a tinkerer of tech." One tech employer reported that applications from women increased significantly when advertisement language focused on behavioural rather than technical skills requirements.

15 NCVER VOCSTATS TVA program enrolments 2015-2022

16 Department of Industry, Science and Resources (2023) STEM Equity Monitor, Department of Industry, Science and Resources, Australian Government.

17 Information Systems Audit and Control Association (ISACA) (2020) The Future Tech Workforce: Breaking Gender Barriers, ISACA.

18 Productivity Commission (2023) Inquiry into the early childhood education and care workforce, Productivity Commission, Australian Government.

19 https://www.futureskillsorganisation.com.au/workforce-plan-2/consultation-paper-gender

First Nations People

Less than 1% of First Nations people held a university STEM qualification, and less than 5% held a VET STEM qualification in 2021.[20] There is a near total absence of First Nations people in the tech workforce (2,130 persons in 2021).[21] This is likely to worsen given declining First Nations people enrolments in the ICT training package.[22]

Ensuring cultural safety in training delivery and providing tailored support for First Nations' students to prepare for training were themes identified in consultations.

Stakeholders indicated that there were few First Nations owned training providers and that the FSO could provide additional support to increase the number of First Nations owned providers. It was felt that this would increase enrolments of First Nations' students.

Providers also noted that for First Nations' students that had had poor experiences in school, a classroom style training environment might not be suitable.

Share your insights on First Nations Representation in FTB[23]

Potential Actions

When asked what actions the FSO should prioritise, stakeholders strongly supported the development of mentoring or networking programs for diverse groups and cohorts. They also emphasised the importance of more work experience or placement opportunities for women to break down preconceptions of what working in tech was like.[24]

Furthermore, stakeholders supported research into barriers preventing priority cohorts from finding employment or training opportunities. They identified a need for proper diversity and inclusion infrastructure to retain diverse talent and the need to support re-training for mid-career professionals with pathways into future employment opportunities.

Stakeholders also emphasised human-centred design processes to define problems and identify solutions. Other suggestions included amplifying role models and success stories; profiling First Nations leaders; partnering with regional community groups to engage talent; developing online portals with a regional focus to attract potential talent; and partnering with employment organisations or community colleges to provide upskilling or boot camps for unemployed individuals to prepare them for finance occupations.

20 Department of Industry, Science, Energy and Resources (2024) Pathway to diversity in STEM: Review final recommendations report, Department of Industry, Science, Energy and Resources, Australian Government.

21 2021 Census - employment, income and education. 4-digit level INDP Industry of Employment by INGP Indigenous Status. Counting: Person Records

22 NCVER VOCSTATS TVA program enrolments 2015-2022

23 https://www.futureskillsorganisation.com.au/workforce-plan-2/consultation-paper-firstnations

24 Stakeholder feedback from FSO National Forum, FSO Collaborator Survey and individual stakeholder consultations.

The FSO was also encouraged to develop best-practice recruitment resources for industry.

Potential actions:

- Identifying and promoting diverse pathways into FTB.

Further areas for research and consultation to inform the development of future actions include:

- Additional support to increase diversity and inclusion.
- Emerging technologies and emerging skills needs including AI adoption in the workplace.
- Learners and graduates experience of VET.
- Perceptions, barriers and challenges to the uptake of VET by industry.
- Pathways between university and VET.
- Best practice support for teachers and trainers.
- Methods for increasing awareness of VET for industry and potential students.

Tackling Gender Disparity in ICT Leadership Roles

The Project Roar Tasmanian Emerging Leadership Program[25], a joint initiative by Project Roar[26] and Red Apple IT[27], aimed to tackle the issue of gender disparity in executive leadership roles, where only 16% are held by women.

"Project Roar gives women the tools, information and confidence they need to be competitive in their industry and discipline, providing practical solutions so women know what to do and how to do it to set themselves up for success," says Catherine Harris[28], Managing Director, Project Roar.

"The program has proven that it is possible to change the status quo and empower women to be agents of change in their own career and industry."

Read the full case study here.[29]

25 https://www.redappleit.com.au/projectroartas

26 https://www.projectroar.com.au/

27 https://www.redappleit.com.au/

28 https://www.linkedin.com/in/catherine-harris-nee-ward/

29 https://www.futureskillsorganisation.com.au/case-studies/tackling-gender-disparity-in-ict-leadership-roles

B. Digital Capability

Digitalisation, automation and the emergence of artificial intelligence are key megatrends that enable significant productivity-enhancing opportunities and present a critical skills agenda.[30]

Jobs and Skills Australia (JSA) recently noted that the whole workforce needs to be digitally literate and that technology and associated digital skills were key enablers in meeting new opportunities of this megatrend. This was reinforced by research conducted by the Digital Skills Organisation (DSO) which found that all workers require, or will require within the next five years, some level of digital skills to enable full economic participation; these are the skills needed for work, learning and life.[31]

The DSO report categorised the working population of Australia into people who are digitally informed (50% of the working population, who require digital literacy, but negligible need for specific digital skills), digitally enabled (43% who rely on digital skills to augment their functional skills) or digital experts (7% who require specific digital skills as central functional skills).

The potential benefit to the economy of a digitally skilled population is well recognised and includes improved productivity gains for companies and higher salaries for employees.[32]

The Australian Computer Society's 2023 Australia's Digital Pulse Report states that few problems in Australia's labour market are more significant than the inadequacy of digital skills. It found that 3 in 5 businesses believe their workforces have outdated digital skills.[33]

A challenge is the lack of a simple common language employers, training providers and learners can use to describe necessary digital skills. When small and medium-sized enterprises cannot clearly define their digital skill needs and training providers are uncertain about priorities, the result is inconsistent and variable training delivery.

30 Department of Education, Skills and Employment (2023) Towards a national jobs and skills roadmap, Department of Education, Skills and Employment, Australian Government.

31 Future Skills Organisation (FSO) (2023) Digital Workforce Report, FSO.

32 Productivity Commission (2023) Productivity Commission Inquiry Report Volume 4: Data availability and use, Productivity Commission, Australian Government.

33 Australian Computer Society (ACS) Digital Pulse 2023, 9th Edition.

The key challenge is delivering digital upskilling programs rapidly and effectively at scale. For example, in the VET sector, the Certificate II Applied Digital Technologies focuses on general digital skills required in the workforce, irrespective of industry. In 2022, this course was delivered by only 125[34] of the approximately 4,000 RTOs, with 5,775 enrolments and 1,365 completions.[35]

The Digital Divide

23.6% of Australians were considered digitally excluded in 2023, according to the **Australian Digital Inclusion Index 2023.**[36] Throughout consultation for the development of this Plan, stakeholders noted that there is a broad range of data capability in the community. One stakeholder reported: **"It's astounding how many people come out of secondary school that can't use MS Office, have never opened an Excel file and don't know what a spreadsheet is."**[37] Training providers noted that employers often expected them to address this gap. Some stakeholders attributed this to a difference in utilisation: secondary schools prefer Google Workspace, whilst most employers seek Microsoft Office proficiency.

An Australian Digital Inclusion Alliance's report stated that digital exclusion is strongly correlated with a lack of device access. For example, mobile-only users have a digital inclusion score of 57 as opposed to the national average of 73.2, according to the latest Australian Digital Inclusion Index (ADII) data.[38] This is particularly concerning as 10.5% of the Australian population only has access to a mobile device. Single persons and public housing renters are overrepresented in this group, with 25% being reliant solely on mobile devices.[39]

One avenue to meet the demand for devices is encouraging appropriate device donation and reuse. This represents an opportunity to significantly increase the number of devices available to vulnerable Australians.

34 training.gov.au search by organisation type, NRT Code ICT20120

35 VOCSTATS, 'Total VET students and courses', TVA Program completions and TVA program enrolments, 2022

36 Digital Inclusion Index (2023) Launch: A Digital Inclusion Approach to Device Donation and Reuse, Digital Inclusion Index. (https://www.digitalinclusionindex.org.au/digital-inclusion-the-australian-context-in-2023/)

37 Individual stakeholder interview conducted April 2024.

38 Digital Inclusion Index (2023) Launch: A Digital Inclusion Approach to Device Donation and Reuse, Digital Inclusion Index.

39 Digital Inclusion Index (2023) Launch: A Digital Inclusion Approach to Device Donation and Reuse, Digital Inclusion Index.

First Nations people have a relatively low level of digital inclusion — 7.5 points below the ADII 2023 Survey national average score for non-First Nations people. The digital inclusion gap between First Nations people and non-Indigenous Australians is evident across the three elements of access, affordability and digital ability. ADII case studies have shown that digital inclusion for First Nations people, particularly in relation to access and affordability, diminishes with remoteness.[40]

Share your insights on digital inclusion in Australia. [41]

Telecommunications is Critical Enabling Infrastructure to the Digital Transformation in the Economy.

Telecommunications is an essential part of all infrastructure. Multiple stakeholders reinforced the importance of fixed, mobile and satellite-enabling infrastructure to support increasing digitalisation across the economy.

Telecommunications networks are increasingly complex and technology is changing rapidly. Due to the growing demand for mobile and wireless communication services, including 5G and 6G technology, the need for skilled telecommunication technicians will likely remain strong. It will also have a critical role in supporting the clean energy transition.[42]

The iterative nature of telecommunication technology requires ongoing skills development and compliance with international standards. For example, technicians must follow regulations surrounding electromagnetic energy, such as the 3GPP and Work Health and Safety standards.[43]

The 3rd Generation Partnership Project (3GPP) specifications cover cellular telecommunications technologies, including radio access, core network and service capabilities, which provide a complete system description for mobile telecommunications. The 3GPP specifications also provide hooks for non-radio access to the core network, and for interworking with non-3GPP networks.[44]

40 National Indigenous Australians Agency (2023) Helping to close the gap through digital inclusion, National Indigenous Australians Agency, Australian Government.

41 https://www.futureskillsorganisation.com.au/workforce-plan-2/consultation-paper-digital

42 Department of Education, Skills and Employment (2023) Clean Energy Capacity Study Final Report, Department of Education, Skills and Employment, Australian Government.

43 3GPP. A Global Initiative. The Mobile Broadband Standard

44 3GPP. A Global Initiative. The Mobile Broadband Standard

Potential actions:

- Activities designed to improve digital capability and the use of emerging technologies within the workplace.

Further areas for research and consultation to inform the development of future actions include:

- Perceptions, barriers and challenges to the uptake of VET by industry.

Turbocharging Australia's Digital Capability

23.6% of Australians were considered digitally excluded in 2023, according to the Australian Digital Inclusion Index 2023 [45].

According to Ishtar Vij, [46] Convenor, Australian Digital Inclusion Alliance (ADIA) [47], "Every worker now needs digital skills. It will increase productivity and enables people to access new career pathways.

"We know that those experiencing digital exclusion, including in relation to their digital capability level, are groups already facing barriers to education and employment: First Nations Australians, people with disability, living in public housing, who've not completed schooling and senior Australians."

The ADIA are proposing the adoption of the Australian Digital Capability Framework (ADCF) as Australia's national common language around digital capability to support all Australians in work, learning and life.

Read the full case study here.[48]

45 https://www.digitalinclusionindex.org.au/digital-inclusion-the-australian-context-in-2023/

46 https://www.linkedin.com/in/ishtar-vij-427b7443/

47 https://www.digitalinclusion.org.au/

48 https://www.futureskillsorganisation.com.au/turbocharging-australias-digital-capability

C. Emerging Technologies and Changing Skills Demands

Industry reported that demands remain high for tech occupations, especially in smaller jurisdictions including Tasmania and the Northern Territory. Recruiters advised increases in demand in recent months for experienced:

- **Software developers.**
- **Cyber Security specialists.**
- **Data analysts.**

The Impact of AI

One of the key areas of focus in the FSO's interviews and workshops was understanding emerging trends in the workforce, with a particular emphasis on artificial intelligence (AI).

As technological developments continue to advance, investments in emerging fields are increasing and digital skills are becoming more integrated within the Australian workforce. The Australian Government White Paper[49] emphasises the change in the skills landscape across industries, with an increasing demand for digital skills in areas including AI, robotics and cybersecurity. This applies across technology and non-tech occupations.

