Submission to WA Government by the AIIA as part of the Skills Forum Roundtable

About the AIIA

The Australian Information Industry Association (AIIA) is Australia's peak representative body and advocacy group for those in the digital ecosystem. We are a not-for-profit organisation to benefit members, and AIIA membership fees are tax deductible. Since 1978, the AIIA has pursued activities to stimulate and grow the digital ecosystem, to create a favourable business environment for our members and to contribute to Australia's economic prosperity.

We do this by delivering outstanding member value by:
• providing a strong voice of influence
• building a sense of community through events and education
• enabling a network for collaboration and inspiration; and
• developing compelling content and relevant and interesting information.

We represent the end-to-end digital ecosystem in Australia, including:
• multinational companies
• large Australian technology, telecommunications and digital and cloud infrastructure companies; and
• a large number of small and medium businesses, start-ups, universities and digital incubators.

Introduction

Information and Communications Technology (**ICT**) is both an industry vertical and a horizontal enabler. Increasingly, technology serves as the backbone of the economy and a key enabler embedded in myriad Australian industries, especially in the wake of the Covid-19 pandemic. This centrality is recognised by the fact that many States in Australia now have dedicated digital ministers or digital economy ministers.

However, growth in ICT skills is exhibited more strongly in adjacent industries, such as health, aged care, telecommunications and financial services, than in the Australian technology industry alone. Furthermore, a historical reliance on importation of offshore skills has come up against the challenges posed by the Covid-19 pandemic and Australia's closed borders response in spectacular fashion. The 2020 WA Edition of the Digital Pulse Report found that an additional 156,000 technology workers will be needed by 2025 to keep pace with current demand.

The AIIA notes that the National Skills Commission (**NSC**) in July published its first Skills Priority Occupation List, which measured the current and projected future demand for 800 jobs listed under the Australian and New Zealand Standard Classification of Occupations (**ANZSCO**).[1]

Technology jobs in the IT sector represented nearly 10 per cent of those in the highest demand category, reflecting an acute national shortage and a strong future demand for skilled technology workers.

In-situ upskilling and reskilling will be vital for the technology industry and the Western Australian economy. ICT skills directly underpin the government's **WA Jobs Plan**, both in the role they play as a backbone to the technology industry in its own right, but also as a core component of other industries, with digital fluency becoming an essential skill in many settings.

It is key that traditional industry strengths be combined with ramped up investment in research and development (**R&D**), skills and cutting-edge technology so that Western Australians are producers of technology in our own right, not just consumers.
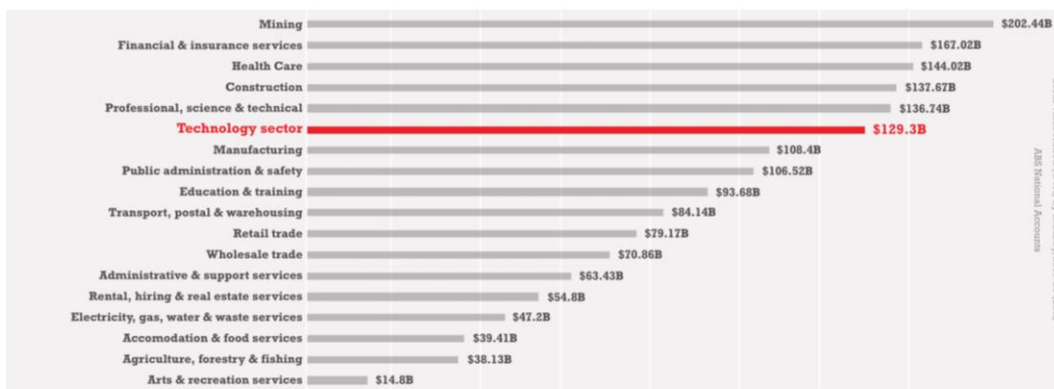
Skills shortages as found by the AIIA 2021 Industry Survey

[1] https://ia.acs.org.au/content/ia/article/2021/these-are-australia-s-most-needed-it-jobs.html?ref=newsletter

When respondents to the AIIA's 2021 Industry Survey were asked about the focus on new hiring in 2021 and the skill sets required for the future, Cyber Security topped the list with 65% of respondents nominating the skillset, followed by Cloud Specific skills.

