Meeting Australia's future skills needs

Skills, Growth and Tertiary Education

Report for the Australian Universities Accord Panel

27 October 2023

RMIT UNIVERSITY

This page is intentionally blank.

Contents

1 Executive summary

RMIT University's Policy & Impact team thanks the Australian Universities Accord Panel (the Panel) for the opportunity to conduct this research, consultation and analysis of 'a more responsive tertiary sector that better meets Australia's skills needs'.[1]

Our conclusions suggest that a more responsive tertiary system is essential if Australia is to meet our immediate and future needs and follow through on headline ambitions for social, economic and environmental reform; supporting the participation and success of First Nations people in Australia; decarbonising the economy, providing fit-for-purpose social and care services and developing public infrastructure for a more prosperous, connected and inclusive society.

Further, the evidence we synthesised for this report strongly asserts that a more responsive tertiary system is within Australia's collective grasp.

The component parts are spread across Australia's post-school education and training systems, and the economic and community ecosystems that support them. There is strong and consistent support from industry and community about the need for a more joined up and effective tertiary system achieving higher and more efficient levels of participation across Australia's fast-changing workforce. Australia's digital and data infrastructure can also enable a more responsive tertiary education system.

But we must act.

To become a reality, a tertiary, multi-sector approach must be intentional and designed into the underpinning education system architecture, including the ways that success is measured, and the policy and governance structures adopted by all the system's jurisdictions.

A redesign of the Australian Qualifications Framework, as recommended by the 2019 Noonan Review must be completed urgently and inclusively; and further complemented by emergent skills-led approaches and capability to advance innovation across all parts of the tertiary system. This is critical to addressing structural inequalities in opportunities to access lifelong learning and high-skilled jobs and credentials.

Australia needs to design and scale up new tertiary learning approaches that support a more diverse population to gain valuable skills and knowledge, at all points during their working lifetimes. This includes more effective industry-partnered 'earn and learn' solutions (from expanded Work Integrated Learning to Degree-level Apprenticeships) to construct and grow the 'middle tier' of valuable, cost-effective

1 Reflects RMIT's Statement of Requirements.

qualifications and learning programs. These are crucial both to meeting overwhelming workforce demand and enhancing the career progression and life-chances of millions of Australian workers. It also means embedding new and faster forms of accredited learning, such as microcredentials, within a rigorous, economy-wide ecosystem for recognising skills and learning capabilities that are relevant in the 21st century.

Finally, we must act together. A collaborative, tripartite approach is necessary in order to tackle 'whole of system challenges' with innovative solutions that can endure for places and regions, industries and sectors, and cohorts of the Australian population.

RMIT makes these recommendations for establishing a more responsive Australian tertiary education system to the Panel.

1.1 Principles for a more responsive tertiary system

The Interim Report of the Universities Accord puts forward a clear, ambitious vision for the future of the Australian tertiary education and skills system:

The national ambition for a tertiary education sector reform is an *adaptive* and *dynamic* system capable of lifting participation and attainment over time, while responding to increasingly complex, fast-changing economic and social challenges. The system needs to operate on two horizons simultaneously; to quickly leverage resources and meet urgent, targeted skill needs, while making steady investment in longer-term skills and innovation capability, to build system resilience and develop durable skills and knowledge that enable Australians to contribute positively to society.

Achieving this requires a system built with the following design principles:

Tertiary and multi-sector by design

A cohesive and connected skills-led system should be tertiary by design, including the intentional reform of existing institutional structures, roles and relationships, across sectors and states, and the corresponding flows of funding, transparency and accountability. Reform must enable innovation and alignment at the VET and HE interface; better recognise the distinct strengths of different sectors; erode structural siloes held by and between sectors, government, industry and regulators. Critically, the future system design must recognise and invest in the value of VET expertise and capability as an essential vehicle to deliver skills outcomes and solutions and remove barriers that prevent innovation and collaboration within and across sectors.

Skills-led

Using skills as a common, coherent set of definitions (incorporating job-relevant skills and knowledge as well as general learning capabilities) to link VET and HE will complement the existing activities that connect education, industry and human capital formation. It will support lifelong learning by helping people to understand their own skills and capability and how to develop this through education and training opportunities, whatever their prior experience.

Personalised learning for all

To address skills gaps and build an adaptive workforce, the tertiary education system must be designed to meet the needs of a more diverse population of learners, by supporting them to construct pathways that meet their specific situations. It must enable 'learning and earning' to take place concurrently, and give learners access to a wide range of high-quality choices and information about skilling opportunities. To achieve this, a fundamental shift in orientation of the tertiary system is required. This means moving away from focusing merely on *qualification* provision and linear education pathways in service of the school leaver market, towards a skills-led tertiary education system designed around the spectrum of lifelong learners and the changing structure of the Australian economy.

Collaborative and tripartite

Change may be 'systemic' when it seeks 'to solve a grand challenge through multiple mission projects that draw together key people across different sectors and policy areas.'[2] Systemic or structural change requires adaptation within and between discrete systems, services, stakeholders and community groups. Learning from past experience, we need to recognise that building consensus over time, across system actors, governments, industry and unions - in short, across the whole community - is essential for reform to be effective and sustained.

Summary of priority policy options

Prioritised recommendations:

1. Reform Work Integrated Learning and industry placements by piloting new financial support for students undertaking placements in the care and teaching industries (as recommended by the White Paper on Jobs and Opportunities), and prioritising broader opportunities for government and industry to co-invest in support of placements and grow high-quality Work Integrated Learning, underpinned by explicit principles including equity and affordability, at scale across tertiary education.
2. Fund higher-level apprenticeships for VET and HE, beginning in established areas of national priority where providers, industry and governments are willing to collaborate on innovative delivery arrangements, and align employer subsidies and support to learners across jurisdictions.

[2] Mariana Mazzucato, as referenced in The Brotherhood of St. Laurence, *Applied Systemic Change: An Implementation Guide of Building Capability in Human Service Systems*, 2022.

3. Define the thresholds for Commonwealth funding of higher education microcredentials and make relevant legislative changes to HESA to allow equitable participation. Ensure that relevant microcredentials can be integrated as appropriate units of credit in relevant HE and VET qualifications and incentivise curriculum innovation by universities and other providers of microcredentials, to support the growth of participation and skill development, especially among the working-age population.
4. Implement *in full* the recommendations of the AQF Review Panel, including the suggestions for a design and consultation workplan and implementation approach*, updated* through a collaborative roadmap and design process leveraging JSA, JSCs and other skills coalitions, as appropriate.
5. In developing a business case for a National Skills Passport, make sure that it is a central part of national investment in the fundamental enabling infrastructure for a lifelong learning system, including: rich skill descriptors, personalised learning profiles that align with senior secondary schooling; an integrated digital platform and ecosystem, using open data standards to allow inter-operability among different credentials and providers of skilling opportunities, as well as future co-investment in learning, and effective recognition of prior experience.
6. Align student-facing digital platforms across VET, higher education, transition from senior schooling (TACs) and careers information to support improved information and guidance about tertiary education and skills attainment.
7. Develop a national tertiary education 'system' attainment target for 2030, 2035 and 2040 and sub-targets for HE/VET and equity.
8. Introduce adjusted equity targets for participation which capture the whole tertiary system and may be specific to discipline clusters, occupations, geographies and other factors.
9. Confirm Jobs and Skills Australia's role as underpinning skills-led workforce and demand analysis for the tertiary system and invest in the development of agreed methodologies and interoperable data standards.
10. Establish a tripartite approach to developing a national Lifelong Learning Strategy.
11. Design and establish a Tertiary Education Commission to support the identified system accountabilities outlined in this report.

12. Create a National Skills Delivery Fund to prototype tertiary skills (delivery) coalitions in priority sectors/geographies, with appropriate, risk based, delivery, accountability and regulatory settings.

1.2 A timeline for system change

In our recommended timeline, the complexity and systemic nature of the reform pathway has been sequenced into three distinct phases, aligned with relevant reform processes, notably the timings for the National Partnership Agreements on Skills Reform and the recently released White Paper on Jobs and Opportunities.

Policy Lever	Phase 1: Design and prototype 2024-2025	Phase 2: Connect and scale 2026-2030	Phase 3: Integrate and sustain 2031-2035
Aligned to progress against:	• National Skills Agreement • Employment White Paper		
Tertiary learning provision	Phase 1: Actions • **Paid student placements:** *Pilot* • **Work Integrated Learning:** *Uplift and scale* • **Degree-level apprenticeships:** *Fund* • **Microcredentials:** *Define and progress*	Phase 2: Actions • **Paid student placements:** *Expand* • **Degree level apprenticeships:** *Fund and co-invest* • **Microcredentials**: *Integrate*	Phase 3: Actions • **Funded placements**: *Integrate* • **Industry Co-investment model:** *Develop* • **Microcredentials:** *Scale integration*
Tertiary education system infrastructure and frameworks	Phase 1: Actions • **AQF reform**: *Commence* • **National Skills Passport**: *Develop foundation* • **Student-facing digital platforms:** *Align*	Phase 2: Actions • **AQF reform:** *Advance in full* • **Tripartite Governance and consultation:** *Establish* • **National Skills Passport**: *Prototype*	Phase 3: Actions • **AQF reform**: *Renew and Sustain* • **System Infrastructure**: *Align system-wide* • **National Skills passport**: *Establish*
Tertiary education system outcome measurement	Phase 1: Actions • **National tertiary education 'system' attainment target:** *Develop* • **Jobs and Skills Australia (JSA):** *Confirm* • **Integrated Data and methodologies:** *Develop with JSA*	Phase 2: Actions • **Equity Targets:** *Renew* • **Graduate Outcomes measures:** *Renew* • **Skills attainment measures:** *Develop and introduce* • **Jobs and Skills Australia and TEC:** *Align*	Phase 3: Actions • **Skills investment frameworks:** *Develop* • **Personalised Learning Record / Skills passport:** *Integrate* • **Longitudinal Analysis:** *Undertake*
Tertiary education system planning and implementation	Phase 1: Actions • **National Lifelong Learning Strategy**: *Develop* • **Tertiary Education Commission:** *Establish* • **National Skills Delivery Fund:** *Establish*	Phase 2: Actions • **Adaptive Planning Cycles**: *Align and coordinate* • **Tertiary Education Commission:** *Expand* • **Skills innovation prototypes:** *Scale*	Phase 3: Actions • **Governance and strategy evaluations:** *Review* • **Tertiary Education Commissions:** *Review and refine* • **Skills investment frameworks:** *Develop*

1.3 A guide to this report

This report proposes a series of options for the AUA Panel to consider in its recommendations for the Final Report, to answer the guiding question of this project: What sort of tertiary system do learners need now and in the future?

The answers are grouped into four domains, reflecting the different policy elements needed to guide and manage the wider tertiary education system.