A KPMG-AMCham report further contends that these fields, which include AI, digital economy and quantum science, are witnessing a rise in economic partnerships and technology investments within Australia and among its global peers.[50] For example, the Australian Information Industry Association (AIIA), along with the Australian Government, launched a $17M initiative to support businesses in safely adopting AI to enhance productivity and competitiveness.[51]

The Australian Computer Society reported that an estimated 95% of workers are expected to see at least 20% of their work time replaced, augmented or otherwise impacted by the adoption of critical technologies. At 2022 levels, this translates to over 11.2 million workers across the economy.[52]

49 Treasury (2023) Working Future: The Australian Government's White Paper on Jobs and Opportunities, Treasury, Australian Government.

50 KPMG-AmCham Australia (2022) A Prosperous Future: Emerging Tech.

51 Australian Information Industry Association (2023) Responsible AI Adopt Program.

52 Australian Computer Society (ACS) Digital Pulse (2023), 9th Edition.

One stakeholder identified that any process that is linear and repeatable is likely to be affected by the introduction of AI. Our research found that Generative AI (GAI) is having a significant impact on finance, technology and business occupations[53] and that, consequently, the Financial Services (FNS), Business Services (BSB) and Information and Communications Technology (ICT) packages training packages were the most likely of all training packages to be impacted by GAI. As a result, the FSO undertook further research to identify which qualifications will require

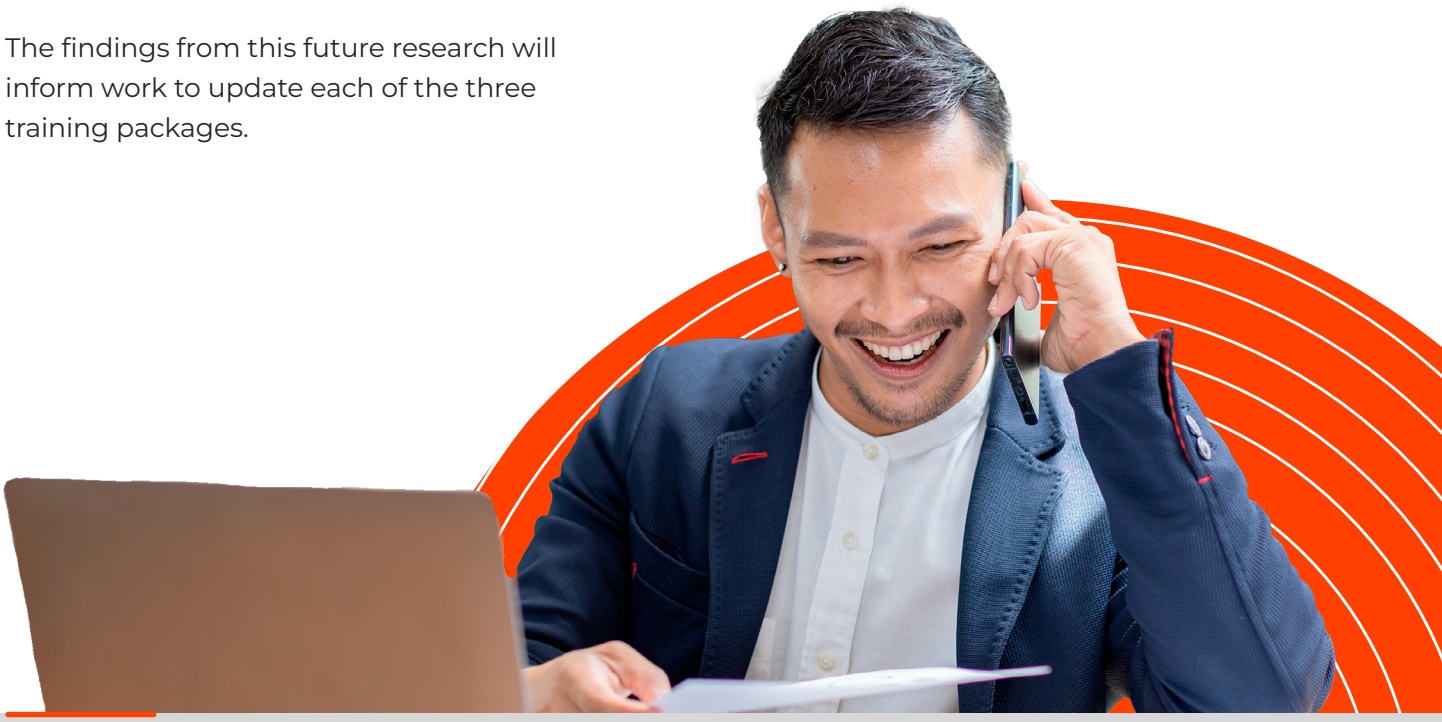
Read our report on the impact of Artificial Intelligence on the VET sector.[54]

This research has not identified:

- **Actual adoption rates of GAI within industry.**
- **Timelines of GAI impact.**
- **Impacts on occupations and skills (i.e. whether by automation, augmentation or adaption).**

Accordingly, it remains unclear how FTB training products need to be updated, and within what timelines, in order to deliver skills that reflect the current and future impact of GAI in the workplace. To address these knowledge gaps, the FSO is proposing to undertake a research project to identify how GAI is being adopted in the workplace, which occupations and skills are being impacted, how this impact is manifesting and what skills will be needed to implement and utilise GAI.

The findings from this future research will inform work to update each of the three training packages.



53 Future Skills Organisation (2023) Impact of generative AI on skills in the workplace, Future Skills Organisation.

54 https://www.futureskillsorganisation.com.au/building-an-ai-enabled-workforce-priority-framework

Regulation and AI

The Critical Technologies Statement outlines how the Australian Government is supporting critical technologies. Critical technologies are technologies that can impact Australia's national interests.[55] The List of Critical Technologies in the National Interest details the specific fields the government is focusing on and include Artificial Intelligence. Accordingly, the Australian Government is developing a comprehensive policy framework for the ethical and responsible use of AI, including:

- Establishing the Artificial Intelligence in Government Taskforce (AIGT) to progress the implementation of safe, ethical and responsible AI across the Australian Public Service.[56]
- Signing the 2023 Bletchley Declaration on AI Safety to identify AI safety risks of shared concern and build a shared scientific and evidence-based understanding of these risks, in the context of a wider global approach to understanding the impact of AI.[57]
- Defining eight AI Ethics Principles designed to ensure that AI is safe, secure and reliable.[58]
- Releasing the 2023 – 2030 Australian Cyber Security Strategy, which emphasises the need to design and sustain security for emerging technologies like quantum, Internet of Things (IoT), AI and machine learning. Robust implementation governance and ongoing evaluation mechanisms are essential for achieving the government's vision and maintaining cyber resilience into the future.[59]
- In January, the Australian Government released its interim response to safe and responsible AI and developing a Safety Standard to support the ethical and responsible use of AI.[60]

55 Critical Technologies Statement, Department of Industry Science and Resources (2023), Australian Government

56 The AI in Government Taskforce: examining use and governance of AI by the APS (2023), Digital Transformation Agency, Australian Government.

57 Department of Industry, Science, Energy and Resources (2023) Bletchley Declaration - Countries attending AI Safety Summit 1-2 November 2023, Department of Industry, Science, Energy and Resources, Australian Government.

58 Department of Industry, Science, Energy and Resources (2023) Australia's Artificial Intelligence Ethics Framework: Australia's AI Ethics Principles, Department of Industry, Science, Energy and Resources, Australian Government.

59 Department of Home Affairs (2023) 2023-2030 Australian Cyber Security Strategy, Department of Home Affairs, Australian Government.

60 Department of Industry, Science, Energy and Resources (2024) Australian Government's interim response to safe and responsible AI consultation, Department of Industry, Science, Energy and Resources, Australian Government.

The Use of AI Within the VET Sector

Training providers reported varied levels of support for the use of AI by students and educators[61]; they also acknowledged that, unless there are closed book exams, AI use cannot be prevented. Most training providers took a pragmatic approach, stipulating that usage needs to be referenced, including the prompt and response, and then edited. This way it is clear that students are at least undertaking research and formulating their own responses incorporating their own judgements and thoughts.

Fast-Changing Skills Needs

The impact of emerging technologies is accelerating a workforce-wide digital transition. New tools will be able to undertake many linear, repeatable processes, resulting in a shift towards a skills-based economy where employers prioritise skills and competencies over traditional qualifications. This is reflective of the evolving demands of industries driven by technological advancements.

Behavioural Skills Are Becoming Increasingly Important.

With the rise of automation and technological advancements, there is an increasing importance for non-routine, cognitive occupations and their associated skills. Interviews with industry stakeholders highlighted the value of a workforce with skills resilient to technological advancements. Multiple participants identified the necessity of a workforce adept in areas, including analysis, problem solving, creativity and interpersonal communication.

It was felt that many technology occupations were moving towards a set of modern work standards more concerned with risk and advice. There was generally broad acceptance that people will have the technological skills, but the focus was more on how people apply those skills in the workplace beyond technology.

In both the FSO Stakeholder Survey and stakeholder engagement, the following skills were identified as gaps and growing in demand in the tech sector (not in order of importance):

1. **Analytical and problem-solving skills/critical thinking skills.**
2. **Project management.**
3. **Business acumen and knowledge.**
4. **Customer relations — communication skills, emotional intelligence, working in a team, etc.**
5. **Lifelong learning.**

61 Stakeholder feedback from FSO National Forum, FSO Collaborator Survey and individual stakeholder consultations.

One ICT employer reported that **"soft skills are employment gold."**[62] However, there are many gaps in the skills of VET and Higher Education graduates, especially around:

- **Emotional intelligence.**
- **Problem solving.**
- **Working with others.**

It was noted that Emotional Intelligence was a core unit in some qualifications but not all and that every student should be trained in this skill.

Technical Skills Are Also Growing in Demand.

In both the survey and stakeholder engagement, the following occupations and skills were identified as in demand (in no order):

1. Occupations:	• Full Stack Engineers • DevOps • Product Managers • Telecommunications Technicians
2. Skills	• Cloud computing • Coding and programming *Of note, one stakeholder reported ongoing demand for early high-level procedural languages like COBOL[63] • Cyber security • Building of AI models • Data analytics • Microservices

62. Ibid.

63 IBM (2024) COBOL, IBM Developer.

Many employers reinforced the need for new entrants to be able to apply technical skills in practice as well as:

- **Report writing.**
- **Process mapping.**
- **Data analysis.**
- **Agile tools and methodology.**

Many solutions from the FSO National Forum prioritised understanding and building on international experiences. One stakeholder reported that a recent visit to the SXSW Edu Conference highlighted the need for the FSO to focus on future global trends quickly becoming relevant in Australia.

Classifications of skills shortages for occupations

Although feedback on the reasons for skills and occupation shortages was collected during consultation for this Plan, Jobs and Skills Australia has developed a classification system for skills shortages which identifies four skill shortage drivers (SSD):

- **Longer training gap** – there are few qualified applicants per vacancy and a long training pathway (Certificate III or above in the AQF)
- **Shorter training gap** – there are few applicants per vacancy and qualification (less than a Certificate III)
- **Suitability gap** – there are above average qualified applicants per job, but a low proportion of suitable applicants compared with the number of qualified applicants
- **Retention gap** – there is above average job mobility (employees leaving these jobs)

The Top 20 largest occupations were classified in the JSA report: **Towards a National Jobs and Skills Roadmap | Jobs and Skills Australia**[64]. The latest Skills Shortage Drivers results, and report were published by JSA on 1 April 2024 at 4-digit ANZSCO level: **Skills Priority List | Jobs and Skills Australia**[65].

The FSO Workforce Plan 2025 will incorporate this classification system into consultations to increase understanding of skills and occupation shortages in FTB.

64 Department of Employment and Workplace Relations (2024) Australian Skills Guarantee, Department of Employment and Workplace Relations, Australian Government.

65 https://www.jobsandskills.gov.au/data/skills-shortages-analysis/skills-priority-list

Potential FSO actions include:

- Ensure VET training products are relevant, current and meet industry needs.
- Support the development of relevant training and resources for the use of emerging technologies in the workplace.