In terms of specific skills of the future, what skills will you look to be hiring in 2021? Please choose up to four:

Skill	Percentage
Other	~17%
Digital	~46%
Coding	~23%
Business Analysis	~35%
Enterprise Architecture	~33%
Bigdata/Analyitics	~45%
AI Skills (eg machine learning)	~28%
Applications Development	~46%
Cyber Security	~65%
Cloud Specific	~60%
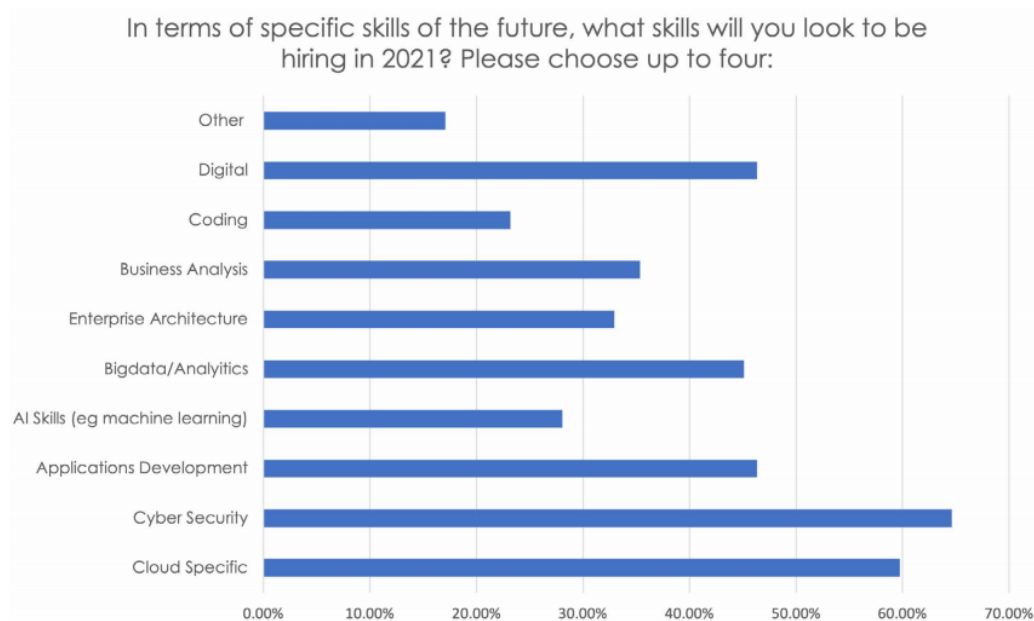
The rise in interest in cyber security was particularly strong (up nearly 10 percentage points from 2020), reflecting a growing interest in the segment throughout the public policy debate, the emerging interest in sovereign data capabilities and the continuing migration to Cloud based computing and data storage.

When asked about the barriers to expansion, skills shortages were nominated as the major reason. Most firms are still focused on hiring staff locally from within Australia, a trend that will only be further reinforced with the COVID restrictions, and some 73% of respondents said they expect to be actively growing and hiring in 2021.

On the question of respondents' use of AI in their business, there was a significant adoption of AI technologies, with 55% currently using this technology as either a core function or some use in their business and only 5.4% saying they have no interest in using AI within their businesses.

Anticipated Industry Adoption of ICT services

The ICT sector's application and reach extends to all parts of the economy. When the AIIA asked specifically which industry sectors are expected to have the greatest level of adoption of ICT services, Government and Infrastructure topped the list with nearly 85% of respondents nominating this sector. The spending capacity and strong focus many firms adopt in servicing the government sector is likely reflected in this response. Amongst other sectors to attract attention are Health, Financial Services and the Mining and Energy sector.