While each chapter and its domain of policy choices offers discrete system changes with individual recommendations, these elements are basically interconnected. Singular or piecemeal policy changes cannot successfully progress without coherent change to the whole framework of the tertiary system, and the core structures that define and hold it together (or separate, as the case may be). The time is now, to articulate and achieve cross-community support for this direction. Within each domain, our report offers several specific options to reach the overall desired outcome: a more responsive, equitable and responsive tertiary education system for all learners.

Throughout this project, the RMIT Policy & Impact team have characterised and investigated the detail of 18 policy levers that could be used to achieve the system outcomes outlined in the AUA's Interim Report. These are now grouped into four domains:

1. **Tertiary learning provision**
2. **Tertiary education system – infrastructure and frameworks,**
3. **Tertiary education system outcomes,** and finally
4. **Tertiary education system planning and implementation.**

These findings are based on eight weeks of consultation and engagement with stakeholders across the tertiary sector and industry, and research into Australian and international examples and best practice. The report builds on several years of research, prototyping and partnership engagement by RMIT's Policy & Impact team.

The report also features two core sector case studies that feature in applied examples throughout the analysis: the clean energy workforce and the social services sector. These case studies exemplify the real and immediate challenges faced by industry and the economy, each requiring both immediate and long-term skills solutions.

Tertiary learning provision is the first domain and explores the challenges for working-age learners and the types of learning experiences that a future system must enable. This includes Industry Partnered Learning, which includes work

integrated learning and the need for paid mandatory placements, as well as learning integrated work through higher-level apprenticeships. A funding threshold for microcredentials is also proposed alongside existing definitions of short-form learning.

The second domain explored in the report is **Tertiary education system – infrastructure and frameworks**, which looks at the core system elements: skills infrastructure and its application through a future skills passport, and the redesign of the Australian Qualifications Framework (AQF), including the challenges and key first steps in progressing this much-needed reform.

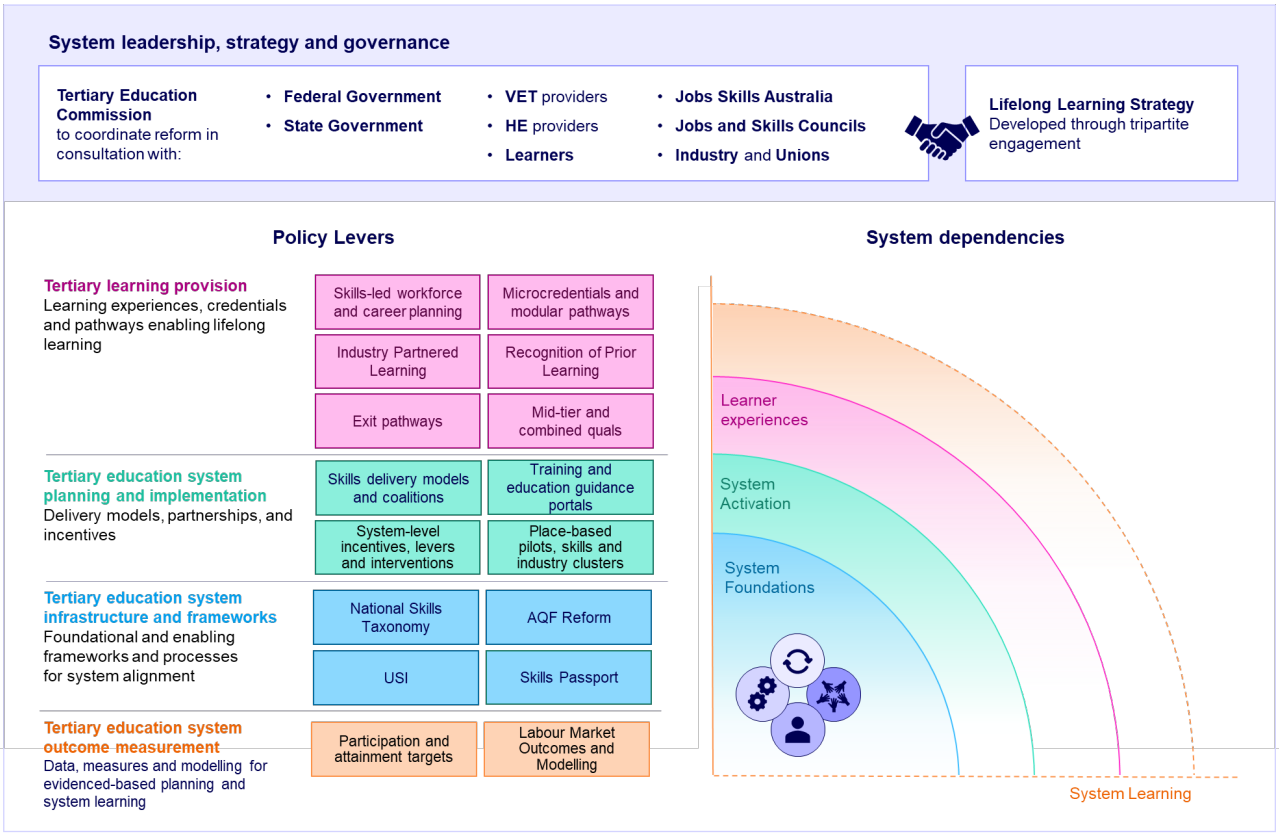
The **Tertiary education system outcomes** chapter investigates the role of targets, measurements, and modelling of the skills system, including how participation and attainment targets, as well as considerations of new and adjusted equity targets, can effectively measure and reflect the skills system and the changing pathways available to learners. It highlights the core role of JSA in the shift to a skill-based approach to system measurement; the need for JSA to work, from the earliest opportunity, with the pathway for establishing a Tertiary Education Commission, and the link to skills matching and labour market outcomes.

The fourth domain is **Tertiary education system planning and implementation**. This chapter outlines how to achieve an interconnected tertiary system that encourages collaboration, efficiency and a tripartite approach to implementation, including by developing a range of innovative and flexible skills and place-based approaches to education and training delivery, and the design principles required for effective governance and system leadership.

To demonstrate the system change process and application of the policy options outlined in each chapter, the report concludes with a roadmap for reform, spelling out the proposed phasing of key policy options in three stages from the publication of the Accord Final Report to 2035.

Through stakeholder consultation and research for this project RMIT has made a ‘readiness’ assessment for each of the identified policy levers, to give an integrated and ‘system-level’ perspective on the component parts. This readiness assessment is detailed at the conclusion of each chapter and summarised in Appendix A.

Illustrative map of policy levers to inform a more responsive tertiary system



Acknowledgements

RMIT wishes to acknowledge the invaluable partnership with the Department of Education, the guidance and contributions of Commonwealth, industry, union, state and sector stakeholders who generously provided their time and perspectives and made the conclusions drawn in this Report possible. A special mention to Phil Hawkins, Poonam Bhatia and Martin Riordan for their support and counsel throughout this project.

2 Issues and challenges

2.1 Challenge and context

Defining the needs of learners

Lifelong learning

Lifelong learning language is not new – it has seen several cycles of topical currency since the phrase was discussed in a 1972 UNESCO report.[3] Within Australia it featured prominently in the 1990s following the John Dawkins policy statement,[4] which highlighted the importance of lifelong learning to address "the growing pressures for skills development" which required changes "associated with award restructuring, changes in industry structure, technology, and in Australia's demographic profile and the role of women in the workforce and society".

As reflected throughout the AUA Interim Report, these exact pressures have remained, largely unaddressed for 35 years.

The difference today is the convergence of overwhelming pressures of demand, and community need, together with an opportunity for meaningful system reform and a shared appetite to renew learning opportunities and infrastructure across Australia. Reform is needed to create the skills that can address the pressures highlighted above, and to ensure that opportunities and experiences of tertiary education are equitable and inclusive. This is being recognised across the entire education system[5] with relevant responses that seek to better articulate the broad range of skills, capabilities and attributes learners acquire across their lifetime and related policy solutions, such as learner profiles, being developed to respond.

First Nations success in tertiary education and skills

As was highlighted in the Interim Report, inclusion of First Nations cultures, knowledge and perspectives is essential for Australia's development as a nation. This needs to be reflected in both the pedagogy and pathway opportunities of our educational institutions, to support and empower First Nations people while enriching the knowledge base of our entire nation.

Pathway opportunities require a commitment not just to increased participation for First Nations students, but to their success in education, community partnerships,

[3] As used in Edgar Faure's 1972 report *Learning to Be: The world of education today and tomorrow*. Report of the International Commission on the Development of Education, UNESCO.
[4] From John Sydney Dawkins' 1988 Report: *Higher education: A policy statement.*
5 Including from schools: https://www.education.gov.au/quality-schools-package/resources/looking-future-report-review-senior-secondary-pathways-work-further-education-and-training

employment and research, and for this commitment to be reflected in the foundational designs and responsible practices of our institutions. This includes career development opportunities for staff at all levels of the vocational and higher education system, in research, leadership, support, professional and teaching roles.

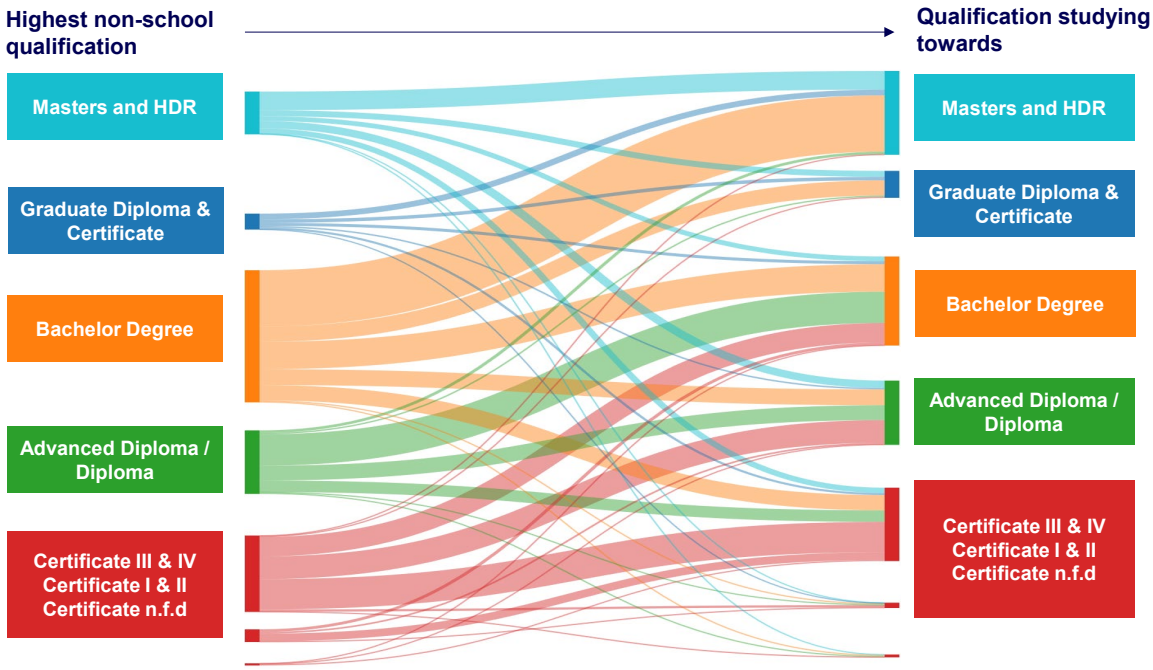
Personalised learning

The first major experience of participation in tertiary education, through long-form learning such as apprenticeships, diplomas or degrees, is a formative experience for many people and, when it succeeds, serves a broad benefit toward a person's development as well as preparing them for work. However, a long-form initial qualification should not be the only pathway available.

