

Chair

Secretariat – VET review
Department of the Prime Minister and Cabinet
PO Box 6500
CANBERRA ACT 2600

Email: VETreview@pmc.gov.au

Re: ISA submission to the Expert review of Australia’s vocational education and training system

Dear Mr Joyce

I am providing this submission on behalf of Innovation and Science Australia (ISA). ISA was established in December 2015 by the Australian Government as an independent statutory board with responsibility for providing strategic whole-of-government advice on all science, research and innovation matters. Our inaugural recommendations were articulated in the form of a strategic plan for the Australian innovation, science and research system to 2030, *Australia 2030: Prosperity through innovation* [the 2030 Plan], which was publicly released on 30 January 2018¹ and responded to by the Australian Government on 22 May 2018.²

This review represents a pivotal opportunity for our vocational education and training (VET) system to respond to the changing nature of work. Transformational reform is required to ensure a quality training system that is well regulated, has effective linkages with employers and industry to ensure training is responsive to current and future jobs and skills needs, and has the capacity to expand to meet the lifelong learning needs of Australian workers. It is also important that any changes to the VET system facilitates recognition of training across other parts of the education system (including the university sector).

An effective education system is critical to the success of our science and innovation system. Technological advances have the potential to boost productivity and enhance the competitiveness of all industries, but in so doing many of today’s jobs will change. The trend of non-routine jobs comprising an increasing share of total employment is likely to continue.³ Alphabet’s January 2019 *Future Skills* report notes the average Australian will increase their learning requirements by a third over their lifetime.⁴ As a result, our education system will need

¹ Innovation and Science Australia 2018, [Australia 2030: Prosperity through innovation](#)

² Department of Industry, Innovation and Science 2018, [Australian Government response to ISA’s Australia 2030: Prosperity through innovation report](#)

³ Department of Jobs and Small Business 2018, [Australian Jobs 2018](#)

⁴ Alphabet 2019, [Future Skills](#).

to adapt to support continued growth of Australian businesses and the capacity of individuals to succeed in a changing labour market. For example, the Advanced Manufacturing Growth Centre estimates that jobs in Australia's manufacturing workforce will evolve away from roles requiring manual or narrowly focused production skills, and towards roles involving elite design or technical expertise, as well as sales and service skills, with an estimated net gain of 23,000 jobs by 2026.⁵

ISA believes that VET is a vital part of Australia's education system and it will play a significant role in helping Australians to adapt to changing skill needs throughout their careers.⁶ We discussed these issues at length in the 2030 Plan. Five of our thirty recommendations are in the area of education, of which two⁷ are directly relevant to the VET sector and the first three terms of reference raised by your review⁸.

We commend to you the detailed discussion in the 2030 Plan⁹, but have highlighted in this submission three principles that we believe should guide Australia's future VET system.

1) A VET system that is responsive to employer needs for new skills

It is our view that the current VET system is not sufficiently responsive to employer needs for future (rather than current) skills and that current employer-VET linkages are complex, slow and difficult to navigate. We also view that there is latent potential further innovation within the VET system that is currently untapped.^{10,11}

In relation to Recommendation 4 in the 2030 Plan, we commend the Australian Government on recognising, through this review, the importance of a VET system that:

- responds to new priorities presented by innovation, automation and new technologies;
- is nimble to employer needs;
- is internationally competitive; and
- is well-connected to other parts of the education system.

How governments strategically engage with industry to ensure that training aligns to emerging work and skills demands is vital. The Australian Industry Group's *2018 Workforce Development Needs Survey*¹² found that 75 per cent of respondents report skills shortages, most often in the technician and trades worker category, and that difficulties remain with the recruitment of employees with STEM skills. They noted for the first time that skills shortages were reported for those with skills in business automation, big data and artificial intelligence solutions. In a similar vein, the 2018 *ACS Australia's Digital Pulse* report noted growing demand for digital

⁵ Advanced Manufacturing Growth Centre 2017, [Submission to the Innovation and Science Australia 2030 Strategic Plan consultation](#)

⁶ Innovation and Science Australia 2018, [Australia 2030: Prosperity through innovation](#) (page 11)

⁷ Innovation and Science Australia 2018, [Australia 2030: Prosperity through innovation](#) (page 36)

⁸ Department of the Prime Minister and Cabinet, [Terms of Reference – Expert review of Australia's vocational education and training system](#)

⁹ Innovation and Science Australia 2018, [Australia 2030: Prosperity through innovation](#) (pages 11-13, 26-38)

¹⁰ Beddie F and Simon L 2017, [VET applied research: driving VET's role in the innovation system](#), National Centre for Vocational Education Research.