Which industry sectors do you expect will have the greatest adoption and growth (buyers) of ICT in 2021? Please choose up to four.
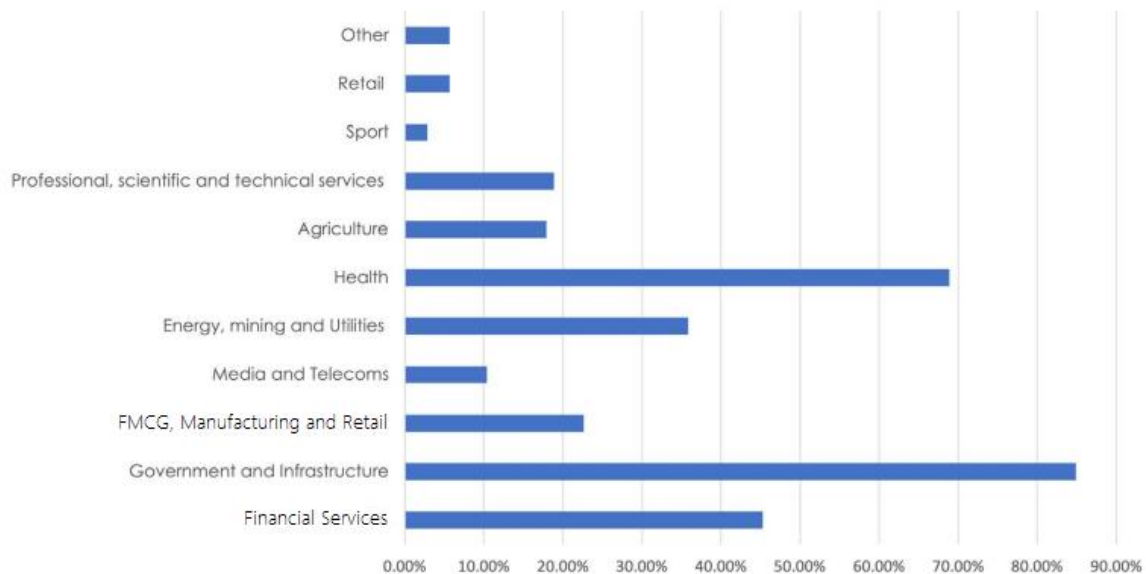
Tactical short-term recommendations

1. ***That the WA Government in conjunction with the AIIA and other industry partners, roll out a Skills Hub for VET leavers.***
    The AIIA stands ready to make available its innovative Skills Hub to the WA Government. The Skills Hub has over 3,000 courses from leading RTO providers across the country. The AIIA and WA Government could develop a pilot for VET (WA TAFE) finishers. The package provided by the AIIA would include career mapping and pathway development. Timeframe for rollout would be 5-7 months and expected costs would be under $1m.

    The WA Government's Skills Hub would assist in mapping skills gaps for employees and assist in transitioning into new careers and fill job opportunities across the State, focusing on the skills uplift of the local workforce rather than relying on migration, and providing a bridge for citizens to their first job and also to transition between jobs.

2. ***That the WA Government commission micro credential co-design courses between industry and education section for the benefit of local skills acquisition and to meet industry needs***
    The AIIA received a Queensland Government grant for the AIIA members to co-design with the QUT two micro-credential course (cyber security and innovation in IT). We recommend the Western Australian Government ask the AIIA WA members to co-design a suite of WA-industry-specific digital courses with a leading Western Australian tertiary institution.

These courses would be up and running with the first students passing through within 12 months. The courses would be provided free of charge to students. The courses would benefit from adopting the extensive training materials being made available by industry such as Amazon, Microsoft, Google and others.

Timeframe for rollout would be 10-12 months and expected costs would be $500,000.

3) **Digital Government and WA Public Sector Skills**

As a leading purchaser of ICT in the economy as well as a user thereof, it is important that the WA Government be seen as an exemplar in digital adoption. It is equally important that government and agency leaders uplift their digital literacy and fluency so that leadership is an enabler and not a barrier to innovation in the public sector. Public services – as with the broader economy – are facing profound skills shortages. It is imperative that the WA Government operates on the basis of a clear strategy and vision in order to ensure it understands where existing digital skills are within the public service (i.e., mapping of digital skills across government) and what is required in the near future to ensure pathways are in place for development and training of the workforce. If the Covid-19 pandemic showed Australian governments anything, it was that an agile and digitally literate public service that can work across siloes is critical to public policy and the economy.

The AIIA is in discussions with numerous state and federal governments to assist them in developing their digital skills pathways, journey mapping and upskilling of their workforces both in leadership and specific-domain knowledge and we would welcome a conversation with the WA Government about making the same processes and platforms available to the Western Australian public service.