Increasingly, working-age learners require up-skilling and re-skilling across the duration of their lives. However, experience of the current tertiary system – particularly in a university setting - does not fully reflect the realities and pressures of learning as a working-age person.

A lifelong learning system should enable *different* experiences for *different* learners and *different* life stages. For example, the current system is mostly geared towards sequential, upward progression through the levels of education in the tertiary system. However, a quarter of all current student transitions in Australia are to a lower AQF level, as illustrated below.

Participants participating in formal accredited study with an existing non-school qualification[6]



[6] ABS Education and Work, 2022, Table Builder.

Current trends in graduate study and lifelong learning

The postgraduate and broader lifelong learning markets are at a critical turning point. Domestic enrolments in traditional postgraduate learning have been in sustained decline across many disciplines since pre-pandemic, and uncertainty remains regarding international postgraduate markets in the post-pandemic environment.

People in Australia and overseas face a growing need to upskill and/or reskill more continuously throughout their life-course. This need is fundamentally driven by the growth of knowledge and its application in every part of society; with knowledge-intensity and technological innovation driving rapid changes to 'the nature of work' in many occupations, while also driving the transformation and restructuring of entire industries. This is forcing a realignment of different parts of tertiary education, which historically have been run separately from each other, and associated with specific industry sectors, types of work, and socio-economic class.

The current structures are not capable of supporting either the level of participation or the speed of learning and adaptation that Australia's changing economic structure demands. This need for change is being accelerated by the policy ambitions and commitments of an Australian government committed to net zero, to national security, and to inclusive, affordable, high-quality health and social care.

Among the opportunities created by these shifts, are the growth of short-form courses and greater collaboration between education providers, unions and employers, to support the participation of learners who may not need a traditional graduate qualification.

Domestic postgraduate demand has been historically counter-cyclical to employment demand (where strong demand in the labour market coincides with weaker demand for tertiary study, and vice-versa); with Deloitte[7] research showing that domestic demand for postgraduate learning is largely driven by work-related outcomes.

When short term economic conditions are challenging, unemployment rates rise and more people enrol in studies to differentiate themselves from other professionals and job seekers. The strength of Australia's post-pandemic economic growth, in particular the lowest unemployment rates in over a decade[8], combined with reduced skilled migration, have significantly reduced competition amongst workers for jobs.

While there are indicators that labour market competition may increase in the future (Australia's economic forecasts are also subject to uncertainty, and skilled migration

[7] Where to Now? Blended Futures, Deloitte (2020).
[8] Australian Labour Force Statistics, ABS (2022).

places are increasing[9]), it is not clear that this will drive the same demand for *traditional* postgraduate programs as in the past. The needs and preferences of current tertiary-qualified learners have been profoundly altered by the pandemic, while new cohorts with different needs have emerged. In short, although demand for further learning may increase, much of this demand will be for different offerings than traditional, on-campus, Masters by Coursework programs.

Skills in demand

Australia faces a range of economic and social challenges that add strain on our skills system. As outlined in the 2023 White Paper on Jobs and Opportunities, Australia is experiencing 'critical shortages' in key areas, including care and wellbeing, technological and digital transformation, and clean energy.[10]

The social care and wellbeing sectors face overwhelming and accelerating community demand for services. Technology-intensive sectors such as engineering, computing, and manufacturing risk being outpaced by the need for faster, deeper specialisation in emerging technologies and processes. The pathway to net zero presents opportunities for industrial transformation, new jobs and enterprises, and productivity growth.

But in all these examples, and many more, the transformation cannot occur without radically different (and better) skills supply, brought about by investment, innovation and collaboration. These sectoral challenges are also commonly exasperated by the inability of the status-quo system to efficiently deploy skills solutions to areas of need, nor offer pathways through learning and work for an increasingly diverse population of learners.

In the introduction to the 2023 *Clean Energy Generation* report, Peter Dawkins identifies not one, but two transformations facing Australia as the nation transitions to a net-zero economy:

> *A transformation of how we generate, use and export energy in order to decarbonise our economy, and a transformation of how we deliver skills through higher education, VET, migration and on-the-job training to grow our workforce.*[11]

It is on this basis that 'ambitious net zero targets will need to be matched by ambitious … skills policy' which will resonate across sectors and geographies in need.[12]

---

[9] Migration Program Planning Levels, Department of Home Affairs, Immigration (2022).
[10] Australian Treasury, 2023, *White Paper on Jobs and Opportunities*, p.105.
[11] Jobs and Skills Australia, 2023, *Clean Energy Generation,* p.7.
[12] Jobs and Skills Australia, 2023, *Clean Energy Generation,* p.8.

2.2 Introduction to case studies

This report will use two areas of identified national priority in the Interim Report: the Clean Energy and Social Services workforces, as case studies and illustrations of the broader 'challenges to be addressed' by a more responsive tertiary education system. These serve to aggregate and contextualise the importance and scale of the options outlined in this report.

Clean Energy workforce

Achieving net-zero carbon emissions by 2050 requires substantial investment in workforce and skills transformation. The JSA *Clean Energy Capacity Study* suggests that the *specific* clean energy supply workforce will need to increase from around 15,000 workers in 2023 to 34,000 workers in 2033.[13] However, the clean energy workforce is fragmented across multiple sectors, 'well beyond the obvious sectors like wind, solar and hydroelectricity into parts of construction, research and development and others'.[14] Analysis shows that Australia will need 213,000 workers in other adjacent occupations, representing an increase of around 30%.[15]

Some key dimensions of the lifelong learning challenge include:

- The education and training systems are delivering some types of skills Australia needs for the transition, but struggling to deliver at the scale, distribution and speed needed to meet demand.
- Scaling the delivery of these skills and recruiting diverse learners is an urgent priority. This may take the form of creating diverse pathways through education, and innovative course design approaches that help education and training providers respond faster to emerging skills needs.
- The types of skills required for transition transcend VET and HE sector boundaries and require a closely connected and aligned tertiary system. Thus, a 'harmonised education, training and migration system with a step change in how we train trades and technical workers is a priority'.[16]
- VET and TAFE will play a pivotal role in meeting skills demand over the next two decades. Modelling forecasts significant shortages of electrical, building, and engineering VET-qualified trade roles. The transition requires 32,000 more electricians in the next seven years and close to 2 million workers in building and engineering trades by 2050.[17] Existing TAFE system capability

[13] Deloitte, 2023, Projections for Jobs and Skills Australia.
[14] Jobs and Skills Australia, 2023, *Clean Energy Generation,* p.8.
[15] Deloitte, 2023, Projections for Jobs and Skills Australia.
[16] Jobs and Skills Australia, 2023, *Clean Energy Generation,* p.17.
[17] Jobs and Skills Australia, 2023, *Clean Energy Generation,* p.17.

needs to be deployed in novel ways to meet uneven demand across geographies and jurisdictions.

- Impact and demand are unevenly distributed across the country, as the transition requires different workers to be employed across the country according to the specific needs of communities in transition as well as requirements of clean energy technologies and industries. Regional areas are poised largely to bear the risk and opportunity of transitioning.

These characteristics create a complex and multi-dimensional lifelong learning challenge. The challenge is systemic in scope and requires collective action and strategic coordination across all levels of government, industry, unions, and education in Australia. At the same time, the success of the transition hinges on tailoring and deploying responses at local and regional levels to communities, many of whom do not have strong connections with tertiary education.

Australia's transition to a net-zero economy therefore represents an exciting opportunity to rethink the way in which the tertiary training and education system can partner with industry and government to contribute to national industrial transformation and economic restructuring. It also provides an opportunity to assess and revitalise the capacity of the tertiary system to address local manifestations of global systemic challenges; to work alongside regional labour markets and communities to meet localised needs. For this reason, 'the clean energy workforce could be a unique testbed to explore innovative models of education and training and should be used to the fullest'.[18]

Case study: La Trobe Valley and Gippsland Clean Energy transition challenge

The Gippsland – La Trobe Valley region of Victoria is facing significant structural economic and social change as industry sectors evolve towards a low emissions future, with transitions underway within energy, forestry, and agriculture. An overarching transition plan is required to achieve change in a fair and equitable way that prioritises the wellbeing of all members of the community and supports long term population growth.

Mining and associated supply chain businesses are the region's largest economic contributor, and is a source of pride, community identity, employment

[18] Jobs and Skills Australia, 2023, *Clean Energy Generation,* p.7.

and economic activity. The workforce that has grown around this industry is highly skilled. In the short term, the planned closure of the Yallourn Power Station in 2028 and Loy Yang A in 2035 will displace thousands of workers.

Gippsland – La Trobe has been designated as a Renewable Energy Zone. There is already a pipeline of more than 25 large renewable energy projects proposed for Gippsland. The longer term move to a low emissions future will have wide-ranging impacts across sectors, including increased prospects for agriculture, fishing, forestry, renewable energy generation, construction, manufacturing and tourism. 12,925 new workers will be required to support a transition to a clean economy by 2025, with even greater skills demand beyond that to service the pipeline of renewable energy projects.

The existing community must be provided access to high quality, valued jobs and employment pathways in industries with a long-term future, with a particular focus on those workers transitioning from the traditional energy and forestry sectors and/or who may have been disenfranchised in the past. It is anticipated that population growth will increase demand for health and social services, agricultural food production, construction, education, childcare and a range of retail, service-based and hospitality jobs in the region.[19]

Social service sector[20]

Australia's social service sector[21] is one of the largest and fastest growing sectors of the economy. Employment in the care and support sector is projected to double over the next four decades, as demand for quality services continues to grow.