Further areas for research and consultation to inform the development of future actions include:

- Emerging technologies and emerging skills needs including AI adoption in the workplace.
- Learners and graduates experience of VET.
- Perceptions, barriers and challenges to the uptake of VET by industry.
- Pathways between university and VET.
- Best practice support for teachers and trainers.
- Methods for increasing awareness of VET for industry and potential students.

D. Training Suitability

Enrolments in the ICT training package have declined significantly over the last five years.

Enrolments declined from 65,120 in 2018 to 46,680 in 2022.[66]

Completion numbers from the ICT training package have fallen to 8,670 in 2022.

Completions declined from 20,485 in 2018 to 8,670 in 2022.[67]

66 NCVER 2023, Total VET students and courses 2022: program enrolments DataBuilder, Total, Training package by Year

67 NCVER 2022, Total VET students and courses 2022: program completions DataBuilder, Total, Training package by Year

The current issues with VET, as identified in multiple reports and interviews, often centred around its lack of comprehensiveness and accessibility.[68] This was particularly relevant in addressing industry-defined skills needs in sectors such as digital technology, IT and telecommunications.

Throughout consultation for this report, most industry stakeholders felt that neither higher education nor VET graduates in technology were "work-ready" upon graduation. Businesses tended to prefer trainees to classroom-based graduates from the ICT training package; one employer reported instructing trainees to ignore classroom teachings and focus on what is being taught in the workplace.

There was significant focus on aligning ICT training with industry need, ensuring that qualifications, skills and training are relevant and up-to-date with current industry standards. Up-to-date training is a challenge in this area given the rapid pace in technological advancements. Of the respondents to the FSO Stakeholder Survey who indicated the ICT training package was relevant to them, less than 30% confirmed that it was meeting industry needs.

Discussions at the FSO National Forum and other consultations highlighted the impact that this has on workforce development and industry growth. This creates inefficiencies in VET and hinders collaboration with industry.

Some stakeholders felt that the training package "gets a bad rap." However, the amount of flexibility within the training package was felt to be overwhelming to industry, training providers and trainers, given the breadth of skills expected to be able to be delivered. Many stakeholders felt that the training package itself was fine but the way it was being communicated to industry was not.

Of some concern, ~50% of respondents to the FSO Stakeholder Survey indicated that they were unsure whether the training package was meeting current occupational requirements.

Just in Time and Just Enough Training

In recent years, there has been a notable shift towards a skills-based economy, where employers are increasingly prioritising skills and competencies over traditional qualifications. This is reflective of the evolving demands of industries driven by technological advancements. Consequently, much of the grey literature reviewed and several stakeholder consultations identified an increasing emphasis on continuous upskilling and reskilling to remain competitive in the labour market.

68 Stakeholder feedback from FSO National Forum, FSO Collaborator Survey, individual stakeholder consultations and various grey literature sources.

Many respondents indicated that shorter training would be of benefit to all. It was generally felt that there is a need to focus on providing "just in time and just enough" training to meet immediate workforce requirements. One workshop attendee summarised the situation as: **"The system currently trains people for an occupation when we should be training them for a skill."**

There were numerous examples of non-accredited training identified during consultations, co-designed in collaboration between training provider and industry, leading to positive outcomes for all. Generally, these were commercial offerings funded by industry but tailored to the individual specifications of that employer.

Qualifications Reform

As part of the commitment to improving vocational education and training (VET), Skills Ministers recognise the importance of reforming Australia's VET qualification system.

The tripartite Qualification Reform Design Group recently published its initial advice,[69] proposing a system where qualifications are recognised as having three distinct purposes:

- **Purpose 1** – Qualifications leading to a specific occupation (for example a licensed trade).
- **Purpose 2** – Qualifications to prepare learners for multiple occupations within an industry.
- **Purpose 3** – Qualifications that develop cross-sectoral or foundation skills and knowledge which may be applied across industries or lead to tertiary education and training pathways.

The Qualification Reform Design Group, with agreement from all Skills Ministers, has asked JSCs to "be a co-designer and co-owner of reform as well as the main driver of implementation."

JSCs have been asked to review existing training products against the three purposes as a way of validating the proposed approach and, where suitable, develop new qualification models as exemplars.

69 Department of Employment and Workplace Relations (2024) Qualification Reform Design Group: Initial advice to Skills Ministers, Department of Employment and Workplace Relations, Australian Government.

Improving Speed to Market

There is a need to improve the speed at which training can be updated to reflect changing skills needs, especially within the tech sector. Stakeholders suggested breaking down units into even more granular units and then updating those micro areas individually rather than having to follow the entire process outlined in the Training Product Organising Framework, which can take an estimated 18 months or longer. This would enable a "fast twitch" response and a separate process to update a specific component.

Stakeholders advocated for frameworks that ensure cross-industry relevance rather than strictly adhering to occupation-based training packages. It was suggested that this approach could prevent duplicative efforts across training providers and ensure a unified skills framework applicable across educators, industry and government.

Share your insights on rural and remote workforce challenges.[70]

Vendor Certifications have an important place in technology training.

Vendor certifications have a place in the training landscape but need to be managed carefully within the accredited training system. Industry demands for certain skills and certain certifications were noted and it was felt that increased collaboration between the VET sector and commercial providers was needed to ensure training products remain relevant and valuable in the job market. Some industry stakeholders reported that certifications can have more value on CVs than a VET qualification and that overall, industry generally wanted VET (and higher education) qualifications to incorporate more into training. One employer reported an instance of a graduate who had successfully graduated with a Computer Science degree but was unable to obtain relevant vendor certifications post-graduation.

Given the variety and availability of vendor certifications, some of which are already aligned with accredited training products, stakeholders reported that it would be helpful to clearly articulate the vendor certification landscape rather than assigning a certain skill to a particular vendor.

70 https://www.futureskillsorganisation.com.au/workforce-plan-2/rural-remote

Several interviews emphasised how innovative products and training initiatives face barriers in their adoption, particularly regarding the digital skills gap and accessibility in regional and remote areas.

Cyber Security technical skills are critical.

On 22 November 2023, the Australian Government released the 2023-2030 Australian Cyber Security Strategy to help realise its vision of becoming a world leader in cyber security by 2030.

The strategy indicates that Australia's cyber workforce will be professionalised, with clear standards to validate cyber skills and experience and have strong career opportunities for diverse cohorts. There was a particular focus on women, who are significantly underrepresented in the sector.[71]

The supporting Action Plan highlights the need to build a framework for the professionalisation of the cyber workforce. This will provide employers and businesses with the assurance that the cyber workforce is appropriately skilled, and workers that their qualifications and relevant experience are recognised and fit-for-purpose.[72]

Many stakeholders identified that the cyber security skills were becoming embedded into governance, risk and compliance and the focus of businesses was no longer on the technical tools, but compliance. Many attributed this to the introduction of the Essential Eight.[73]

Industry stakeholders felt that training in Cyber Security needed to be updated to align with technological and business changes, including units on networking and risk management. It was noted that the Essential Eight Assessment Course designed by the Australian Signals Directorate assisted with this.[74]

Given this change in focus, some stakeholders indicated that they did not believe that new graduates from VET or higher education have the necessary life skills and business acumen required to be able to work in cyber security immediately post-graduation, and that around 3-5 years' experience in the technology sector was required prior to working in this field.

71 Department of Home Affairs (2023) 2023-2030 Australian Cyber Security Strategy, Department of Home Affairs, Australian Government.

72 Department of Home Affairs (2023) 2023 Cyber Security Strategy Action Plan, Department of Home Affairs, Australian Government.

73 Australian Cyber Security Centre (2017) Essential Eight, Australian Cyber Security Centre, Australian Government.

74 TAFE Cyber Security (2023) Essential Eight, TAFE Cyber Security.

Consultations identified that the VET sector had responded well to increasing demand for cyber security skills and demonstrated its strength and effectiveness in doing so. However, it was noted that Cyber Security training faced challenges, including poor completion rates and a disconnect between training and industry needs.

Main training providers attributed poor completion rates in Cyber Security qualifications to the lack of pre-entry requisites for the Certificate IV and Advanced Diploma. It was reported that the Advanced Diploma especially expects students to begin with a foundational level of knowledge in the area, although there was a diverse range of capabilities in new students. Training providers reported that polarised classes of varied ability make it challenging for educators to maintain speed of delivery. Many respondents felt the Advanced Diploma was the de facto requirement for entry to Cyber Security Specialist roles.

Training providers reported that soft skills core units in the Advanced Diploma were generally the biggest challenge for students given the inflexibility of the training rules, which meant that the BSB unit of Manage Team Effectiveness had to be at the same AQF level. Respondents felt the unit for **"Work in a team"** would be more relevant but is unable to be imported due to this restriction.

Some training providers reported difficulty in attracting and retaining teachers with expertise in cyber security. One training provider reported that it had unsuccessfully advertised for a Cyber Security Lecturer for three years. Several training providers requested additional industry support to provide professional development for trainers.

General knowledge and awareness of Cyber Security is critical in roles across the economy.

Demand for upskilling staff on Cyber Security fundamentals was reportedly significant, including in industries outside the tech industry and that everyone has responsibility for cyber security. Of note, the Small Business Cyber Resilience Service program[75] will provide free, tailored, person-to-person cyber security support for small businesses. Pending outcomes from the grant opportunity, there may be an opportunity for the FSO to support training through this program using existing Units of Competency.

75 Business.gov.au (2024) Small Business Cyber Resilience Service, Business.gov.au.

Graphic 2: FSO Cyber Security Technical Committee

The FSO Cyber Security Technical Committee[76] has discussed six key issues

- There is no clearly understood alignment between existing VET qualifications and modern workforce needs.
- There is a lack of clarity on the skills requirements that align with role definitions and expectations across Cyber Security.
- Update of VET Cyber Security training may be impacted by a lack of existing high quality training resources and assessments. It should be noted that TAFE Cyber has developed a suite of consistent resources which may assist.
- The VET sector is often not seen as a meaningful pathway towards Cyber Security job roles.
- A base level of Cyber Security awareness may be lacking across the community and industries.
- The sector would benefit from greater diversity and an increased awareness of job opportunities.

Telecommunications is a critical industry and training requires an update

The Certificate III in Telecommunications Technology qualification reflects the role of a technician in the telecommunications industry.

Industry feedback on this qualification indicates that some parts of the qualification list outdated versions of the Australian Standard AS/CA S009 and therefore are not compliant with industry standards. Subsequently, this impacts graduates who may not be able to perform work to the regulatory requirements.

Additionally, industry has identified duplication and outdated information across all eight Telecommunications qualifications included in the ICT training package.

Despite these challenges, the Certificate III in Telecommunications Technology has extremely positive outcomes for graduates: 94% of completers move into employment with a gross median graduate income of $69,546 per annum, which exceeds the median graduate income of every other Certificate III in the FNS, BSB or ICT training packages.[77]

76 Future Skills Organisation. Cyber Security Technical Committee. https://www.futureskillsorganisation.com.au/working-groups/#cyber-security-technical-committee

77 Jobs and Skills Australia (2023), VET Student Outcomes 2018-19, VET National Data Asset (VNDA)

Potential FSO actions include:

- Ensure VET training products are relevant, current and meet industry needs.

Further areas for research and consultation to inform the development of future actions include:

- Emerging technologies and emerging skills needs including AI adoption in the workplace.
- Learners and graduates experience of VET.