Strategic longer-term recommendations

1) *Championing diversity, inclusion and regionalisation* – ICT can enable the growth of regional hubs and centres of excellence as physical location and geographic proximity becomes less of a barrier post-Covid-19. This aligns with the AIIA's 2020 White Paper recommendation that government and industry partner to drive investment and policy to support regionalisation of government services and industry, in the context of the work of the future. At a citizen level, digital fluency can open up potential career opportunities and pathways for both new workers coming out of the education system and existing workers who are retraining into new industries. On a human level this is important given the challenged viability of certain specific industries following lockdowns and pandemic control measures. Services to citizens are increasingly being delivered digitally, so enabling digital skills amongst all citizens will ensure inclusion and social connection. This aligns to the Western Australian government's previous blueprint for digital inclusion, on which the AIIA made a supportive submission.

Digital inclusion in the regions must be advanced by institutional and educational investments such as regional Community Resource Centre (**CRC**) hubs and sophisticated training packages delivered through to regional, remote and rural areas of WA. These investments will dovetail with an increase in the number of skilled digital jobs filled by Western Australians.

2) *Creating green jobs* – as Australia transitions to a low carbon economy, there is enormous untapped potential for ICT innovation in that process. As recognised by the OECD, the transformation of the economy is directly reliant on innovation to realise efficiencies, develop new technologies and new ways of applying them, and decoupling the relationship between economic growth and resource depletion.[2] ICT skills will be essential to driving this process.

3) *Long-term skills forecasting* – Government to engage more programmatically and proactively with industry – e.g., via bodies such as the AIIA – to assess the demand for skills so that proactive plans can be created to meet that demand and create opportunities for WA citizens. Government can then look as to how to incentivise the market to meet the forecast skills needs while building expertise, specialisation and local reputation in the broader market.

4) *Support innovative re-design* – As per the work of the ICT Industry Reference Committee (**ICT IRC**), the AIIA recommends that simplified, innovated employment pathways co-designed with industry be developed to improve understanding and lessen frustration amongst employers and tertiary institutions. There is an opportunity for the WA Government to liaise with the Digital Skills Organisation and TAFE WA, facilitated by the AIIA, around these outcomes. This aligns to the AIIA recommendation in its 2020 white paper that government implement a nationally recognised lifelong learning framework with skills passport to capture digital skills across VET, University and micro-credential certifications.

5) *Take an industry focus to ICT skills development across the WA economy* – by leveraging work such as the AIIA's ongoing WA Research Project into digital innovation in the mining industry, the WA government needs to gain a full understanding of where economic growth is occurring, what the digital skills of the future are and plan accordingly for how to acquire or grow those skills. There is growing recognition of the opportunities that ICT skills provide to workers and businesses across JTSI, AMWU, AiG and the Steel Manufacturers' Union. Government must now harness that spirit of collaboration for the benefit of the WA economy and citizens, leveraging examples of world class customers and innovative local capabilities such as the CORE contract with BHP for the redevelopment of Mt Newman. By investing in innovative skills across the economy, key industrial aims such as the Ag2030 strategy of ramping up the value of agriculture nationally to $100bn by 2030 will be bolstered by increases in skills and productivity. Government must work with industry in understanding the pull-throughs, e.g., cybersecurity, which is crucial to every sector.

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[2] https://www.oecd.org/sti/inno/fosteringinnovationforgreengrowth.htm

By mapping a comprehensive skills picture across WA industries, the government will be able to efficiently and strategically target courses in relevant sectors and amongst relevant workforces without the need for 4-year tertiary degrees. The AIIA stands ready to facilitate this process.

6) ***Continue to invest in digital capability across government*** – the WA Government needs to continue to invest in its digital capability. As our country has seen from vaccination, contact tracing and QR code rollouts, a modern agile government requires modern agile digital systems with corresponding investments. Where investment falls short, important outcomes such as public health lie exposed. The AIIA suggests that the WA Government should establish a Digital Restart Fund similar to South Australia and New South Wales and develop a Digital Government Strategy similar to the Federal Government's recent $1.2 billion announcement.

Conclusion

The WA Government needs to continue to invest in modern agile digital platforms to manage citizen expectations and to operate as a modern agile government. It needs to proactively map skills across the public service and industry and strategically partner with industry and world-leading tertiary institutions to deliver targeted upskilling and reskilling programs where the economy most stands to benefit in the context of a post-Covid-19 world.
ICT skills, both as a backbone to the technology sector in its own right, but also as a core component of productivity and innovation in other sectors, are key to this equation, with digital fluency now an essential industrial skill that needs to be stimulated by government across industry. The AIIA stands ready to assist the WA Government as it embarks on this pivotal task.

For more information, please contact policy@aiia.com.au.