Around 460,000 care and support workers (excluding mental health) in Australia are employed across a wide range of occupations and multiple industries. The largest occupation group in the care and support workforce is personal care and support workers, who are largely VET-qualified. These workers are 59% of the entire workforce, and growing rapidly. Allied health professionals are the second largest

[19] LaTrobe Valley Authority, 2022, LaTrobe Valley and Gippsland Transition Plan.
[20] Much of this overview has been summarised from: https://www.nationalskillscommission.gov.au/reports/care-workforce-labour-market-study, https://www.aihw.gov.au/reports/australias-welfare/australias-welfare-2023-data-insights/contents/welfare-workforce-demand-and-supply
[21] Social Service Sector includes Care & Support, Community Service and Mental Health.

group (13%), followed by Health and welfare support workers and Registered nurses (both 12%) and Health and welfare managers (5%).

The sector is highly feminised; women account for around 79% of the care and support workforce. The sector also employs proportionally more Aboriginal and Torres Strait Islander people than most others, and likewise for people from CALD and migrant communities.

Job vacancies in the sector are the fourth highest at 5.3% nationally, and while workers tend to stay working within the sector, job turnover is high, with some sub-sectors reporting 25-30% annual turnover.

Rising demand for care and support services is expected to underpin a continued shift in the industry composition of Australia's economy towards services. This will continue to increase demand for additional workers with the right skills, in vocational and highly specialised roles. Governments play a significant role in funding, delivering and regulating these care and support services, which increases the importance of good policy design to enable productivity growth, quality improvements, appropriate competition and better labour market outcomes.

The sector is highly fragmented, and unlike in other countries Australia lacks a whole-of-social services framework, creating fragmented, systems-within-systems: in skills and training, employment and workplaces, service delivery systems, and sources of policy direction, funding and reporting. The sector is also represented by numerous peak bodies and professional associations.

Consistent mapping of the workforce is challenging, with poor alignment between ANZSCO occupation codes and existing and evolving job roles. Alignment is relatively better among occupations predominantly Commonwealth-funded e.g. disability, child-care, aged care services, whereas for other predominantly State-funded services, there is much poorer occupational match with ANZSCO codes. This is further reflected at the sub-sector level, with limited development and visibility of career pathways. The high degree of sector fragmentation is also reflected in the education and training system, with the Community Services Training Package alone containing 45 qualifications, 61 Skill Sets and 460 units of competency, spanning care, support, mental health and community services.

To gain real traction from a better-connected and aligned tertiary sector, there is much the Social Service sector can (and must) do to develop more effective workforce strategies, including identifying opportunities for greater alignment and consistency of common job functions, and developing more coherent career pathways that link learning, earning and career development.

There is much the sector can gain now from the initiatives proposed in the AUA and from a better connected and aligned tertiary sector. Examples are highlighted throughout this Report.

Example: social care and wellbeing sector in Victoria

Transformation in social care and wellbeing is essential to supporting Victoria's growing, ageing population in the face of growing demographic need and inequality. On one hand, advanced technologies such as artificial intelligence, virtual reality and robotics present an opportunity to design and implement new models of care. On the other hand, the sector is already struggling to develop and cultivate workforce scale and skills to meet community demands, with forecasts suggesting that approximately an additional 110,000 workers will be required to meet projected demand over the next 5 years.[22] As these two concerns coalesce, the care and wellbeing workforce is at risk of being outpaced by both demand and technological disruption, with the predominantly female formal and informal care and wellbeing workforce most vulnerable to these changes.

[22] Deloitte Access Economics, RMIT City North Social Innovation Precinct and Innovation Spine: Economic impact assessment and sector case studies, 2022.

3 Tertiary learning provision

This section addresses the potential to design and deliver more responsive tertiary learning provision, leading to better experiences and outcomes. These include articulating and addressing systemic challenges for work integrated learning and professional placements; the expansion of work-based or 'degree-apprenticeship' models of provision and options to support the inclusion of higher education microcredentials into a sustainably funded part of the Australian tertiary education landscape.

We also introduce a new concept – Industry Partnered Learning (IPL) - which includes types of learning where industry engagement (including unions) plays a key role in how students engage with a particular qualification, including Work-Integrated Learning (WIL) and Learning-Integrated Work (LIW).

These responses are an essential part of a system of lifelong learning which supports a broader cohort of learners to access and participate in tertiary education: including people who are of working-age and who may not have easy or accessible pathways to re-skill or change careers. This group of potential learners is a key cohort who are currently missing out on skilling opportunities, and could be supported to gain qualifications at the 'mid-tier' of the AQF by quickly developing skills for in-demand occupations and improving their earnings and contribution to productivity.

The implementation of a Lifelong Learning Entitlement (LLE) is a crucial way to support this cohort in new forms of learning such as IPL and shorter up-skilling opportunities such as microcredentials. These options often function at the intersections of vocational education and higher education and so risk being overlooked or under-structured in a bifurcated, multi-jurisdiction system.

Prioritised policy options:

1. Reform Work Integrated Learning and industry placements by piloting new financial support for students undertaking placements in the care and teaching industries (as recommended by the White Paper on Jobs and Opportunities), and prioritising broader opportunities for government and industry to co-invest in support of placements and grow high-quality Work Integrated Learning, underpinned by explicit principles including equity and affordability, at scale across tertiary education.
2. Fund higher-level apprenticeships for VET and HE, beginning in established areas of national priority where providers, industry and governments are

willing to collaborate on innovative delivery arrangements, and align employer subsidies and support to learners across jurisdictions.

3. Define the thresholds for Commonwealth funding of higher education microcredentials and make relevant legislative changes to HESA to allow equitable participation. Ensure that relevant microcredentials can be integrated as appropriate units of credit in relevant HE and VET qualifications and incentivise curriculum innovation by universities and other providers of microcredentials, to support the growth of participation and skill development, especially among the working-age population.

Challenge and response

Challenge:

Australia needs vastly more skills to be developed, now and in future, and the tertiary education system will have to provide more learning to increasingly diverse and working-age Australians.

Response:

Enabled by a tertiary education system framework and infrastructure, Australia can develop new learning responses that provide more frequent, applied opportunities to build valuable skills and knowledge.

3.1 Industry Partnered Learning

Industry Partnered Learning (IPL) includes types of learning where industry engagement plays a key role in how students engage with a particular higher education qualification, including Work-Integrated Learning (WIL) and Learning-Integrated Work (LIW). Work-Integrated Learning is the most common form of Industry Partnered Learning (IPL), and encompasses any arrangement where students undertake learning in a work context, as part of their course requirements. Placements are the best-known example of WIL. Less well known is Learning-Integrated Work (LIW), which engages a worker in a formal educational program to develop their skills while they are employed.

Is Learning-Integrated Work 'just apprenticeships'?

Apprenticeships are a long-established format of LIW for trade qualifications, where apprentices have a formal training contract with an employer. These contracts are managed by state apprenticeship bodies (such as Apprenticeships Victoria, or Training Services NSW). Individuals are employed as an apprentice and undertake agreed leave to attend their formal learning component (for example, one day a week attending TAFE classes). Apprenticeship entitlements are often linked to specific industrial awards, taking into account the age of the apprentice, with pay increases linked to completing time-based and competency-based milestones.

Traineeships offer a similar type of IPL through LIW, offered in vocational areas other than trades, such as services, retail and personal care. Traineeships are generally for a shorter contract period of training than apprenticeships (around one year, as opposed to a four-year apprenticeship), and are at times used to formally train an existing or new employee as a trainee.[23]

Learning Integrated Work is a progression of these types of IPL. The difference between apprenticeships, traineeships and the new, broader definition of Learning Integrated Work proposed for the Accord in this report is the expansion of apprenticeship/traineeship arrangements to other types of tertiary learning and linked areas of industry. This could mean the introduction of nationally recognised Degree Apprenticeship programs in Australia, as well as more Higher Apprenticeship courses and other types of earn-and-learn qualifications across the entire span of the AQF: from Vocational Education certificates through to Industry PhDs. Current legislative arrangements in most states[24] require a vocational education pathway to be eligible for apprenticeship and traineeship subsidies and support arrangements for employers and employees.

[23] This definition and the history of apprenticeships and traineeships is explored in Peter Noonan and Sarah Pilcher's *Finding the truth in the apprenticeships debate*, Mitchell Institute, August 2017, Mitchell Report No. 03/2017.

[24] South Australian legislation introduced in 2021 allows for higher education qualifications, see *South Australian Skills Standards,* under the South Australian Skills Regulations 2021.

The case for reform – Work Integrated Learning

Positive graduate benefits but constrained supply

Graduates from universities who work in fields where WIL is prevalent, consistently fare better in the job market than graduates from universities where WIL is uncommon.

Despite rising evidence of the benefits of WIL, a Universities Australia report[25] indicated that in 2017, only roughly one-in-three university students (37.4%; 451,263 students) had a WIL experience and nearly half of all WIL experiences (42.9%) were placements, in professions where practical skills are crucial for determining a student's preparation for the workforce and essential for professional accreditation.[26]

As the AUA Interim Report noted, there is difficulty supporting sufficient placements in healthcare – notably in nursing, allied health and psychology, as well as in education.

These mandatory, unpaid placements place undue pressure on students who can least afford to forgo other paid work, who may also be undertaking caring, health and family responsibilities (and other barriers like long travel from regional and outer-suburban areas), to undertake placements.

The role of professional bodies

Our consultation found that the role of professional certification bodies in Industry Partnered Learning – chiefly around mandatory work placements – helps to constrain the number of, and conditions for, student placements. Further, the involvement of professional bodies in different fields of study varies widely. While maintaining standards for professional practice – including for safety, quality, consistency, and accountability is undoubtably important – there is less clarity on the certification of the accrediting bodies themselves, and their obligations toward meeting skills shortages and a charter toward meeting student experience standards in IPL.

There is an inherent tension that these issues prompt against quality drivers protecting reputation managed by peak professional bodies and accrediting associations. Yet the drivers of change – and particularly exposed to technological advances and AI – require greater and more structured participation by industry and professional bodies toward generating solutions.

For example, a collaborative approach in which the Department of Education leads a process with professional bodies under which they may be required to review their

25 Universities Australia. *Work-integrated learning in universities.* 2019.
26 Mitchell Institute, *Industry experiences and their role in education to work transitions*, report prepared by Peter Hurley, Michael Coelli, Binh Ta, Lizzie Knight and Melinda Hildebrandt, Melbourne, 2021.

accreditation requirements to ensure they remain fit for purpose, up to date, and to ensure that Recognition of Prior Learning arrangements are working. Considerations may include opportunities in the context of technological advances, precedent of simulation WIL in several professions, international evidence of new RPL which includes 'gap training' to support migrants and ex-Defence workers, and how this WIL upskilling may be mapped with professional bodies into a broader capability framework across the full tertiary education spectrum.

In terms of responsibility, the Department of Education may initially conduct this review with professional bodies to bring forward an action plan in association with JSA and TEQSA, with ultimate responsibility under the TEC for sustained action in its new broader mission on WIL and lifelong learning.