E. Pathways

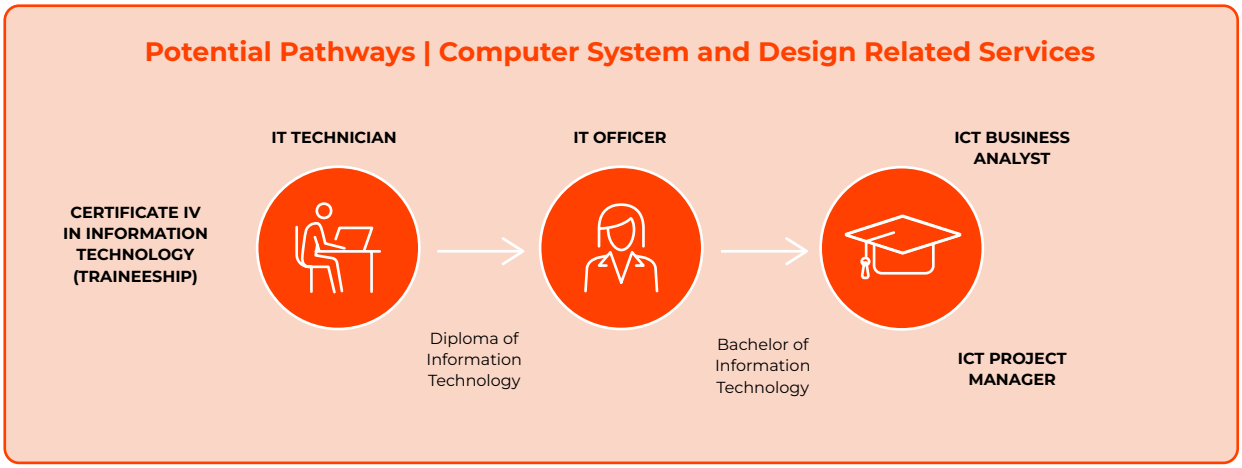
Challenges with attracting and retaining workers in the technology sector are multifaceted. A notable number of reports and interviews highlighted a key barrier to technology careers: the lack of clear career pathways.

This barrier is particularly apparent for underrepresented groups, including First Nations people, individuals with disabilities and women, especially in shortage in rural and remote areas. There are also reported issues with tech employers refusing to hire graduates without bachelor degrees and a supply of students unprepared to meet the digital demands of modern occupations.[78]

Recommendations to address these issues include adapting teaching methods and improving access to training. For example, the Certificate II in Applied Digital Technologies received positive feedback from stakeholders as a pathway for school students into tech careers but is not consistently funded by all jurisdictions for school delivery, thereby reducing uptake.

Many stakeholders reported a lack of understanding of pathways into tech occupations among secondary school teachers and careers advisors. Technology's brand appeal was reported to be lacking and poorly understood among young people, particularly young women. Addressing these challenges requires emphasising the pathways to skills and aligning education with the needs of the future workforce.

78 Department of Industry, Science, Energy and Resources (2023) Pathway to Diversity in STEM: Review final report, Department of Industry, Science, Energy and Resources, Australian Government.



Earn While You Learn (EWYL)

While there was a notable uptick in the number of ICT traineeship commencements from 3,725 in 2018 to 5,535 in 2022[79], it is likely that this is at least partially due employer subsidies available during 2021 and 2022. However, technology trainee commencements only accounted for 12% of all commencements in the ICT Training Package in 2022.

Stakeholder feedback indicated that many employers are unaware of the existence of digital traineeships; those that are believe it is complex and has high entry barriers.[80] This was partly attributed to a fear of the unknown. During this frequent topic of discussion, industry reported the following barriers to increasing uptake:

- Businesses don't understand the potential impact, nor what is expected of them.
- Businesses have concerns around their ability to provide sufficient supervision by highly specialist staff.
- Small and medium-sized enterprises struggle to "hide trainees in the team." Big business can often more effectively build these resources into larger project teams.
- There is lack of tools or frameworks to support supervisors or mentors.
- Restrictions around trainee: supervisor ratios limit the ability of larger businesses to take on more trainees.
- There is a lack of flexibility in training delivery for trainees.
    - » Trainees at one technology consulting business had to attend the same session at the same time at an offsite training provider, meaning that the business is losing a significant number of trainees at the same time rather than being able to stagger absences.

79 NCVER 2023, Total VET students and courses 2022: program enrolments DataBuilder, Total, Training package, Apprentice/trainee status by Year

80 Stakeholder feedback from FSO National Forum, FSO Collaborator Survey and individual stakeholder consultations

One stakeholder reported that when employers want to recruit a trainee, it was very difficult to find information. Even some training providers felt that it was a challenge to set up a traineeship and there was no single resource which provides information readily on courses and subsidies.

As noted however, the Australian Skills Guarantee[81] will require direct Commonwealth procurements to establish targets for apprentices, trainees, paid cadets and targets for women which is expected to drive an increase in EWYL uptake in technology.

Further, respondents noted that employer training support impacted completion rates. One stakeholder asked: "Do they [industry] value putting people through education and give them the day to go to training or do they make them take leave?" Employer support for training completion and industry involvement in EWYL models were felt to be crucial.

Stakeholders identified that complexities around completion or part-completion of qualifications impacted eligibility to undertake a traineeship. They also identified challenges around lack of careers advice in technology and limited work experience opportunities which were hard to organise. One stakeholder reported that "pathways from Years 11 and 12 [into tech] are non-existent.[82]"

Other issues such as trainees on 12-month contracts with minimal wages and a lack of structured study time remaining, also impacted completion rates and the overall learning environment.

One stakeholder reported that many trainees are on 12-month contracts (with trainee wages), which is generally the minimum time to complete the Certificate III. The respondent felt that this was not conducive to learning at one's own pace. The need for support from the employer, including structured study time that allows trainees to work on projects, often results in most trainees needing an extension beyond the 12 months. This was generally unsatisfactory for trainees, as they don't want an extension due to their low wages.

Of note, as an outcome of the Jobs and Skills Summit, the Australian Government announced a Digital and Tech Skills Compact with business and unions.[83] A practical outcome of that was the establishment of the Digital and Tech Skills Working Group. The Working Group was tasked with designing a model to support workers to earn while they learn in entry level tech roles, including for people traditionally under-represented in digital and tech fields.

81 Department of Employment and Workplace Relations (2024) Australian Skills Guarantee, Department of Employment and Workplace Relations, Australian Government.

82 Individual stakeholder interview conducted April 2024.

83 Minister for Industry (2022) Digital and Tech Skills Compact, Minister for Industry, Australian Government.

The Working Group finalised its advice to Government in August 2023, concluding that EWYL models are uniquely positioned to contribute meaningfully to the digital and tech skills pipeline. Other recommendations included collaborations between government, industry and providers to deliver an EWYL model targeting entry-level digital and tech roles and building diversity considerations into the design. The Working Group outlined a preferred model and potential actions to support trainees and break down systemic barriers.

Amazon Web Services Pioneers Early Career Talent Into Diverse Tech Pathways

Amazon Web Services (AWS)[84] has developed a variety of vocational pathways to prepare early career talent for diverse technology careers by meshing accredited training with industry certifications.

"AWS could see that there was a lot of interest within the sector, but the available training wasn't being actively embedded into VET curriculums. We also recognised that many VET providers had limited exposure to technologies like cloud, which could be a barrier to launching programs in tech," says Jodi Phillips[85], Strategic Advisor Public Sector (Skills and Workforce Development) for Australia and New Zealand, AWS.

AWS used an AWS Academy Training Partner, Academy IT[86], to help solve these challenges, developing accredited VET courses in cloud computing, network development and data and machine learning.

"AWS developed these courses so graduates will be highly employable and able to articulate their skills and deploy them effectively," says Jodi.

Read the full case study here.[87]

84 https://aws.amazon.com

85 https://www.linkedin.com/in/jodi-phillips-678b2235/

86 https://www.academyit.com.au/

87 https://www.futureskillsorganisation.com.au/amazon-web-services-pioneers-early-career-talent-into-diverse-tech-pathways

Potential actions include:

- Ensure VET training products are relevant, current and meet industry needs.
- Develop tools and resources to identify pathways and support careers advice into and within FTB careers, including on Earn While You Learn models.

Further areas for research and consultation to inform the development of future actions include:

- Learners and graduates experience of VET.
- Perceptions, barriers and challenges to the uptake of VET by industry.
- Pathways between university and VET.
- Methods for increasing awareness of VET for industry and potential students.

F. Supporting Teachers and Trainers

Two of the top three challenges identified at the FSO National Forum affecting the technology workforce were the shortage of digital teachers in secondary schools and the difficulty that VET training providers face in recruiting and retaining trainers with current tech expertise. State Governments are also prioritising this issue.[88] Stakeholders noted that there is no ICT teaching specialty in most teaching degrees.

Stakeholders called on the FSO to support secondary teachers and VET trainers through, for example:

- **Providing teaching and training resources to enhance national consistency.**
- **Facilitating hosting opportunities in industry workplaces.**
- **Engaging professional associations and leveraging Continuing Professional Development (CPD) to support teacher work placements in industry.**

88 Government of New South Wales (2023) Digital Skills Workforce Compact 2023-30, Government of New South Wales. and Department of State Growth (2019) Tasmanian ICT Workforce Action Plan 2020-2023, Department of State Growth, Government of Tasmania.

MYOB Empowers Teachers To Upskill and Stay Industry relevant

MYOB[89] connects with educators from all sectors to upskill teachers and trainers, providing students access to up-to-date technology via platforms like MYOB Business[90] and MYOB Academy[91].

"We noticed that some educators were not always using the most up to date and industry relevant technology. So, it has been about encouraging a new way of thinking and simplifying the process," says Tricia Andrews[92], Education Manager, MYOB.

Now working with more than 200 educational institutions, MYOB is paving the way for industry and training partnerships.

"We need to do the right thing by students to equip them for the future — the key is supporting our educators with the resources to do this."

Read the full case study here.[93]

Potential actions include:

- Ensure VET training products are relevant, current and meet industry needs.
- Provide additional support to VET trainers and teachers to maintain industry currency in FTB.
- Supporting training-industry partnerships.

Further areas for research and consultation to inform the development of future actions include:

- Best practice support for teachers and trainers.

89 https://www.myob.com/au

90 https://www.myob.com/au/products/myob-business

91 https://academy.myob.com/

92 https://www.linkedin.com/in/triciaandrews01/

93 https://www.futureskillsorganisation.com.au/case-studies/myob-empowers-teachers-to-upskill-and-stay-industry-relevant

G. Increasing Understanding of VET

Promotion of VET

Only 20.6%

of the technology sector workforce has a VET qualification as their highest qualification.[94]

Multiple stakeholders suggested that VET could play a greater role in addressing skills and occupation shortages but that industry and student perceptions of VET were impacting its ability to do so. Suggestions included simplifying language and removing jargon, shortening qualifications and streamlining RPL processes for other qualifications and experience, including vendor certifications. Stakeholders also demanded clearer definitions of skill sets and microcredentials to avoid misinterpretation.

Consultations with training providers and industry reinforced that current and prospective employers require clear, accurate, reliable information on the VET sector to inform decision-making, whether as an entry pathway or for reskilling or upskilling existing workers. While information on the VET sector is available (for example, via government websites and from individual providers), it remains fragmented.

Accordingly, the FSO will embed plain-English messaging into all its proposed and current activities, including Training Package Development and EWYL activities.

Further, the FSO has started to explore effective methods to work with State and Territory Governments and the National Careers Institute (NCI) to promote VET opportunities within technology to school students, teachers and industry. This includes increasing the FSO's use of the VET Alumni Network. .[95]

94 2021 Census - employment, income and education.4-digit level INDP Industry of Employment by 1-digit level QALLP Non-School Qualification: Level of Education: Counting: Person Records. Note: VET qualifications are Certificate I – IV, Diploma and Advanced Diploma

95 YourCareer.gov.au (2023) Australian VET Alumni, YourCareer.gov.au.

Partnerships Between Education Providers and Industry

Many stakeholders expressed a concern about the continuing lack of industry input, understanding and utilisation of the VET sector, despite this having been an area of focus in the Australian Government's White Paper on Jobs and Opportunities[96] and the Inquiry into the Perceptions and Status of VET.[97]

As a result, training providers reported that they struggle to grasp industry needs and skill gaps effectively and match training with industry requirements. At the FSO National Forum, this was a key challenge identified across all three sectors. Training Providers noted the impact this had on learners when industry fails to fully invest in co-designing or co-delivering training programs.

At that Forum, industry stakeholders also highlighted a desire for easier engagement with the VET sector, emphasising the need for clear and straightforward communication channels between business owners, leaders, RTOs and JSCs. Both industry and training providers generally agreed that there is a need to streamline the process for obtaining the Certificate IV in Training and Assessment and simplifying the process for industry involvement in training delivery.[98]

96 Treasury (2023) Working Future: The Australian Government's White Paper on Jobs and Opportunities, Treasury, Australian Government.

97 Australian Parliament (2024) Inquiry into the Vocational Education and Training Workforce, Parliament of Australia.

98 training.gov.au (2022) TAE40122 - Certificate IV in Training and Assessment, training.gov.au.