¹¹ LH Martin Institute and TAFE Directors Australia 2017, [Bridge to Opportunity: TAFE as Key Partners in Innovation Ecosystems](#)

¹² Australian Industry Group 2018, [Skilling: A National Imperative](#) Included responses from 298 companies employing a total of 111,209 employees.

talent with the Australian economy needing an additional 100,000 ICT workers by 2023.¹³ **We have heard from our stakeholders that the complexity of the current VET training system¹⁴ (which includes 67 Industry Reference Committees advising on development of employer-related training packages)¹⁵ can slow down the development of new courses to meet these employer needs.**

ISA notes the rapid and successful implementation of cybersecurity training courses developed at Box Hill Institute (Victoria) as a pointer to what should be possible in the development of new training packages. These practical courses were identified by the Cyber Security Growth Centre (AustCyber) as being of high-value to Australian employers seeking to fill an estimated 18,000 cyber security job roles by 2026. AustCyber worked to expand the delivery of the courses to select high-quality TAFEs nationally in close consultation with key employers of cybersecurity skills in each state and territory.¹⁶ **Under Recommendation 5 in the 2030 Plan we encourage utilisation of expertise within the six Industry Growth Centres to identify skills shortages in future work requirements of high-growth sectors.** As demonstrated by AustCyber's experience, Industry Growth Centres are well positioned to understand emerging skills needs in their sectors (which are themselves key sectors for Australia's future). In areas of rapid technological advancement, dual-sector institutions can also provide an important nexus between university research and emerging vocational skills training needs. This can be seen in Charles Darwin University's partnership with SPEE3D to utilise 3D metal printing technology, create industry procedures and standards and drive material development.¹⁷

More specifically, ISA observes that in 2018 the Australian Government provided \$187 million to support approximately 50,000 additional apprenticeships through the Skilling Australians Fund (SAF) - a fund partially financed from a levy from employers sponsoring temporary foreign workers.¹⁸ Currently there is minimal public information on which skill/occupation areas will benefit from SAF support. In addition to greater transparency on the distribution of SAF funds, ISA suggests that Industry Growth Centre advice could be used to inform the supply-side potential of the SAF in high growth sectors, thereby growing local skills and relieving demand for overseas workers.

Australia could also look to international examples of how to develop vocational education and training in the face of evolving skills needs in the future, such as the approach taken by the Singaporean Government.¹⁹ Singapore's VET system has been designed to underpin Singapore's economic strategy of turning the country into an economic, education and R&D hub for Southeast Asian countries. The Singaporean Government have adopted a concerted, long-term plan to ensure that their VET system is focused on developing workers who are not just job-ready, but who also have the critical thinking, teamwork and communications skills needed to underpin their lifelong learning journeys.

¹³ Deloitte 2018, [ACS Australia's Digital Pulse 2018](#)

¹⁴ Australian Government, [Quality in the VET system – a shared responsibility](#)

¹⁵ Industry Reference Committees provide their advice to the (COAG-governed) [Australian Industry and Skills Council](#)

¹⁶ AustCyber 2018, [Sector Competitiveness Plan 2018](#)

¹⁷ Charles Darwin University, [Advanced Manufacturing Alliance](#)

¹⁸ Department of Education and Training, [Skilling Australians Fund](#)

¹⁹ Tucker, M.S. 2016, [The Phoenix: Vocational Education and Training in Singapore](#), Center on International Education Benchmarking (pages 34-36)

2) A VET system that is transparent, high quality and trusted

A VET student needs to be confident that the system they are entering will provide them a quality training experience. Previously training providers have been able to enter the system with minimum registration requirements, resulting in dodgy providers eroding the trust of the VET system overall.

Robust and well-understood standards, backed by strong quality assurance processes, are essential to rebuilding trust in the VET system. We therefore welcome the recently commenced consultation on Australia's Qualification Framework (AQF)²⁰ to ensure the AQF continues to meet the needs of students, education providers and employers. We are pleased to see that the discussion paper also explores how the nature of work is changing and how the AQF might adapt to support increased reskilling and retraining needs to meet increasing demand for enterprise and social skills (known by ISA as '21st century' skills), and where people may want faster, cheaper, self-directed and on-demand learning. This challenges the current competency-based model of vocation education and training.

Regarding trust in quality of training, we also note that the 2018 independent review²¹ of the *National Vocational Education and Training Regulator Act 2011*, led by Professor Valerie Braithwaite, highlighted the vital role that the Australian Skills Quality Authority (ASQA) plays in safeguarding the reputation and integrity of the VET sector. We are pleased to see changes to ASQA's regulatory powers in July 2018²² that enabled the Authority to seek civil penalties (i.e. fines) for breaches of the Standards for Registered Training Organisations (RTOs) guilty of activities such as misleading / deceptive conduct or inadequate teaching standards, even in cases where a provider has since rectified the breach.²³

VET course choice should be driven by a clear understanding of the quality of training on offer. Without trust, both students and employers may turn away from the VET system as a training path of choice. The recent opening up of the VET system to private providers means that ASQA is now responsible for regulating over 4,000 RTOs (including more than 3,000 private providers). This results in a balancing act between ensuring aligned, quality training standards while at the same time not quelling innovative approaches new providers can bring to the system (such as Academy Xi's provision of digital skills).²⁴ **ISA believes that the entry standard for RTO registration should be raised to a high quality threshold based on strong educational standards and access to quality training staff.**

As articulated in ISA's 2030 Plan, we welcome recent measures to strengthen the evidence base underpinning the confidence in the quality of the VET system such as by: increasing information on VET accredited courses on the National Register of VET; monitoring of VET student outcomes by the National Centre for Vocational Education Research (NCVER); and enhancing information available on myskills.gov.au (such as employment trends by industry

²⁰ Department of Education and Training, [Australian Qualifications Framework Review](#) Submissions to the Review consultation opened 12 December 2018 and will close 15 March 2019, with the final Review due June 2019.