Identified barriers – Work Integrated Learning

Placement poverty and adequate supervision

The issue of students remaining unpaid while completing mandatory placements, often in areas of industry with longstanding skills shortages, needs to be addressed. While unpaid placements are currently permitted under the Fair Work Act,[27] the reality for students suggests that poor early experiences are often negatively influencing perceptions of working in these industries.[28]

Nearly all stakeholders feel that students should be compensated for their labour during these time-intensive placements, but the matter of who is responsible for paying students is less clear. With many placements operating in public sector and nonprofit schools, hospitals and facilities, state and territory governments likely have a role to play, alongside the Commonwealth and - where appropriate - employers and industry bodies.

The other side of student placements is the need for adequate supervision. For industries that are already under pressure from shortages of skilled workers – it can be extra difficult to source adequate resources for supervision of students in the workplace.

Government fragmentation

For governments, a problem highlighted with the provision of placements has been that clinical placements span two different portfolios, education and health, with little oversight and the suggestion that these entities require better collaboration in

[27] Fair Work Act 2009 – where lawfully unpaid placements are defined within a Vocational Placement criteria.
[28] See Oke, N., Hodge, L., McIntyre, H., & Turner, S. (2022). 'I Had to Take a Casual Contract and Work One Day a Week': Students' Experiences of Lengthy University Placements as Drivers of Precarity. *Work, Employment and Society*, pp. 1-17.

preparing students and providers for both the practical experiences required for quality learning experiences.

Example: NDIS Workforce Placements

Competition for clinical placements with adequate supervision is a longstanding issue[29] for students within nursing and health care. More recently, NDIS funding has added additional challenges for providers (particularly smaller service providers[30]) in managing pricing and supervision for student placements, as well as adding challenges in offering more novel training arrangements for traineeships which require formal qualifications for supervisors:

> "Under NDIS pricing, service providers are already concerned about how they are going to adequately supervise their support workers. One provider explained that the pricing allows for one supervisor per 18 support workers in usual situations and one supervisor per 15 support workers where they are supporting participants with complex needs. Many felt that the requirements for supervising a trainee would not be viable under those arrangements."[31]

The NDIS National Workforce Plan acknowledged this issue, and noted its effect on the pipeline of appropriately skilled workers:

- Clinical placements and work experience in disability for allied health professionals directly influences recruitment into disability positions, but NDIS placements are increasingly limited. Education providers, disability providers and state and territory governments need to work together to re-establish pathways between education and industry that may have been disrupted through the introduction of the NDIS.
- Implementing traineeships for support workers is more complex as supervisory arrangements in a participant's home look different to a more traditional service setting.[32]

[29] "The Education Review noted that placements for students are not always easy to obtain even when educators recognise the value of exposure to particular clinical settings; there is a high level of competition for placements; and the costs of delivering adequately supervised programs are high", 2002 Report on the Inquiry into Nursing – The patient profession: Time for Action, 3.51. See also Patricia Heath's "National Review of Nursing Education 2002: our duty of care", Department of Education, Science and Training, 2002.

[30] Quilliam, Claire and Bourke, Lisa. "The perspectives of National Disability Insurance Scheme service providers on student placements in rural Victoria" University Department of Rural Health, University of Melbourne, *Summary Report,* 2019, p. 2.

[31] Jobs Queensland. *Building the NDIS workforce through traineeships*. Research report, Queensland Government, August 2018, p. 18.

[32] Australian Government. *NDIS National Workforce Plan: 2021-2025*, Department of Social Services, 2021, p. 16.

Options for reform

Paid mandatory placements

Feedback from stakeholder conversations across the sector provided strong and consistent support for the expansion toward WIL being a universal part of Australian higher education qualifications. Our stakeholder consultations also revealed a reform appetite to progressively increase the quality and payment for WIL, particularly where these constituted placements that were mandatory for professional certification alongside formal qualifications.

Options are framed here along an evolutionary pathway as a way to garner additional industry and jurisdictional support and to progressively increase the absorptive capacity of key placement hosts in response to the identified barriers listed above.

- Pilot additional support for students in the area of care and teaching professions (as outlined by the White Paper on Jobs and Opportunities) with the consideration of shared investment models between Government and employers (which may be state and territory governments).
- Develop as a part of a National Cabinet discussion of Education Ministers a new, national agreement to progressively introduce paid placements for mandatory work placements required as part of a formal qualification, in collaboration with relevant portfolios and industries.
- Develop additional guidance for universities and employers that define threshold standards as part of the agreement with the aim of offering safe, supportive environments for students on placement.
- Professional certification bodies should be expected to consider existing work experience in the field as RPL toward placement requirements; and be reviewed to ensure accessible and equitable pathways are being recognised for students.

The case for reform – Learning Integrated Work

Mid-tier qualifications for productive lifelong learning

As we shift toward the future system of lifelong learners who are re-skilling and up-skilling in tertiary education, re-skilling pathways which include paid employment are needed. The new working-age learner is less likely to be able to take on full-time study without an income, in conjunction with family and care requirements.

As such, broader 'Learning-Integrated Work' (LIW) options are needed for qualifications across the span of the AQF, particularly designed to be accessible for those who have limited or outdated existing qualifications. A further advantage of these mid-tier qualifications is their potential to recognise previous work experience and skills developed during the work-based component of the qualifications. This can make mid-tier tertiary education more productive, inclusive, cost-efficient, and valuable in extending career development opportunities that could address some critical issues of retention and sustainability in national shortage areas, because it makes reskilling faster, less costly and better aligned with industry and community need.

The AUA Interim Report highlighted the Industry 4.0 Advanced Apprenticeships as an example of new models being piloted at AQF levels 5 and 6.[33] This area of 'mid-tier' qualifications operates at a crucial level of accessible, well-structured learning pathways that can lead to highly skilled occupations without the full cost and time of 3-4 year degree programs.

Nature and benefits of mid-tier focus

A growing focus on these 'mid-tier' qualifications emphasises a 'learn-and earn' approach, combining paid employment with relevant knowledge, applied learning and skills formation. These qualifications can vary by length and be adapted to suit the specific needs of different industry sectors and occupational requirements, while still adhering to pedagogical approaches proven to effectively increase the utilisation and relevance of workforce skills, and the application of relevant knowledge, in the economy. RMIT's analysis and prototyping demonstrate that this model of mid-tier 'learn-and-earn' qualifications will improve workforce transitions; increasing the efficiency and effectiveness in which skills investments can be translated into application, and thus the speed at which workers can enter the workforce or move between industry sectors.[34]

The inclusive design of these qualifications is also critically important. The mid-tier or para-professional level of knowledge, skills and application[35] expands the spectrum of opportunities for in-demand pathways that can be accessed by a diverse (often mature) population of learners, many of whom face intractable opportunity-cost

[33] Interim Report, p. 61.
[34] RMIT's Workforce Innovation Development Institute (WIDI) "Blazing the Trail - Higher Apprenticeships Pilot for the social service sector" Project Report, p. 7.
[35] Review of the Australian Qualifications Framework Final Report 2019, p. 103.

barriers to workforce transitioning between different occupations and industry sectors.

Analysis of ABS data suggests that the most significant barriers to participation in tertiary education for mature students (over-25 years old) are financial and balancing study with work and personal commitments.[36] This finding was stronger for survey participants interested in enrolling at a sub-bachelor level of study. With the proposed qualification and pathway re-designs, this cohort of workers, previously disengaged from tertiary education, can develop skills without forcing a choice between re-training and income, through a sustainable growth of mid-tier provision.

Identified barriers – Learning Integrated Work

Jurisdictional differences

As highlighted earlier in this section, many existing apprenticeship-type forms of LIW are currently linked to agreements with the VE sector, administered through state-based apprenticeship and traineeship systems. Dual-sector institutions, such as Victoria University, also develop and deliver a wide range of provisions including cadetships.

The expansion of IPL to include LIW in Higher Education would require states and territories to include higher education in their existing apprenticeship legislation and leverage additional tertiary education opportunities and workforce solutions by doing so.

Otherwise, a new, national program could be initiated to operate a combination of LIW and IPL provision across qualification levels between VET and HE, across tertiary levels to offer programs such as Degree Apprenticeships, Higher Apprenticeships and innovative ‘earn-and-learn’ types of IP.

Higher cost of delivery and increased complexity

Many of the prototype models of Learning Integrated Work so far have highlighted the extra time taken to design a program of learning that met employer needs and maintained university standards and relevant professional accreditation requirements.

Stakeholders also pointed to the additional costs of delivering a more complex delivery mode (partly in-class and partly in the workplace) and the additional support, mentoring and coordination needs that are required to support the learner effectively. This was over and above the identification of a ‘job’ that came with relevant pay and conditions that had to be sustained for the length of the learning program.

[36] ABS, Work-Related Training and Adult Learning, 2021, Table Builder.

Options for reform

Expansion of LIW models across both vocational and higher education

Consistent feedback from our consultation suggested that increasing the provision of mid-tier qualifications, in priority areas of demand, using LIW and Degree Apprenticeship models, could have major benefits for learners and industry. Therefore these options suggest:

Option 1:

- Broadening and updating existing apprenticeship legislation nationally to include Higher Education providers, in alignment with redesign of the Australian Qualifications Framework
- Adding Higher Education qualifications to existing apprenticeship and work-based support mechanisms, with funding support from the Commonwealth and States where relevant

Option 2:

- Establishing a new Industry Partnered Learning body within the Commonwealth (Tertiary Education Commission) to initiate and manage new policies for Learning Integrated Work programs across the tertiary system, including Degree Apprenticeships and Higher Apprenticeships
- Support large-scale pilots of Degree Apprenticeships, together with ‘skills delivery coalitions’, in areas of established industry need, such as digital health, defence and advanced manufacturing
- Prioritise funding, including in the design of a Lifelong Learning Entitlement, for new mid-tier qualifications and microcredentials to support working-age learners to access the tertiary education system with accessible re-skilling pathway opportunities

In each of these options, the Commonwealth government should:

- Insist on useful and accurate data and analytics reporting to inform the evaluation of reforms and scaling partnerships
- Create a public awareness campaign about new models of IPL to encourage enrolment and engagement from both students and industry

- Ensure the design of IPL models is inclusive, accessible, and flexible, to support the needs of learners who are not necessarily school leavers
- Provide guidance to education and jobs providers around career advice for both younger learners and mid-career workers about the opportunities for IPL models available.

Dependencies

- System outcomes, with regular reporting of experiences to assess real-time graduate and labour-market outcomes for degree apprentices as they engage with industry and learning
- Scale and implementation levers, including collaborative skills delivery coalitions to develop innovative IPL solutions and pilot new provision.