Potential opportunities to address these challenges include establishing regular communication channels between industry and training providers, leveraging AI to develop a simple unified framework to identify skills applicable across educators, industry, and governments. Other suggestions included industry co-investment in training and time-off for staff participation in teaching roles, incentivising involvement through co-contribution schemes and ensuring a measurable return on investment for industry.

There were suggestions that Qualifications Reform would enhance industry input. Even within the current system, it was suggested that the FSO could better inform the technology industry about the flexibility and ability to contextualise existing training products. This action will be included as part of the ICT training package Needs and Gaps Analysis.

Potential actions include:

- Develop tools and resources to identify pathways and support careers advice into and within FTB careers, including for Earn While You Learn models.
- Support Industry-Training Partnerships.

Further areas for research and consultation to inform the development of future actions include:

- Perceptions, barriers and challenges to the uptake of VET by industry.
- Pathways between university and VET.
- Methods for increasing awareness of VET for industry and potential students.

Technology Sub-Sectors

For the purposes of this Workforce Plan, the Technology industry consists of the following subsectors[99]:

- **Publishing (except Internet and Music Publishing).**
- **Telecommunications Services.**
- **Internet Service Providers, Web Search Portals and Data Processing Services.**
- **Library and Other Information Services.**
- **Computer System Design and Related Services.**

99 Derived from the ANZSIC 2006 Division of Information, Media and Telecommunications Industry and TCA definition of the Tech Industry.

FUTURE SKILLS ORGANISATION
Finance Technology Business

Publishing

(except Internet and Music Publishing)

25,487

employed in the sector

1,100

5.8%

Projected Growth to 2028

4,299

16.9%

VET qualification as the highest level of qualification

15,293

60.0%

University qualification as the highest level of qualification

263

1.0%

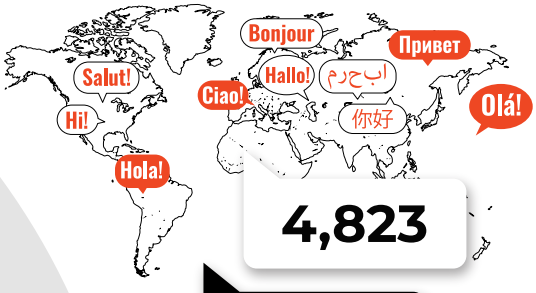
of sector workforce with disability

52.5% of sector workforce are women

13,384

181

>1.0% of sector workforce identifies as First Nations



4,823

18.9%

of sector workforce is linguistically diverse

- **4,515** Journalists and Other Writers
- **1,450** Advertising, Public Relations and Sales Managers
- **1,211** Authors, and Book and Script Editors
- **1,210** Software and Applications Programmers
- **1,200** General Managers
- **1,165** Sales Representatives
- **1,114** Graphic and Web Designers, and Illustrators
- **893** Advertising and Marketing Professionals
- **680** ICT Managers
- **571** ICT Sales Professionals

Sources: refer to page 52.

Publishing (except Internet and Music Publishing)

What the subsector is and does?

Businesses in this subsector are mainly engaged in newspaper, magazine, book or software publishing.

Regulations / Legislation / Other information

The Australian Press Council Standards of Practice apply to text, headlines, photographs, graphics, captions, audio, video and all other forms of published material, but not to advertising.

Publishers are obliged to comply with the Standards of Practice in their print and online publications. This applies to actions by their employees and external contributors, including those who are not journalists.[100]

The Copyright Act 1968 regulates copyright in Australia in relation to original literary, dramatic, musical and artistic works, and other subject matter (including sound recordings, films and television broadcasts). [101]

100 Standards - Australian Press Council

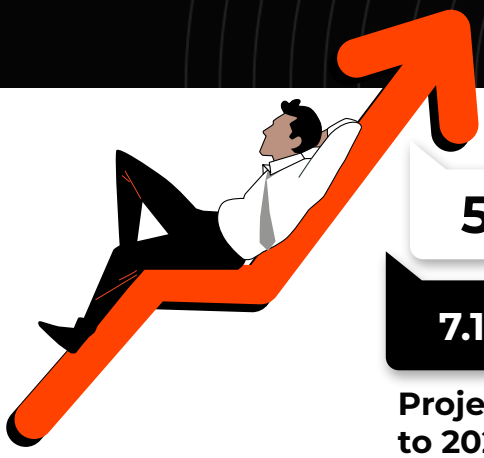
101 Federal Register of Legislation - Copyright Act 1968

FUTURE SKILLS ORGANISATION
Finance Technology Business

Telecommunications

55,827

employed in the sector



5,800

7.1%

Projected Growth to 2028

15,547

27.8%

VET qualification as the highest level of qualification

26,820

48.0%

University qualification as the highest level of qualification

297

<1%

of sector workforce with disability

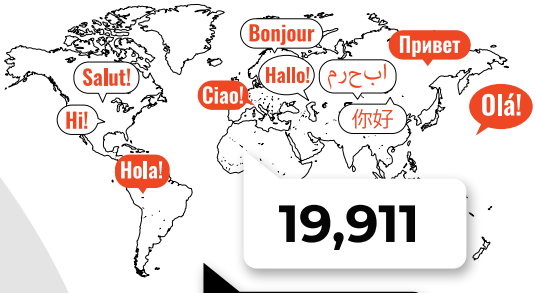
29.4% of sector workforce are women

16,401

583

1.0%

of sector workforce identifies as First Nations



19,911

33.8%

of sector workforce is linguistically diverse

6,022 Telecommunications Trades Workers
3,971 ICT Managers
3,919 Telecommunications Engineering Professionals
2,624 ICT Sales Assistants
2,093 Software and Applications Programmers
2,057 Contract, Program and Project Administrators
1,875 Telecommunications Technical Specialists
1,692 ICT Sales Professionals
1,616 Information Officers
1,529 Advertising, Public Relations and Sales Managers

Sources: refer to page 52.

Telecommunications Services

What the subsector is and does?

The Telecommunications Services sector incorporates both fixed and wireless telecommunications, including mobile networks. The fixed network is responsible for most data transmissions sent across the country and internationally. Wired telecommunications cover a variety of different fixed-line technologies, ranging from legacy copper wire connections to more modern technology such as fibre optics. [102]

Advanced information and communication technologies (ICT) which bring together telecommunications, computers and software is recognised as a Critical Technology in the National Interest. [103]

Regulations / Legislation / Other impacts

The Australian Communications and Media Authority (ACMA) regulates communications and media infrastructure, services and content. Within telecommunications, specified cabling work must comply with the Telecommunications Cabling Provider Rules 2014. Cablers must have the right registration for the type of work they are doing.

ACMA oversees the registration process for cablers but does not manage registrations or renewals. It has authorised five registrars to manage cabling registrations on its behalf. Registrars also manage applications for recognition of prior learning (RPL). Training requirements for registration can be met through, for example, the Basic Open Cabler Registration Skill Set. This skill set addresses the skills and knowledge required to install, maintain and modify telecommunications customer cabling in domestic and commercial premises in accordance with ACMA requirements.

102 https://www.acma.gov.au/sites/default/files/2021-12/Trends%20and%20developments%20in%20telecommunications%202020-21_0.pdf

103 https://www.industry.gov.au/publications/list-critical-technologies-national-interest/advanced-information-and-communication-technologies

FUTURE SKILLS ORGANISATION
Finance Technology Business

Internet Service Providers, Web Search Portals and Data Processing Services

21,590
employed in the sector

700
8.5%
Projected Growth to 2028

4,728
21.9%
VET qualification as the highest level of qualification

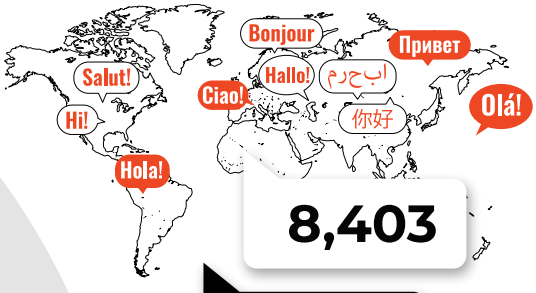
11,847
54.9%
University qualification as the highest level of qualification

1,413
<1%
of sector workforce with disability

29.1% of sector workforce are women

6,290

191
0.9%
of sector workforce identifies as First Nations



8,403
38.9%
of sector workforce is linguistically diverse

1,951 Software and Applications Programmers
1,427 ICT Managers
1,188 ICT Support Technicians
1,136 Telecommunications Trades Workers
832 ICT Sales Professionals
771 ICT Sales Assistants
725 Computer Network Professionals
699 Telecommunications Engineering Professionals
603 Advertising, Public Relations and Sales Managers
596 Database and Systems Administrators, and ICT Security Specialists

Sources: refer to page 52.

Internet Service Providers, Web Search Portals and Data Processing Services

What the subsector is and does?

This subsector comprises businesses primarily engaged in providing access to the Internet, search facilities for the Internet, and data processing, hosting, and related services.

Regulations / Legislation / Other impacts

The Privacy Act 1988 was introduced to promote and protect the privacy of individuals and to regulate how Australian Government agencies and organisations with an annual turnover of more than $3 million, and some other organisations, handle personal information.

The Privacy Act includes 13 Australian Privacy Principles (APPs), which apply to some private sector organisations, as well as most Australian Government agencies. Such organisations and agencies are collectively known as 'APP entities'. [104]

104 https://www.oaic.gov.au/privacy/privacy-legislation/the-privacy-act

FUTURE SKILLS ORGANISATION
Finance Technology Business

Library and Other Information Services

6,896
employed in the sector

1,500
8.3%
Projected Growth to 2028

1,640
23.8%
VET qualification as the highest level of qualification

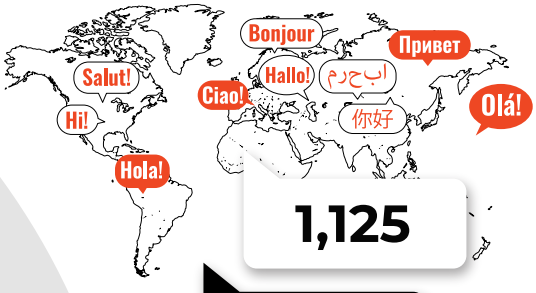
3,835
49.1%
University qualification as the highest level of qualification

100
1.5%
of sector workforce with disability

72.5% of sector workforce are women

5,001

122
1.8%
of sector workforce identifies as First Nations



1,125
16.3%
of sector workforce is linguistically diverse

1,565 Librarians
1,219 Gallery, Library and Museum Technicians
1,106 Library Assistants
237 Archivists, Curators and Records Managers
136 General Clerks
124 Filing and Registry Clerks
123 Contract, Program and Project Administrators
92 Policy and Planning Managers
87 Other Natural and Physical Science Professionals
86 Keyboard Operators

Sources: refer to page 52.

Library and Other Information Services

What the subsector is and does?

This subsector includes businesses mainly engaged in providing library or archive services, maintaining collections of documents (e.g. books, journals, newspaper and music) and facilitating the use of such documents (recorded information regardless of its physical form and characteristics). All or parts of these collections may be accessible electronically.

Other information services include:

- News collection services
- Telephone-based recorded information services

Regulations / Legislation / Other impacts

The Copyright Act 1968 provides certain exemptions to private and public libraries. [105]

105 https://www.legislation.gov.au/C1968A00063/latest/tex

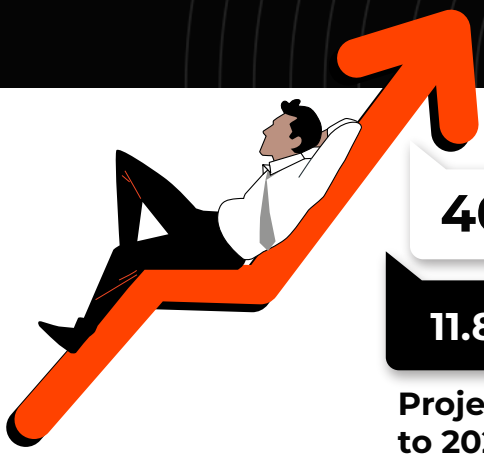
FUTURE SKILLS ORGANISATION
Finance Technology Business

Computer System Design and Related Services

Businesses in this subsector are mainly engaged in providing expertise in the field of information technologies such as writing, modifying, testing or supporting software to meet the needs of a particular consumer; or planning and designing computer systems that integrate computer hardware, software and communication technologies.