²¹ Department of Education and Training 2018, [All eyes on quality: Review of the National Vocational Education and Training Regulator Act 2011 report](#)

²² Enacted through amendment of the *National Vocational Education and Training Regulator Regulations 2011*

²³ Australian Skills Quality Authority 2018, [ASQA given additional powers to seek civil penalties and issue infringement notices](#) On 12 July 2018 the Governor-General, His Excellency General the Hon. Sir Peter Cosgrove AK MC (Retd), gave Royal Assent to the National Vocational Education and Training Regulator Amendment (Enforcement and Other Measures) Regulations 2018 (NVR Regulation Amendment 2018).

²⁴ Innovation and Science Australia 2018, [Australia 2030: Prosperity through innovation](#) (page 37, case study 2)

sector available with matched occupations and VET training options for prospective VET students). **We see opportunities to further increase the granularity of data available to students and tracking of additional metrics (such as completion rates and employment on graduation) to better inform student VET course choices.**

A pressing priority in recent years has been the reform of the VET-FEE HELP scheme to achieve sufficient protection of students, increase accountability and compliance monitoring of providers and to limit cost blowouts. Recent changes made under the new VET student loans scheme are an important step towards greater accountability for providers. **ISA supports the 'approved course list' for Australian Government loans, including where the approved course list is linked to employment outcome metrics.**²⁵ This approach has the multiple benefit of drawing VET students (and their payments) to quality RTOs who ensure training meets employment demand - thus incentivising quality VET training provision.

While rebuilding the foundations of the VET system as a robust, high-quality system is essential to restoring confidence, it is important to also keep track of (i.e. measure) how the VET system is supporting Australia's transition to a more value-adding industrial and service-based economy. Of Australia's 19 industry sectors, the Department of Jobs and Small Business²⁶ predicts the strongest employment growth (in descending order) in the: Health Care and Social Assistance; Professional, Scientific and Technical Services; Construction; Education and Training; and Accommodation and Food Services sectors over the next five years to May 2022. It will therefore be important that metrics for the VET system are able to capture how this industry growth is being supported.

3) A VET system that is financially structured to support lifelong learning

The current VET system is designed to provide vocational education and training to serve a single career path, and government funding support is modelled accordingly.

It is important that the Government considers how the VET system can be better financially structured to support lifelong learning in light of the role VET needs to play in Australia's ability to adapt to new demands and technologies presented by the increasing automation of the economy (i.e. requiring higher skills and more frequent skill updates). This is another area where the Singaporean experience can be instructive, for example where numbers of course places are allocated based on job shortage areas²⁷ and where citizens over the age of 25 are provided a 'SkillsFuture' credit of S\$500 for pre-approved courses.²⁸

With our education system changing from a 'one-point-in-time' experience to a system that supports individuals' needs for many different careers across their lifetime, we believe that careful consideration needs to be given to how these changes are financially supported. We would argue that financial responsibility for the costs of lifelong learning needs to be shared between the individual, employer, and the States & Territories and Commonwealth governments, and might require changes in areas such as the current limitations in the number

²⁵ Department of Education and Training 2017, [Review of the VET Student Loans Approved Course List and Loan Caps Methodology](#)

²⁶ Department of Jobs and Small Business 2018, [Australian Jobs 2018](#) (page 30)

²⁷ Tucker, M.S. 2016, [The Phoenix: Vocational Education and Training in Singapore](#), Center on International Education Benchmarking (page 38)

²⁸ Singapore Government Future Economy Council, [SkillsFuture Credit](#) The initiative was launched in January 2016.

of financially-supported training courses and/or VET loans an individual can receive across their lifetime. Before this can occur, however, the current under-funding of the VET system (relative to funding for Australia's Higher Education sector)²⁹ should first be addressed.

In addition to sustainable financial support, the VET workforce needs to be sufficiently equipped, flexible and ready to enable delivery of skills of the future.

ISA's view is that Australia can look forward to a prosperous future if it proactively seizes opportunities to adopt new technologies. A strong, trusted and financially viable VET system that is well-connected to industry's evolving training needs is critical to ensuring Australian businesses and workers adapt seamlessly for the future. We wish you every success with this important review.

Please don't hesitate to contact the board at secretariat@isa.gov.au should you have any questions in relation to this submission.

Yours sincerely

Andrew Stevens
Chair

25 January 2019

²⁹ Department of Education and Training 2018, [Review of the Australian Qualification Framework Discussion Paper](#) (page 10)