3.2 Short-form learning

Microcredentials and fast-tracked upskilling

Over the past decade microcredentials have risen to prominence, with their promise of a rapid, accessible, and affordable means to upskill and gain qualifications in fast-paced skills environment.

The benefits of this type of credential, being flexible, quick-to-market, and often delivered online, is equally what makes it a challenge for the structured processes of the tertiary education system. The Commonwealth sought to address this definitional question with its National Microcredentials Framework (NMF) developed in 2021.[37] The final definition in the NMF allowed for a broad range of volume for its conditions of a microcredential, defined as: "a certification of assessed learning or competency, with a minimum volume of learning of one hour and less than an AQF award qualification, that is additional, alternate, complementary to or a component part of an AQF award qualification." [38]

In this view, microcredentials are assessed – either as 'learning' or through assessed competency, from a range of anywhere between an hour and a full semester (i.e. a half-year, full time) of tertiary learning. This framing allows for a microcredential to be defined across both Vocational and Higher Educational systems, but also leaves a level of ambiguity about what the government – as the co-author of the framework – sees as its role in funding microcredentials within the tertiary education system.

The focus of Higher Education's perspective on microcredentials was often viewed through the lens of assessment and quality assurance, to meet new and existing university structures of learning and teaching (e.g. undergraduate / postgraduate credit architecture and faculty structures). On the other hand, Vocational Education and independent providers instead drew attention to the broader usage of microcredentials that VET is already well-placed to deliver, and does so broadly for the public already: through single unit of competency skill sets (e.g. First Aid, CPR, or RSA training) that are delivered to a broad range of people. These stakeholders suggested – some with very strong views – that 90% of learners accessing microcredentials were working toward discrete, specific pieces of industry knowledge or certification, and not with a view toward stacking them toward a traditional university qualification. This perspective was also present in the Bean & Dawkins Review, reflecting World Economic Forum data[39] that suggested that in practice, "employers are not looking to higher education providers to meet their upskilling and

[37] https://www.education.gov.au/higher-education-publications/resources/national-microcredentials-framework
[38] *National Microcredentials Framework*, Department of Education, 2022, p. 3.
[39] World Economic Forum. *Future of Jobs 2020*, 2020.

reskilling needs,"[40] citing the perceived lack of suitability of Higher Education providers to offer industry reskilling.[41]

The case for reform

Microcredentials are recognised as critical to addressing identified skills gaps and industry workforce demand. They provide learners with flexible, modular and inclusive methods of rapid skills acquisition, and providers with a more responsive, industry-aligned offering.

The Interim Report noted the role of microcredentials as having significant potential toward offering fast, stackable and portable skills pathways. The Report focused on the need for individuals to continually update and refresh their skills across their lifetimes, *in addition* to any foundational and enduring knowledge from existing higher education and vocational education qualifications.[42]

Following interviews with a wide range of stakeholders, an issue emerged from these two ends of the microcredential spectrum, seemingly at odds between the needs of Higher Education and Vocational Education. The definition in the NMF itself was valid for the range of microcredentials across the spectrum of uses for industry and learning. However, within that framework has emerged a need to define a threshold for public funding. This is likely to require a sub-set of definitions which can verify skills, knowledge or learning capability within Higher Education that are equivalent to skills sets in VET qualifications, and accreditation by industry.

Identified barriers

Our consultations demonstrated that industry is highly interested in microcredentials, and keen to work with tertiary education providers to rapidly upskill the current and future workforce. Issues however arise when industry requires a short timeframe between development and delivery of skilling programs, which is often at odds with the timeframes to develop a fully assessed and approved microcredential at a tertiary institution.

In some sectors such as technology and ICT development, industry has taken the lead in developing its own industry-specific microcredentials and offering them independently of tertiary education providers. They have 'jumped ahead' of the tertiary system; and in these fields there is a strong online self-learning and upskilling culture.

There remains unmet demand in other industries for upskilling microcredentials, especially in sectors with high demand for renewal and innovation, such as clean

[40] Bean, Martin & Dawkins, Peter. *University-Industry Collaboration in Teaching and Learning Review*, DESE, 2021, p. 22-23.
[41] Based on the AiGroup Employer Survey, Australian Industry Group. (2021), *Skills Urgency*, p. 22.
[42] AUA *Interim Report*, p. 62.

energy. These industries require active and innovative partnerships with HE and VET providers to address skills shortages.

More broadly, international research on the actual effects of microcredentials on workforce readiness and employability is mixed, suggesting that they may offer diminishing returns for those who already have significant prior work experience.[43] Yet this concept of shorter-form learning is marked as an international "megatrend" by the EU[44] because of its fast-tracked ability to help up-skill the workforce.

Stakeholder engagement found that the current NMF definition is extremely broad, and some feedback called for a stronger definition within the volume parameters: requiring a minimum volume of learning to register within a provider's credit structure, and eventually to 'stack' as a modular course toward a tertiary qualification. As one respondent queried – 'what is the smallest atomic 'unit' of credit that can be called a microcredential?'[45]

Evidently, the response to this varied greatly between stakeholders in vocational education and higher education. Some vocational education stakeholders saw the greatest need for the smaller end of the definition (an hour as the smallest definable microcredential), and most often around 5 or 6 hours of learning. Higher education respondents generally described microcredentials as requiring longer to qualify, most often as single subject short courses that could later stack into existing qualifications structures (i.e. 8 microcredentials could form a semester of a course).

While the development of the NMF, MicroCred Seeker, and the Microcredentials Pilot in Higher Education were welcomed as stepping stones toward Commonwealth support for microcredentials – the strict requirements and delayed development of these processes have demonstrated that the speed which makes this type of short-form learning attractive can also be hindered by formalisation. We note that the latter initiative was designed with a Higher Education lens, which undervalues the scope of offerings across the entire tertiary market, and missed the opportunity to support the broad definition of microcredentials that the NMF prescribed.

[43] As described in Kässi & Lehdonvirta's "Do Microcredentials Help New Workers Enter the Market? Evidence from an Online Labor Platform" article, published in the *Journal of Human Resources*, 2022, pp.1-53.
[44] CEDEFOP, 2023. https://www.cedefop.europa.eu/files/2023_microcredentials_agenda_v6.pdf
[45] This was the terminology suggested in the University of Newcastle's submission to the Accord Discussion Paper, April 2023.

Microcredentials in Applied Settings: NSW's NETM

The partnership developed for NSW's New Education and Training Model (NETM) for the new Western Sydney International Airport was raised during our consultations as an example[46] of microcredentials as an applied demonstration of innovative place-based solutions for specific industry needs. This model, with industry and provider co-design, involves forming coalitions for particular regions, industries and sectors. Microcredentials in this model are around 40 hours long, and the 43 microcredentials are offered through a mix of both vocational and higher education, alongside workplace learning.

The NETM project takes the 'suite' model of microcredentials a step further with an online platform wherein microcredentials delivered as part of the program will be delivered as a digital credential that learners can see on the program's Skills Passport website.

The NETM course listing notes that NETM microcredentials are non-accredited training and are not formally recognised under the AQF.

It is worth questioning whether microcredentials such as those developed for the NETM model would be better or worse off if provided through some sort of accredited means: does the speed of delivery outweigh the potential accredited certification of a course? For industry-focused microcredentials, our consultation suggests that speed and industry involvement are key elements for re-skilling, and that the bulk of actual microcredentials currently being offered are outside of higher education. Microcredentials can exist outside of the AQF, but some sort of industry accreditation would be required for them to form a useful skills currency. The great potential and opportunity currently exists for a new Australian Skills Classification (ASC) and AQF, together with a Skills Passport and digital platform, to provide the underpinning for an Australia-wide, open-standards ecosystem infrastructure that would provide access to information and opportunities for prospective learners, and connecting opportunities for providers of credentials and experiences, whether formally accredited or industry-developed.

[46] See the Western Parkland City Authority's NETM model: https://www.wpca.sydney/our-work/netm/

Microcredentials in HE/VET

Our consultation found vastly differing views on the way microcredentials align with existing structural frameworks of higher education compared to vocational education. The NMF seeks to define microcredentials across both systems. However the funding model, teaching, assessment, learning design, outcomes and core rationale differs according to whether a microcredential is designed within a VET or HE paradigm. Microcredentials tend to work effectively in VET due to the national training system, comprised of industry informed 'units of competency' that can be readily 'packaged' into skill sets.

Options for reform

Funding thresholds for government

The NMF offers a broad but encompassing definition of microcredentials across the breadth of the short-form learning environment. As discussed earlier in this section, the outstanding issue remains the role of government in the funding of higher education microcredentials.

We propose the establishment of a threshold to establish the need and suitability of public funding for industry-focused microcredentials in areas of national priority and skills shortage.

To maintain the link to industry need, there should be an industry certification for microcredentials to validate the need for public subsidy or funding – similar to that of VET skills sets, administered through a fast-tracked process. The South Australian Skills Commission piloted an approach[47] to this process between 2020-2023. Understanding the results from this experiment could inform an approach to implement a version of this nationally, by learning from the limitations and successes of South Australia's pilot.

Microcredentials could also be funded on a place-based, time-limited basis, in cooperation with state initiatives, as exemplified by the NSW NETM, which has been funded to develop the workforce and industry sectors surrounding the new Western Sydney International Airport.

Definitions of funding-eligible microcredentials should be developed with the consultation of both vocational education and higher education providers, acknowledging the strengths of each system.

To encourage lifelong learning across the spectrum of the tertiary skills system, microcredentials that meet the threshold for Commonwealth public funding should

[47] https://skillscommission.sa.gov.au/careers-and-pathways/micro-credentials

also be eligible to be accessed as part of an individual's Lifelong Learning Entitlement.

Concept: A Lifelong Learning Entitlement

Financial incentives and system-wide funding schemes will be required to create a shared culture of lifelong learning. To ensure supply and demand for skills reform grows in step, financial incentive schemes should be directed to both providers and learners.

Through the Lifelong Learning Strategy, the TEC should also review options for introducing a lifelong learning entitlement to empower learners within specific geographies or industries to engage in lifelong learning. A lifelong learning entitlement (LLLE) is a financial entitlement that can be accessed to fund or subsidise learning opportunities across an individual's lifetime.

There are several global examples of a LLLE with varying scope, financial incentives and purposes, most commonly to supporting historically disadvantaged cohorts of working age people, or to enable workers to enrich and deepen skills for the benefit of economic development. There is also variation in who holds and manages the entitlement. In some cases, the entitlement is owned by the individual, others the employer; some offer contributions and others compensate for full programs.