230,974

employed in the sector



40,000

11.8%

Projected Growth to 2028

36,484

15.8%

VET qualification as the highest level of qualification

158,261

68.5%

University qualification as the highest level of qualification

1,347

<1%

of sector workforce with disability

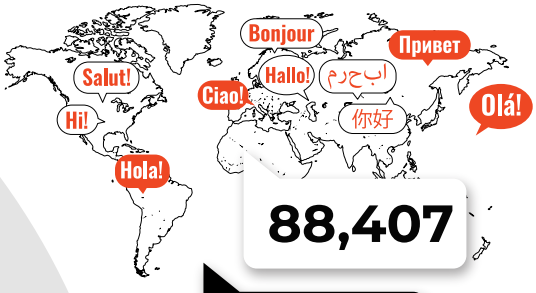
27.5% of sector workforce are women

63,596

1,116

0.5%

of sector workforce identifies as First Nations



88,407

38.3%

of sector workforce is linguistically diverse

53,538 Software and Applications Programmers
23,048 ICT Managers
15,205 ICT Support Technicians
10,883 ICT Business and Systems Analysts
8,822 ICT Professionals, nfd
8,749 ICT Sales Professionals
7,311 Database and Systems Administrators, and ICT Security Specialists
7,200 Computer Network Professionals
5,626 ICT Support and Test Engineers
5,211 Advertising, Public Relations and Sales Managers

Sources: refer to page 52.

Infographic Sources:

- 2021 Census - employment, income and education 4-digit level INDP Industry of Employment, Counting: Person Records Note: percentage of workforce in sector
- Victoria University Employment Projections – May 2023 to May 2028 for Jobs and Skills Australia
- 2021 Census - employment, income and education 4-digit level INDP Industry of Employment by 1-digit level HEAP Level of Highest Educational Attainment, Counting: Person Records Note: VET qualifications are Certificate I – IV, Diploma and Advanced Diploma
- 2021 Census - employment, income and education 4-digit level INDP Industry of Employment by 1-digit level HEAP Level of Highest Educational Attainment Counting: Person Records Note: university qualifications include Bachelor Degree, Graduate Diploma and Graduate Certificate and Postgraduate Degree
- 2021 Census - employment, income and education 4-digit level INDP Industry of Employment by SEXP Sex Counting: Person Records
- ABS, 2021 Census - employment, income and education INDP - 1 Digit Level by ASSNP Core Activity Need for Assistance. Counting: Person Records
- 2021 Census - employment, income and education 4-digit level INDP Industry of Employment by INGP Indigenous Status. Counting: Person Records
- 2021 Census - employment, income and education 4-digit level INDP Industry of Employment by ENGLP Proficiency in Spoken English. Counting: Person Records

Strategic Priorities

Closing the skills gap by optimising alternate tertiary learning pathways

The Learner

Inform - Deliver - Support

Awareness, Pathways to meaningful work, Lifelong Learning

The Employer

Vision - Hire - Train

Right people and right skills to address skills gaps and employer needs

The Trainer

Design - Deliver

Relevant, agile, and capable

The System

Vision - Hire - Train

Enabling relevant and responsive learning

The FSO is dedicated to narrowing the gap between education and industry, to ensure effective transitions between learning and work. With a focus on enhancing the skills pipeline, we're dedicated to meeting the rising demand for skilled individuals in the finance, tech and business services sectors to meet the projected demand. Our approach involves harnessing the potential of the education and training system, leveraging its strengths, and aligning it with the dynamic needs of industry.

Our strategic approach encompasses four key pillars:

1. Ensuring a Learner-Centric Approach by

- Centrally positioning the learner in our initiatives, ensuring their needs, aspirations, and career goals are the guiding principles.
- Supporting the learner via a range of initiatives that may include career information, mentorship programs, and learning pathways, to empower them to succeed.
- Cultivating an inclusive and supportive learning environment by championing diversity, equity, and accessibility, and ensuring equal opportunities for all learners.

2. Enhancing the VET System by

- Conducting thorough industry consultations to pinpoint specific skill gaps and emerging trends.
- Collaborating with education and training providers and industry experts to ensure tertiary learning aligns with industry needs.
- Promoting and facilitating work-integrated learning opportunities, such as internships and traineeships, to provide practical experience and industry exposure.
- Advocating for investments in state-of-the-art training facilities and resources to guarantee students receive hands-on training with the latest technologies and industry-relevant equipment.

3. Fostering Industry Engagement and Commitment by

- Promoting awareness and outreach programs to underscore the value and benefits of the VET system to employers and industry leaders.
- Facilitating and promoting partnerships between educational institutions and industry to foster collaboration, knowledge sharing, and mutual understanding.
- Recognising industry best practice and celebrating initiatives which highlight industry engagement in VET in areas such as offering traineeships s or innovative recruitment practices that recognise the skills of VET graduates.
- Showcasing success stories and case studies of VET graduates who have excelled in their respective fields, highlighting the potential and value of alternative pathways.

4. Supporting the Government's Qualifications Reform Agenda by

- Collaborating closely with relevant government and stakeholders to synchronize our efforts with the qualifications reform agenda.
- Contributing to the development of a relevant and usable qualifications system that meets the needs of industry, learners, and the broader economy.
- Advocating for policies and initiatives that promote the recognition and acceptance of VET training products across various sectors and industries.
- Facilitating the integration of Higher Education (HE) and VET qualifications into broader educational pathways, enabling seamless transitions and lifelong learning opportunities.

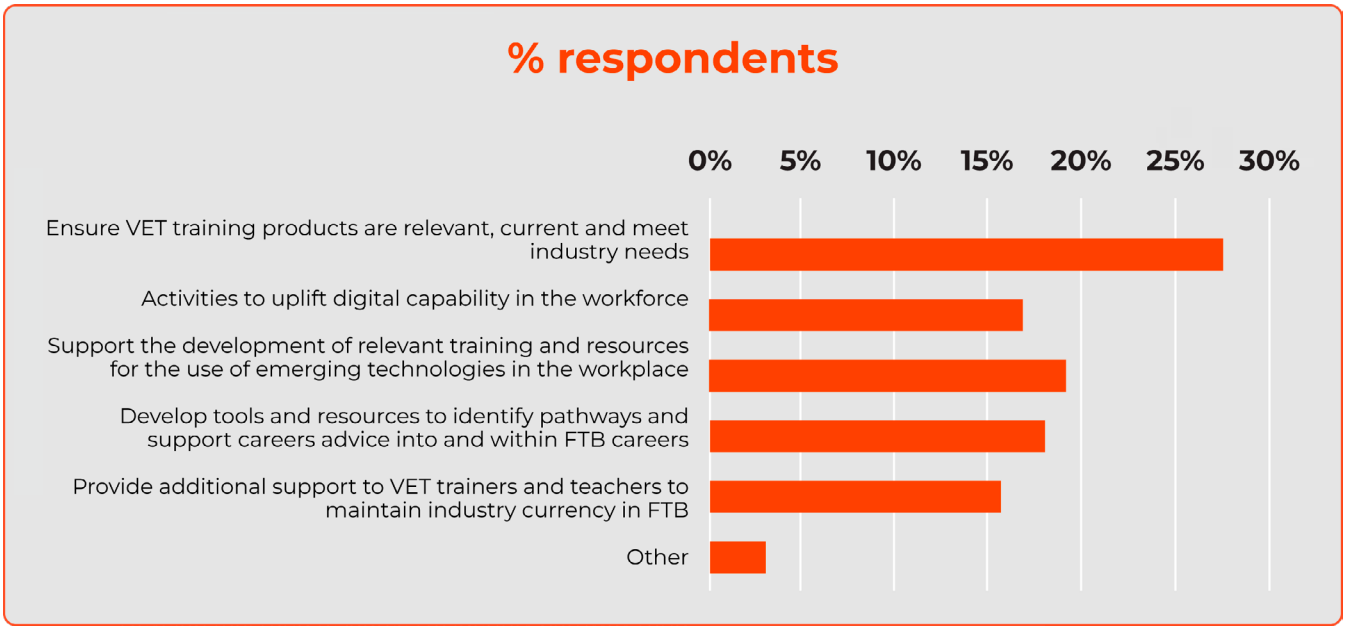
By prioritising the learner-centric approach, enhancing the VET system, fostering industry engagement and commitment, and supporting the government's qualifications reform agenda, the FSO aims to cultivate a skilled workforce that meets the demands of the economy and contributes to the overall growth and productivity of the nation.

Potential Actions

In response to the FSO Stakeholder Survey, industry identified priority actions to:

- Ensure VET training products are relevant, current and meet industry needs.
- Uplift digital capability in the workforce.
- Support the development of relevant training and resources for the use of emerging technologies in the workplace.
- Develop tools and resources to identify pathways and support careers advice into and within FTB careers, including on Earn While You Learn models.
- Provide additional support to VET trainers and teachers to maintain industry currency in FTB.

Graphic 3: FSO Stakeholder Survey respondents



Accordingly, the 2024 Workforce Plan identifies a range of potential actions which, pending approval, would be further developed in consultation with industry, unions and training providers to address the challenges raised in this plan.

Table 2: Potential Actions to Address Challenges and Drivers

Labour Force Dynamics	Potential Action	Stakeholders
Diversity and Inclusion	**Challenge:** The Technology workforce has low diversity rates and declining enrolments in ICT training by women. **Potential Action:** Increase understanding and promote gender equality in enrolments in ICT, FNS and BSB training packages.	**RTOs including:** • TAFEs • Private RTOs • Community RTOs • Schools • Universities • Unions • Industry associations • Priority cohorts • Community Groups
Digital Capability **Training Suitability**	**Challenge:** There is no common language employers, training providers and learners can use to describe necessary digital skills. **Potential Action:** Evaluate existing frameworks as the basis for a common language for uplifting digital capability.	**RTOs including:** • TAFEs • Private RTOs • Community RTOs • State and Territory Governments including Secondary schools • Universities • Unions • Industry associations • Priority cohorts
Emerging Technologies and Changing Skills Needs **Increasing understanding of VET**	**Challenge:** States and Territories are developing multiple approaches to addressing workforce shortages, especially in tech. **Potential Action:** Share knowledge and promote best practice at state and federal level. Ensure collaboration on projects in areas where Federal, State and Territory objectives align.	**RTOs including:** • State and Territory Governments • Unions • Industry associations • Priority cohorts

Training Suitability **Emerging Technologies and Changing Skills Needs**	**Challenge**: Declining enrolments are evident in FTB training packages. **Potential Action:** Undertake a comprehensive needs and gap analysis to review the qualifications, units of competency (UoCs) and skill sets.	**RTOs including:** • TAFEs • Private RTOs • Community RTOs • Schools • Universities • Unions • Industry associations • Priority cohorts
Training Suitability **Emerging Technologies and Changing Skills Needs**	**Challenge**: Telecommunications qualifications are out of date and contain incorrect information. **Potential Action:** Update Telecommunications qualifications in line with industry and regulatory requirements.	**RTOs including:** • TAFEs • Private RTOs • Community RTOs • Unions • Industry associations • Priority cohorts
Pathways	**Challenge**: Uptake of traineeships in FTB is low. Employers want more job relevant skills. **Potential Action:** Explore opportunities for entry-level FTB qualifications which can be completed as a traineeship.	• Australian Council of Trade Unions (ACTU) and other relevant Unions • Tech Council of Australia • DEWR • Industry • Training Providers

Pathways **Increasing Understanding of VET**	**Challenge**: Poor industry and student perceptions of VET. **Potential Action:** Improve clear information about VET as a pathway for skills development and employment in FTB.	• Industry Associations • FSO Large Employer Taskforce • Unions • State and Territory Governments including secondary schools
Emerging Technologies and Changing Skills Needs **Training Suitability** **Pathways**	**Challenge:** Cyber Security is everyone's responsibility but there is no common language employers, training providers and learners can use to uplift capability. **Potential Action:** Explore potential frameworks as the basis for a common language for uplifting cyber security capability.	• FSO Cyber Security Technical Committee • Industry • State and Territory Governments
Diversity and Inclusion **Emerging Technologies and Changing Skills Needs**	**Challenge:** The increasing utilisation of GAI within the workplace to automate, augment or adapt job roles presents opportunities for the VET sector. **Potential Action:** Examine upskilling of workers in GAI.	• DEWR • Unions • Industry associations • Priority cohorts • Employers

Future Research

Our proposed program of research aims to better understand why challenges are occurring and how to address them to meet the needs of the FTB workforce.