In Australia, it is commonly conceptualised as an entitlement held by learners with the intent of support working Australians to access subsidised (or free, in priority sectors of demand) up-skilling or re-skilling opportunities to prepare for new or changing jobs. It is intended as a mechanism to share investment in lifelong learning amongst all segments of Australian society and to increase access to tertiary education in individuals' work and career journey, underpinned by public investment and principles of universal access. Financial support might also be used to help individuals to transition between jobs in declining industries (such as related to the net-zero transition) and could include individual learning accounts combined with additional social protection mechanisms that facilitate such transition.[48]

The entitlement may take the form of an income contingent loan administered through the taxation system and accessed to cover fees related to up- or re-

[48] https://www.ilo.org/global/about-the-ilo/how-the-ilo-works/ilo-director-general/statements-and-speeches/WCMS_644530/lang--en/index.htm

skilling experiences with recognised providers. This could be linked to a National Skills Passport or existing government social service provision platforms such as Centrelink. Alternatively, a LLLE could simply be an expansion of existing self-education expense deduction schemes to training activity related to 'future-focused' employment opportunities (i.e. covering re-skilling activity, not just up-skilling within current role). This would allow cost gaps associated with participation in lifelong learning to be claimed as a tax-deduction.

Several design principles for a LLLE in Australia emerged during our consultation and research. A LLLE should be:

- Directed primarily to those who haven't studied in the previous 12-18 months, not new graduates.
- Inclusive of AQF levels both below and above previous attainment and flexible in how and where it may be spent.
- Linked to clear communication and guidance information to incentivise participation in skill areas to meet occupational or sector skill gaps.
- Designed alongside measures to evaluate the impact and outcomes of a LLLE for both students and sectors in demand.

Option 1

- A new taxonomy (whether a universal credit point system or using the Australian Skills Classification) should be developed for the linking and mapping of microcredentials through a redesigned AQF[49]. In developing microcredentials, tertiary providers should consider the AQF qualification band that a microcredential could lead to, for the purpose of potential RPL assessment in the future.
    - This is stipulated as part of the minimum standards in the NMF, but the Commonwealth in conjunction with TEQSA could outline stronger guidance for RPL assessment of microcredentials

49 Consistent with recommendation 9, develop guidelines in the AQF Qualifications Pathways Policy to facilitate the recognition of shorter form credentials.

- HELP loans should be offered for higher education microcredentials which meet the threshold conditions indicated below

Option 2

- The current definition in the NMF should be retained, but a further sub-set of microcredentials should be established through legislation that meet a defined threshold, and rationale, towards the need for Commonwealth funding or subsidisation. Higher education could reflect a similar model to vocational education for Skills Sets. Eligibility for funding should include consideration of the following requirements to meet a threshold:
    - If the microcredential addresses a current industry high-priority skills shortage, as defined by JSA
    - If the microcredential provides up-skilling or cross-skilling opportunities for current workers impacted by transition to new technologies toward clean energy
    - Toward development of microcredentials which support workers in the care economy to up-skill, co-designed with input from existing employers and workers

or, alternatively/in addition to:

- Develop a new, more rigorously defined specification for microcredentials which signals their place within the AQF. Over the next five years:
    - Microcredentials will be drawn from accredited learning
    - A reformed AQF will allow for microcredentials to be designed at different bands of the AQF framework

This definition would enable microcredentials to be funded within public Higher Education providers and TAFEs. This would separate out industry-delivered microcredentials and most of the current volume of microcredentials being undertaken by learners in the private sector.

Dependencies

The progress of a redesigned AQF, either through stronger protocols for RPL processing of microcredentials, or through incorporation of microcredentials into the AQF, will significantly determine the preferred policy option described above. It will also be essential to assess implementation of the Commonwealth's Higher Education Microcredentials Pilot, and the response to the volume definition of a funded microcredential (i.e. 0.25 – 0.49 EFTSL) in order to pilot smaller volume microcredentials around a shared tertiary definition of volume of learning (e.g. 10 hours, or up to 0.125 EFTSL).

Establishment of a Lifelong Learning Entitlement (LLLE) to include re-skilling opportunities through microcredentials and or inclusion of proportionate (to EFSTL) in Commonwealth Grants Scheme funding would support the equitable participation and uptake of microcredentials so funded.

Assessment of current state readiness for reform

Element and readiness*		Current state characteristics	Ideal future state characteristics
Mandatory Placements	R	• Placements are generally unpaid, forcing students to forgo paid work to complete their study • There is a bottleneck of supply for placements, particularly in care and health settings. This is at times given extra, artificial constrain by professional industry bodies regulating placement numbers and conditions • There is a highly variable quality of placement experiences and supervision • Funding arrangements do not incentivise employers to take on students on placement	• Mandatory placements in priority areas such as health, care and teaching are paid • Students receive adequate supervision and quality of experience • Placements are of adequate number and quality to support the amount of students enrolled and the needs of industry
Learning Integrated Work: (earn-and-learn courses such as degree and higher apprenticeships)	R	• Current apprenticeship style courses are available for VE, but not HE • Any current attempt to offer a HE earn-and-learn course requires significant time and resources (so much so that it dissuades participation from providers) to work around current settings • Industry is explicitly calling out for these types of qualifications and the skilled graduates they create	• Higher and Degree apprenticeships are a key part of the tertiary system, in addition to existing qualifications • Employers are incentivised in a similar way to apprentice-style subsidies to employ LIW students, and students are adequately supported with the learning and work components • There are agreed program design principles for these types of courses to be developed across different sectors and providers

Element and readiness*		Current state characteristics	Ideal future state characteristics
Microcredentials	A	• A NMF has been developed, following significant consultation across the sector • Additional subsets of microcredentials that meet thresholds for government funding is required • Further clarification on the alignment of microcredentials with the reformed AQF is required, to establish a taxonomy toward stackable microcredentials and appropriate RPL • The current HE microcredentials pilot is a positive start to developing a funded microcredentials model for HE, but requires wider investment and co-design with industry across the whole tertiary sector, with smaller hour volume (rather than EFTSL) funding available • The current process for industry to develop microcredentials with tertiary providers (HE and TAFE in particular) is slow and doesn't meet the need for a fast-response skilling solution	• Microcredentials will provide an additional way for people to enhance and increase their skills in a fast, accessible way • Microcredentials have an agreed currency across the tertiary sector, in VET and HE • Industry co-designs microcredentials with providers to deliver timely, stackable, high-quality learning experiences • Individuals can easily demonstrate and share their microcredential qualifications for future employers • Industry knows how, and who to speak to within the tertiary sector to develop microcredentials for the skills needs they've identified • There is a dedicated, fast-tracked, and time-limited process for endorsement of microcredentials for the consideration of government funding

** Readiness ratings: green (fit-for-purpose, only minor adjustments), amber (some additional investment), red (significant reform). Readiness may be a proxy for investment required to meet ideal state.*

4 Tertiary education system infrastructure and frameworks

This section addresses the core enabling infrastructure and frameworks that are needed both to underpin a more responsive tertiary education system and to guide its adaptive progress. This includes the development of a National Skills Passport (Section 4.1), redesign of the Australian Qualifications Framework (Section 4.2) to enable coherent tertiary and multi-sector provision, and new qualification designs along with the digital infrastructure to underpin and connect tertiary education activities for all users and for planning and collaboration purposes.

Prioritised policy options:

1. Implement *in full* the recommendations of the AQF Review Panel, including suggestions for a design and consultation workplan and implementation approach, through a collaborative roadmap and design process leveraging JSA, JSCs and other skills coalitions, as appropriate.
2. In developing a business case for a National Skills Passport, make sure that it is a central part of national investment in the foundational infrastructure for a lifelong learning system, including: rich skill descriptors, personalised learning profiles that align with senior secondary schooling; an integrated digital platform and ecosystem, using open data standards to allow inter-operability among different credentials and providers of skilling opportunities, as well as future co-investment in learning, and effective recognition of prior experience.
3. Align student-facing digital platforms across VET, higher education, transition from senior schooling (TACs) and careers information to support improved information and guidance about tertiary education and skills attainment.

Challenge and response

Challenge:

Australia has invested in some core building blocks of a responsive tertiary education system. The maturity of each discrete component is varied, and investment has not been managed to provide whole-of-system tertiary solutions.

Response:

A redesigned AQF and a coherent ‘tertiary’ view of the necessary education system infrastructure can support the shift to increasingly responsive and personalised learning and connect providers across the higher education and vocational education and training divide.

4.1 Skills infrastructure: towards a Skills Passport

The case for reform

Investment in National Skills Passport is vital to support ongoing engagement in lifelong learning and will help identify skills pathways. A National Skills Passport will provide verified recognition of prior learning to help streamline the transitions between education and employment.

To navigate tertiary education sectors and identify skills pathways is increasingly important as people undertake more learning across their lifetime; engage more with modular learning and embark on increasingly personalised learning journeys.

Digital infrastructure connects the tertiary education and skills system, providing navigational and informational tools linking individuals to skilling opportunities. Many of these elements were highlighted in the Bean & Dawkins Review[50], including the use of rich skill descriptors, personalised learning profiles that align with senior secondary schooling; an integrated digital platform and ecosystem, and using open data standards to allow inter-operability among different credentials and providers of skilling opportunities. These elements are enabled by future co-investment in learning, and effective recognition of prior experience.

Investment in well-designed digital infrastructure is a powerful way to address issues of equity and access to the tertiary system and an important tool in enabling personalisation of pathways - between and through - the tertiary system and work. This infrastructure can support this outcome in four key ways:

1. *Enable more rigorous and innovative Recognition of Prior Learning* by providing a means of capturing, verifying, and communicating skills attained through learning and experience in a coherent, interoperable way across the whole of Australia. Furthermore, a nationally recognised skills taxonomy combined with a skills passport could provide a powerful engine to demonstrate what students ‘can do’, translating experience and qualifications into skills that are recognised in the labour market.
2. *Improve and surface connections between the VET, HE and workforce skills systems*, including supporting student navigation and alignment between skills and qualification descriptions. The combination of changes we propose can better support the development and communication of pathways between qualifications and employment.

[50] *Review of University-Industry Collaboration in Teaching and Learning*, 2021.

3. *Support learners to conceptualise their own skills development and access good options and choices within the broader skills system.* Access to reliable and relevant information about learning opportunities can assist people to view tertiary education as an accessible public resource that could benefit them in making career and life choices.
4. *Provide students with a common language and means to communicate skills and capabilities*, forging connections between learning, skills and jobs, and between tertiary education providers and the workforce, via the redevelopment of the Australian Skills Classification.

Identified barriers

Tertiary by design: designed with and for diverse tertiary sector interests

To be a truly useful artefact, a Skills Passport requires a national standard and format that can be recognised across sectors, jurisdictions and education providers.

Despite clear appetite and opportunity for a Skills Passport, our engagement so far indicated that many stakeholders only have a conceptual understanding and divergent views about how (and for whom) a Skills Passport should be designed, managed, and funded.