These specific research topics have either been recommended by external stakeholders or identified as gaps in research during development of this Plan or the Initial Workforce Plan.

Table 3: Proposed Research Areas

A. Diversity and Inclusion	Research to further examine diversity in FTB workforces, with a particular focus on rural and remote workers, balanced gender representation and First Nations people's participation. This research will identify gaps and barriers in training and employment for diverse groups and provide insights to education providers and industry to support increased diversity within their workforces.
C. Emerging Technologies and Changing Skills Needs	Research to better identify and understand growing skills demands and trends nationally and internationally using forward-looking data and employment projections. Separately, we will deliver research to better understand AI adoption rates within FTB sectors.
D. Training Suitability	Research to understand from learners and potential learners the relevance and appropriateness of VET for employment outcomes in FTB, including consulting with current learners not employed in FTB occupations. For learners or graduates already employed in FTB occupations, this will help us better understand how well training aligns with the requirements of the workplace. Findings from this research will inform updates to training packages.
E. Pathways	Consultation with employers to identify perceptions, barriers and/or challenges to traineeship and apprenticeship pathways, specifically in the BSB training package. This will result in transferable findings to inform FSO work on the design of 'Earn While You Learn' pathways for the technology industry. We will also conduct research to support outcomes in the Universities Accord Interim Report identifying opportunities to more closely align VET with Higher Education.

F. Supporting Trainer Currency	Research to better understand training support required for educators in FTB. Insights will assist training providers in enhancing support mechanisms.
G. Increasing Understanding of VET	Work with the National Careers Institute to deliver research to support promotion of VET as a pathway for skills development and employment, in finance, technology and business. Outputs from this research will be used to increase awareness of VET pathways into FTB occupations within industry/employers and secondary school students.

Approach to Workforce Plan 2025

Table 4: FSO Workforce Plan development process 2025

Process Step	Data Analysis (1)	Initial Draft Complete	Consultation	Data Analysis (2)	Finalising Report	Approvals and Publication
Anticipated Timing	May – July 2024	July – August 2024	August – December 2024	December 2024 – Jan 2025	December 2024 - February 2025	January – March 2025
Who Will Be Consulted?	WFP Technical Working Group JSA DEWR		Commonwealth / State / Territory Governments Unions Industry Peaks and Associations FSO Taskforces Other JSCs RTOs/Educators Community Groups Priority Cohort Groups	JSA DEWR FSO Taskforces	WFP Technical Working Group JSA DEWR FSO Strategic Advisory Committee FSO Board	JSA DEWR FSO Strategic Advisory Committee FSO Board

Process Step	Data Analysis (1)	Initial Draft Complete	Consultation	Data Analysis (2)	Finalising Report	Approvals and Publication
What Will Occur?	Interrogate relevant data sources including JSA, ABS, LinkedIn, NCVER, QILT, VNDA and State and Territory Government data. Research additional Grey Literature.	Draft a high-level report based on Data Analysis (1) and additional desktop research.	Obtain feedback on initial draft. Determine gaps and future focus areas. Update any changes to relevant regulation and legislation.	Update information to incorporate stakeholder feedback. Update other sections of report as required. Additional Data Analysis (if required).	Draft an Executive Summary. Finalise Draft of Finance Industry Report. Finalise Draft of Technology Industry Report. Finalise Draft of Business Industry Report. Incorporate research findings.	Approvals and updates. Proofreading, editing and final design.
How Will We Do This?	Updating data tables. Adding additional data points as required. Commencing research projects.	Amending and adding to Workforce Plan 2024 as relevant.	Stakeholder Survey. Stakeholder Interviews. Stakeholder Workshops. Proposed Activity Consultations. FSO Taskforces.	Consolidate and analyse feedback and Grey Literature. Analyse data from stakeholder engagement.	Draft, review and edit. Share drafts with JSA and DEWR.	Document finalised and designed.

Process Step	Data Analysis (1)	Initial Draft Complete	Consultation	Data Analysis (2)	Finalising Report	Approvals and Publication
Outputs		Workforce Plan – quarterly update.		Workforce Plan – quarterly update.		Workforce Plan 2025.

Existing Workforce Policies and Government Initiatives

There are a number of initiatives from governments, at both state and federal levels, aimed at addressing skills and occupation shortages in the technology sector.

Commonwealth Government

Australian Skills Guarantee[106]

The Skills Guarantee will also introduce national targets for apprentices, trainees and paid cadets working on Australian Government funded major projects. The Skills Guarantee will also introduce national targets to increase the proportion of women working on major projects and drive long-term sustainable change to reduce gender segregation in the apprenticeship system.

The Skills Guarantee will apply to direct Commonwealth procurements in the ICT sector, with an estimated individual value of $10 million. Initially, targets for apprentices, trainees and paid cadets, and targets for women, will be negotiated with suppliers on a project-by-project basis. Targets will apply to direct Commonwealth project contracts agreed from 1 July 2024.

Safe and Responsible AI in Australia[107]

The government is seeking to create an AI safety standard through governance mechanisms that will help ensure AI is developed and used safely and responsibly in Australia. These mechanisms can include regulations, standards, tools, frameworks, principles and business practices.

Cyber Wardens[108]

This national initiative leverages Council of Small Business Organisations of Australia's (COSBOA) grassroots infrastructure and reputation to change the behaviours of Australia's 2.3 million small businesses. Its goal is to create a new Cyber Warden frontline.

Cyber Wardens is an initiative of the COSBOA, supported by the Australian Government and an industry alliance led by Telstra, CommBank and the Australian Cyber Security Centre and delivered by 89 Degrees East.

Link: cyberwardens.com.au

106 Department of Employment and Workplace Relations (2024) Australian Skills Guarantee, Department of Employment and Workplace Relations, Australian Government.

107 Department of Industry, Science, Energy and Resources (2024) Supporting responsible AI consultation, Department of Industry, Science, Energy and Resources, Australian Government.

108 Cyber Wardens (2022) CyberWardens, Cyber Wardens (https://cyberwardens.com.au/).

Small Business Cyber Resilience Service[109]

The Small Business Cyber Resilience Service program was announced as part of the 2023-2030 Australian Cyber Security Strategy. Under Shield 1 of the Strategy, Strong businesses and citizens, the program will support small businesses to build their cyber security resilience and capability.

One service provider will be funded up to $8.1 million to set up a free, tailored, person-to-person support to help small businesses improve their cyber resilience and support small businesses impacted by a cyber incident.

Virtual Work Experience Program[110]

In partnership with the Commonwealth Bank of Australia, Microsoft, nbn co and Year13, the Tech Council of Australia created Virtual Work Experiences for young learners to explore technology careers and jobs for free. The virtual work experience will provide industry-relevant experience for user's resumes. Industry funds the development of the planned 6-12 virtual work experiences, which are simulations of tech work experience. These are free to students and post-school leavers who experience barriers to employment as a result of disadvantage.

State and Territory Government Initiatives

There is also work underway across State and Territory Governments relevant to the workforce challenges facing the FTB sectors. Most states are focusing on ensuring workforces will adapt to increasing demand for new and expanding use of technologies.

This work complements State and Territory subsidised training schemes that are a feature of the delivery of VET.

Historically there is often fragmentation across Commonwealth Government Departments, States and Territories, training providers and industry on needs and initiatives which impacts their ability to deliver reform at scale. Greater coordination between stakeholders to improve awareness could improve uptake.

While a state-based approach is important, many state and territory initiatives can only be progressed when tackled at a national level. The opportunity comes from the sharing of best practice between the States and with Federal Government. Enduring change will only come from a coordinated and integrated approach.

109 Business.gov.au (2024) Small Business Cyber Resilience Service, Business.gov.au.

110 Year13 (2024) Tech Council of Australia Virtual Work Experience, Year13.

New South Wales

NSW Vocational Education and Training (VET) Review[111]

The NSW VET Review is a comprehensive examination of the vocational education and training sector. The review is focused on identifying the strengths, gaps and opportunities for improvement in skills development and training to support our students and workforce. An interim report was delivered to the government by the review panel in December 2023. The government is currently considering findings and recommendations in the interim report, with a final report expected to be delivered in mid-2024.

Two immediate priorities identified in the Interim Report are to put TAFE at the centre and to address the delivery of VET in NSW, including how the system is governed and connects with industry; the permanency of the VET teaching workforce; and the provision of infrastructure and facilities used to deliver VET.

Link: NSW vocational education and training review

NSW Skills Plan

The Final Report of the NSW VET Review will guide the development of a 2024 NSW Skills Plan, to support a vision for the future success of NSW, with a skilled and agile workforce supported by a world-class public TAFE. The NSW Skills Plan will outline NSW specific priorities, while also reflecting key national developments including the National Skills Agreement.

Link: NSW vocational education and training (VET) review[112]

Bridging the Gap of Women in Technology Roles

A collaborative initiative of the NSW Digital Skills and Workforce Compact, between the Department of Education and other NSW Government agencies, aims to address the under-representation of women in tech roles. Currently, women hold only 25% of jobs in digital industries in NSW, with fewer female founders and CEOs and a persistent gender pay gap. The Compact seeks to bridge this gender gap in tech by promoting gender diversity, cultivating future female tech leaders in schools, supporting women in tech with mentoring and networking opportunities, and working towards closing the gender gap. All 8 project streams of the NSW Digital Compact focus on increasing female participation in the digital industry and reducing the projected digital skills gap of 85,000 workers by 2030.

111 New South Wales Department of Education (2023) NSW Vocational Education and Training Review, New South Wales Department of Education.

112 https://education.nsw.gov.au/about-us/strategies-and-reports/our-reports-and-reviews/nsw-vocational-education-and-training-review

Institute of Applied Technology Digital

The NSW Government VET Review Report (2021) recommended the establishment of Institutes of Applied Technology (IAT). The vision is for the the Institutes to deliver fully integrated theoretical and practical employability skills, with curriculums designed with real employers and focused on the state's emerging labour market needs.

The Digital IAT, at Meadowbank NSW, is a partnership between TAFE NSW, University of Technology Sydney, Macquarie University and Microsoft. It focuses on in-demand areas of Big Data, Cyber Security, Cloud Computing, Software Development, and Artificial Intelligence.

Link: IAT Digital – store.training.tafensw.edu.au[113]

NSW Digital Skills and Workforce Compact[114]

The ICT Landscape Report for the NSW Skills Board outlines the supply and demand for ICT workers in NSW and suggests potential responses to the shortage. The NSW Digital Skills and Workforce Compact 2023-30 ('the Compact') combines the resources, knowledge, and expertise of the NSW Government, employers, digital industry groups, and the education and training sectors. It brings a collaborative, integrated approach to address the expected shortage of 85,000 digital workers by 2030 as set out in the ICT Landscape Report.

The Compact has six pillars of action to help improve how NSW attract, train, recruit, develop, and keep talent. The Compact aims to make structural changes in the digital ecosystem. This includes small businesses, major tech employers and organisations that heavily rely on digital talent.

This is achieved by cross-sector collaboration among 38 Compact Partners, including Industry Peak Bodies (FSO, TCA), Industry partners (such as AWS, Microsoft, ANZ, Woolworths), and the education and training sector (State Government, TAFE NSW, etc.). Spanning across 8 project streams, each with a 2-year action plan, cocreated with clear success measures to evaluate progress and overall success within the Compact.

Future Skills Organisation is a member of the Compact Steering Committee and each of the working groups addressing the six pillars of action.

Link: NSW Digital Skills and Workforce Compact 2023-30 | NSW Government[115]

113 https://store.training.tafensw.edu.au/product-category/iat/iat-digital/

114 New South Wales Government (2023) NSW Digital Skills Compact, New South Wales Government.

115 https://www.nsw.gov.au/education-and-training/nsw-digital-compact/nsw-digital-skills-compact

Driving Digital Skills Pilot Program[116]

Driving Digital Skills is a program designed to improve current industry workers' digital skills and safeguard employment in the rapidly changing business environments of growth industries across NSW.

Developed by Investment NSW and the Department of Education, Training Services NSW, the program addresses the need to support existing workers, including those at risk of displacement due to job redesign – as innovations and emerging technologies alter the way we work. Driving Digital Skills is a program delivered collaboratively through Skills Lab, UTS and AiGroup that benefits both workers and businesses by offering digital technology and mentoring training.

Link: Driving Digital Skills Pilot Program - Investment NSW[117]

Driving Sustainable Advanced Manufacturing Programs

Driving Sustainable Advanced Manufacturing is a sister program to Driving Digital Skills and is designed to increase manufacturing businesses' knowledge and skills in the race to Net Zero.

Developed by Training Services NSW in partnership with Investment NSW, AiGroup and a range of training providers, the program addresses the skills gap in existing workers across the 3 levels in manufacturing businesses. After completing the Net Zero FutureMap™ Workshop, businesses leads leave with a plan on how to achieve Net Zero and meet the new mandatory climate impact reporting requirements. With a tailored training program to suit Executive Leadership, Team leaders and shop floor workers, the business can develop and implement a targeted Net Zero plan and be assured they have the knowledge to understand how the new financial reporting requirements will impact their business.

116 Investment NSW (2024) Driving Digital Skills Pilot Program, Investment NSW, Government of New South Wales.

17 https://www.investment.nsw.gov.au/priority-sectors/advanced-manufacturing/driving-digital-skills-pilot-program/

Tech Start Program

A collaboration between Training Services NSW and Akkodis to provide the connections, pathways, and confidence to help candidates from a diverse range of backgrounds pursue a career in the Tech industry. The goal of the Tech Start program is to support students to acquire the skills and credentials necessary to step into entry level tech roles.

The program facilitates direct access to industry leaders and subject matter experts in relevant fields such as AI, Data and Cyber allowing direct learning from industry experts currently working in the field to provide an insight to the role and the industry. All program intakes are 50% female.

Pre-Tech Digital Skills Program

The Pre-Tech Digital Skills Program is an online platform available for anybody in NSW to develop foundational digital skills and learn about career pathways in the technology industry.

Link: Pre-Tech digital skills program - NSW Department of Education[118]

Cyber Industry Experience[119]

The NSW Cyber Industry Experience program brings industry and the education sector together to design meaningful experiences that will give students a taste of different roles in cyber security. Students hear first-hand from experienced professionals, get the chance to visualise themselves in the company and learn how they can make a significant contribution to the IT industry.

By increasing awareness among students, preparing them early for future roles and increasing participation among under-represented groups, may improve the quality and quantity of cyber security professionals in Australia.

Link: Cyber Industry Experiences - Investment NSW

118 Link: Pre-Tech digital skills program - NSW Department of Education

119 https://www.investment.nsw.gov.au/priority-sectors/technology/cyber-security/cyber-industry-experiences/

Victoria

Victorian Skills Plan for 2022 Into 2023

The Victorian Skills Plan provides a "skills roadmap" as a new approach to connecting industry, learner and community insights and provides evidence for the provision of training and skills aligned to current and future job needs. It identifies actions and the further work needed to build a robust skills base and shape the next generation of training strategies.

The Skills Plan focuses on the occupations and skills that industry and workers need and are delivered by the TAFE and training system, Adult Community Education and Higher Education. Developed through consultation with industry, employers, unions, education and training providers and learners, the Skills Plan delivers industry-validated insights on the scale and form of the issues facing Victoria, provides clear direction on the response required and identifies priority actions to improve the Victorian training and skills sector.

Department Accredited VET Courses - Business[120]

The Victorian Department of Jobs, Skills, Industry and Regions has developed a range of accredited VET courses, including for business. The courses have been developed to support Victorian industry and community needs where there are no existing packages or endorsed units available. These courses, accredited through the Victorian Registration and Qualifications Authority, include the Cert IV in Cyber Security, Advanced Diploma of Cyber Security, Cert III in Emerging Technologies and Cert III in Enabling Technologies.

Digital Jobs Program[121]

The Victorian Government's Digital Jobs program is training and upskilling mid-career Victorians for transition into digital professions.

The aim is to support up to 5,000 mid-career Victorians to complete 12 weeks of industry-backed training along with the opportunity to apply their new digital skills in a 12-week digital job placement with a Victorian business. The target group are Victorians over the age of 30 ready for a career change and businesses searching for employees with digital skills.

120 Victorian Government (2024) Department Accredited VET Courses, Victorian Government.

121 Digital Jobs Strategy Implementation Roundtable (2023) Digital Jobs, Digital Jobs Strategy Implementation Roundtable, Government of Victoria.

Victorian Skills Authority (VSA) Employment Forecast Dashboard[122]

The Employment Forecast Dashboard provides information about workforce needs across all industries, occupations and regions, as well as about occupations that use government-funded VET to skill their workers.

The dashboard is the main vehicle for the Victorian Skills Authority to provide up-to-date information about current and future demand for jobs to raise awareness of the range of employment opportunities across Victoria. The current dashboard provides information about workers expected to enter the Victorian economy between 2023 and 2026.

Monash College Future Skills[123]

Monash College Future Skills is a new Victorian initiative at the intersect of VET and higher education. It offers AI-infused intensive, accredited and non-accredited programs specialising in digital, care, clean economy and professional skills. Courses are designed to incorporate the latest in AI technology to revolutionise workforce productivity and adaptability through skills for the future workforce.

Queensland

Digital Professional Workforce Action Plan 2020-2024[124]

The Digital Professional Workforce Action Plan 2020-2024 is part of Queensland's $200 million Future Skills Fund and with an $8 million allocated to boost the number of Queenslanders skilling and reskilling for an expected upsurge in digital jobs.

It is estimated that Queensland will need an additional 10,000 digital professionals by 2024 to support industry, economic recovery and future prosperity. More than half of Queensland's digitally skilled workforce is already employed in supporting industries outside of the traditional ICT sector such as mining, manufacturing, agriculture and tourism and this trend is expected to continue.

122 Victorian Government (2023) Employment Forecast Dashboard, Victorian Government.

123 Monash University (2024) Future Skills, Monash University.

124 Queensland Department of Transport and Main Roads (2023) Digital Professional Workforce Action Plan 2020-2024, Queensland Department of Transport and Main Roads.

Western Australia

STEM Skills Strategy[125]

The STEM skills strategy aims to build a globally competitive and innovative workforce with the skills to drive Western Australia's technological future and create job opportunities. The goals of the Strategy are to:

1. Ensure students have STEM skills for the jobs of the future
2. Reskill the current workforce with the STEM skills required to embrace a technological future
3. Break down barriers and ensure that everyone has the opportunity to participate in a STEM future

South Australia

Policy Direction for Skills in South Australia[126]

Skilled. Thriving. Connected. The Policy Direction for Skills in South Australia sets out a clear response to immediate skills needs and signals how the South Australian Government, through strong partnerships and shared responsibilities, will support South Australians to engage in education and training and to transition into secure, well-paid jobs. The policy direction includes a focus on the technology sector to support high-tech work, cyber security and IT roles across all businesses. The vision of this policy direction is to develop skilled, highly adaptable skilled people that contribute to a thriving South Australia and are supported by a connected skills system.

The Skilled. Thriving. Connected. Policy Direction for Skills in South Australia forms one part of the South Australia's Skills Plan, which also includes the Jobs and Skills Outlook and the Skills Investment Plan. For further information, see South Australia's Policy on a Page.

125 Government of Western Australia (2021) Future Jobs, Future Skills, Government of Western Australia..

126 South Australian Government (2024) Skilled. Thriving. Connected., South Australian Government.

Higher Education Apprenticeships and Traineeships[127]

The South Australian Skills Commission is expanding apprenticeships and traineeships to include a university/higher education qualification in some cases to ensure South Australia has the skilled workforce it needs now and in future. Higher Education Apprenticeships and Traineeships are qualifications offered by higher education institutions.

Off-job training is linked to a university course and is delivered by a higher education institution or university rather than a RTO. As with traditional apprenticeships and traineeships, employers provide real on-job training by a qualified and experienced supervisor; Higher Education Apprentices and Trainees put their learning into practice and develop skills in the workplace throughout their qualification.

Financing of Return to Employment[128]

Backed by the Department for Industry, Innovation and Science, the Financing of Return to Employment (FORTE) pilot program commenced in May 2022, delivering no-cost, high quality training to equip 150 South Australians with the digital skills required to work in the state's fast-growing high-tech sectors.

FORTE is designed to increase the diversity of South Australia's tech sector and provide opportunities to those who may otherwise face barriers to employment. The program specifically recruits women, young people (ages 18-24), First Nations people and people with disability.

Tasmania

Technology Industry Skills Compact

The Technology Industry Skills Compact is currently under development.

The Industry Skills Compact brings a refreshed approach to industry engagement in Tasmania and will focus on supporting stronger collaborative partnerships between participants in the training and workforce development system, delivering on the recommendations of the Premier's Economic and Social Recovery Advisory Council.

Skills Compacts are agreements between industry bodies (such as associations and employer representatives), recognising that both government and industry have areas of strength and responsibility for the system. These agreements include "step-up" commitments by industry, such as support for TasTAFE; specific industry-wide training requirements; increased involvement of industry professionals as trainers; and shared infrastructure to enable students to train on modern technology.

127 Skills Commission South Australia (2023) Higher Education, Apprenticeships, and Traineeships, Skills Commission South Australia.

128 Department for Innovation and Skills South Australia (2023) Free Tech Training for SA Career Seekers, Department for Innovation and Skills South Australia, Government of South Australia.

The Technology Industry Skills Compact will have a Priority Action Plan, developed collaboratively by the sector in partnership with the Tasmanian Government. The Action Plan aims to address current and emerging challenges in skills, training and workforce development.

Australian Capital Territory

Skilled to Succeed[129]

In April 2022, the ACT Government launched its skills and workforce agenda, Skilled to Succeed, to address skills and workforce shortages throughout the Territory. Skilled to Succeed maps out key priorities and will support the ACT in reaching its target to grow the workforce to 250,000 by 2025. The ACT Government is ambitious in its efforts to grow Canberra's economy, the capability of its workforce and the great jobs thriving local industries can offer.

In November and December 2022, consultation was undertaken to develop the Skilled to Succeed Industry Action Plans (IAPs). The IAPs are expected to be published later in the year and have been informed by consultation with industry, government agencies, registered training organisations and community partners. The IAPs will support, grow and strengthen the ACT vocational education and training (VET) system, as well as ensure a strong, skilled workforce for Canberra's key industries. The IAPs will deliver skills outcomes across five core industries: advanced technology; experiences; caring; renewables and sustainability; and building and construction. The IAPs will also provide targeted actions to support the skills and capability needs unique to each industry.

Northern Territory

Digital Territory Strategy[130]

The Digital Territory Strategy maps out a plan to enable Territorians to get the most out of digital opportunities and challenges now and into the future. The goal is to deliver better government services, connect communities and remain competitive in the global economy.

The strategy has a strong focus on helping local business to grow, upskill and create more jobs; supporting children to thrive, be safe and have strong foundations for a bright future; connecting, creating and supporting safe, sustainable and vibrant communities; strengthening the delivery and reliability of services; and improving accountability, inclusion and ingenuity.

129 Government of the Australian Capital Territory (2023) Publications - Skills, Government of the Australian Capital Territory.

130 Northern Territory Government (2018) Digital Territory Strategy, Northern Territory Government.

Occupation Profiles

The following occupation profiles have been included in this Workforce Plan to provide greater insight into the five largest tech occupations. In addition, given its importance as a national priority, we have included the profile for Cyber Security Specialists.

Workforce Plan 2025 will include a detailed occupation profile for every technology occupation.

- Database and Systems Administrators and ICT Security Specialists
- Graphic and Web Designers and Illustrators
- ICT Business and Systems Analysts
- ICT Support Technicians
- ICT Managers
- Software and Applications Programmers

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