Even early consultation suggests several existing barriers:

- Many Higher Education providers have recently invested in the development of the **My eQuals** platform. The platform is managed on behalf of the Australian and New Zealand Higher Education sector by HES, a company owned by Universities Australia. This platform could act as a single source of verifiable truth for specific qualifications gained by an individual. However, this platform is not a Skills Passport, and some stakeholders have suggested the underlying platform design and database management process is not easy to scale or adapt.[51]
- Some representatives of the vocational education sector have expressed a view that the fundamentals of the current system are built for higher education and may not be fit-for-purpose for scaling in a tertiary system.

Building buy-in beyond the tertiary system: articulating a unique and trusted public value proposition

The design and implementation of a Skills Passport must also match the aspirations and preferences of learners and employers:

51 Note VET also has a VET transcript service with emergent links to the Universal Student Identifier.

- Consideration should be given to the unique public value proposition offered by a government-designed, managed, and funded Skills Passport. Learners and industry need to be aware of how it is differentiated from other large scale professional social networks such as LinkedIn.
- Industry has stressed that the success of a Skills Passport relies on significant adjustments to the hiring process and culture of employers. Specifically, employers would have to adopt a more skills-led understanding of worker credentials and capabilities. This cultural shift and broad buy-in depend on significant investment, coalition-building and demonstration of practical value to promote uptake by employers and learners.
- Multiple stakeholders also expressed the importance of designing and signalling responsible, secure data-handling processes, given the policy ambition to track individuals over time and connect a Skills Passport to other education and employment data sources.

Case study: Singapore MySkills Passport – a cautionary tale?

- The MySkills Passport is a 'one-stop' portal for Singaporeans to upskill in their lifelong learning journey. Individuals can claim their SkillsFuture Credit, learn more about the latest skills in demand, and view more than 20,000 SkillsFuture Credit Eligible courses on the Course Directory. The platform is also designed to support employers to search for talent, upskill staff, manage job postings, and stay informed of industry and skill trends.
- MySkills Passport is often touted as the world-leading example of a Skills Passport, including within the University's Accord Interim Report.
- Recent evaluations of the platform suggest that its innovative design has not translated into widespread usage, as recent research has noted '…*while most respondents are satisfied with the platform, low participation rates are largely driven by structural barriers of time and financial cost. In addition, there exists a mismatch between the government-driven pragmatism rhetoric in lifelong learning and the personal aspirations of respondents towards self-development'.*[52]

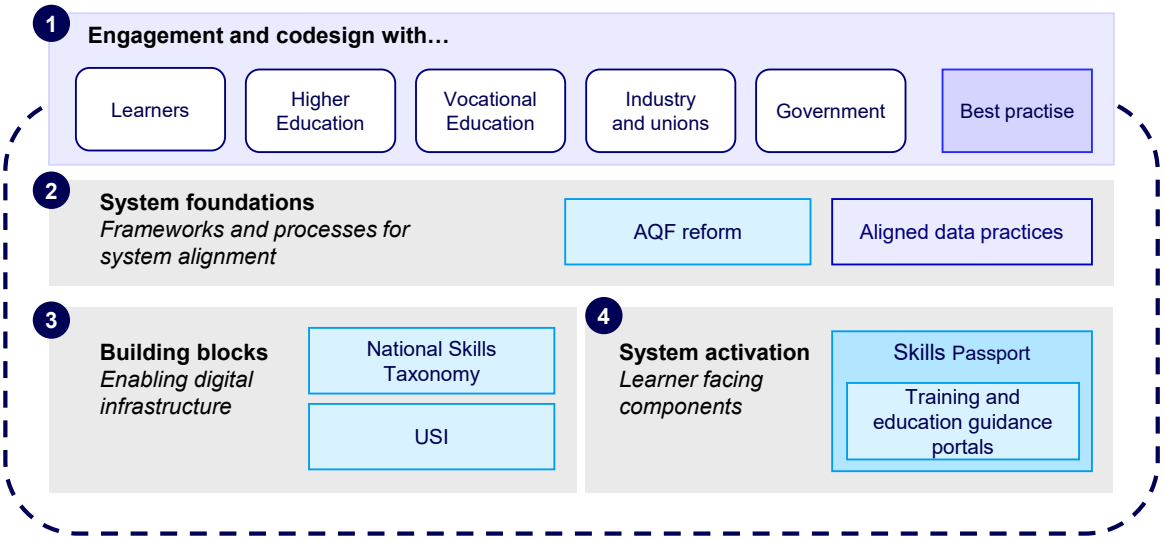
[52] Kim, Soojin, et al. "A case study of the Singapore SkillsFuture Credit scheme: preliminary insights for making lifelong learning policy more effective". *Asian Journal of Political Science*, vol. 29, no. 2, pp. 192-214.

Options for reform

- Develop a business case and reform the relevant components of the digital skill infrastructure as part of the design and development of a National Skills Passport
- Invest early in 'fundamental' enabling infrastructure such as a National Skills Taxonomy (Australian Skills Classification) and an expanded USI
- Engage in a highly consultative development phase to inform the design principles for a National Skills Passport

While the Interim Report and the White Paper on Jobs and Opportunities put forward a National Skills Passport as a preferred 'digital solution', it is vital for a fully realised tertiary-wide Skills Passport that the full existing network of tertiary education skills infrastructure be reviewed and reformed in tandem. This includes leveraging the existing work being undertaken by JSA towards skills mapping, which demonstrates the links between qualifications and skills, and could be featured in the Skills Passport.

Based on the above discussion and analysis of dependencies within the digital skills infrastructure system (see next section), the following system renewal sequence should be considered:



Dependencies

Skills-led design

To develop a National Skills Passport that meets the criteria outlined above and holds genuine currency in the labour market, the platform needs be based on skills attainment and knowledge acquisition, *not just successful completion of qualifications*.

In this context, skills represent a 'standardising measure' that cuts across sectors and allows learners to translate learning and training outcomes across diverse industries and jurisdictions. Given their in-train work updating the Australian Skills Classification, close collaboration with Jobs and Skills Australia is key to enabling the success of a Skills Passport.

Digital Platforms

Several reviews cite challenges that students face navigating information for the purpose of career pathways, with information often fragmented across different websites and not always complete.[53] These challenges limit learners' ability to make well-informed choices, and are linked to skills mismatches with labour market demand, tertiary system usage, and poor learning outcomes. In recent years, several countries have set up digital platforms that provide students and workers with a record of the skills and qualifications they have attained. These platforms aim to standardise access to education records, making it easier for students to compile and present their credentials, and for employers to verify prior learning. The platforms are often linked to skills and labour market information that assists individuals with career choices. Some recommendations for the Australian government for digital platforms are identified below:

- **Unified digital platform**: The Australian government should take a leading role in developing and implementing a unified digital platform for skills and qualifications. More accessible and navigable information, including digital platforms that identify learning opportunities such as MicroCred Seeker[54], and a platform to access learning credentials such as the National Credentials Platform, could be unified across HE and VET (i.e., to include and expand learning opportunities on the Your Career platform) to better support students to pursue pathways across the tertiary education sector that suit their circumstances.
- **Stakeholder engagement:** The government should consult with a wide range of stakeholders, including students, workers, employers, education providers and industry organisations in developing the platform.

[53] Joyce, Steven. *Strengthening skills: expert review of Australia's vocational education and training system*. Report, 2019. See also: Shergold, Peter, et al. *Looking to the future: Report of the Review of senior secondary pathways into work, further education and training*. Education Council Australia, Final Report, 2020.

[54] https://www.microcredseeker.edu.au/

- **Privacy and security:** The platform must be designed with privacy and security at the forefront. This includes implementing robust data protection measures and giving users control over their personal information.
- **Integrate with existing skills and qualifications frameworks:** The platform should be integrated with the AQF and the ASC to ensure that users can easily navigate the skills landscape and identify the qualifications they need.

Universal Student Identifier (USI): the linking thread between students and system infrastructure

In 2014, the Australian government introduced legislation to establish the USI system, which became operational in 2015. However, the USI is primarily used for vocational education and training (VET) courses and does not cover the entire education system. From 1 January 2023, all higher education students, including those who commenced prior to 2021, must have a USI in order to receive HELP loans, access Commonwealth Supported Places, and to graduate and receive their award.

A primary role of the USI is to ensure comprehensive record-keeping for every student. By assigning a unique number to each individual, the USI enables the creation of a single, comprehensive, and accurate record that encompasses qualifications, awards, and statements of attainment from various educational providers. The USI also facilitates seamless transcript portability. With this system, students can effortlessly access and share their educational records across different education institutions and employers. This feature promotes smooth transitions between learning providers and reduces the administrative burden associated with verifying qualifications.

Moreover, the USI plays a significant role in maintaining the quality and standards of education. It aids regulatory bodies and education providers in monitoring trends, identifying patterns, and addressing gaps in the education system. These insights contribute to continuous improvement efforts that enhance the overall quality of education in Australia.

The Australian government also greatly benefits from the USI. It enables the collection of comprehensive data on student participation, progression, and completion rates. This data is crucial for policy development, resource allocation, and monitoring the effectiveness of various educational initiatives. With the USI, the government can make informed decisions based on accurate and up-to-date information.

Key recommendation: widen the use of the USI to include all kinds of education including accredited short-form learning

4.2 A redesigned AQF

The AQF outlines the learning requirements and other characteristics of the qualifications issued across the VET and HE systems in Australia with the objective of facilitating pathways to, and through, formal qualifications.

Like all qualification frameworks across the world, its central aim is to 'establish a basis for improving the quality, accessibility, linkages and public or labour market recognition of qualifications within [Australia] or internationally'.[55]

The case for reform

AQF reform is critical to a more responsive tertiary system, enabling personalised learner pathways through education and training.

The current AQF model was first introduced in 1995 and was last reviewed and amended in (following the review) 2013. It was reviewed again in 2019 by an Expert Panel Chaired by the late Peter Noonan (the 'Noonan Review') but many of its recommendations have not progressed. As a piece of guidance with regulatory implications, many stakeholders perceive the current AQF as broadly 'fit for purpose' for the tertiary system as it exists today.

The current AQF, with its emphasis on 'levels structures rather than the qualifications aligned to those levels' is however seen as not enabling the future needs of the tertiary sector and Australia's workforce, economy and society.

As the Interim Report notes, AQF reform is essential if Australia is serious about transitioning to a new truly *tertiary* education system centred around lifelong learning and attainment of skills alongside knowledge for increasingly diverse learners.[56]

We recommend that the AQF should be reformed in line with recommendations from the 2019 Noonan Review. The extensive body of work that underpinned the review mounted a compelling case for change to ensure the AQF was fit for purpose for the future.

This included supporting a more connected and aligned tertiary system, increased visibility of skills across the entire AQF, greater parity between VET and HE, support for RPL and alignment of microcredentials. As will be discussed in the 'outcomes of AQF reform section' the AQF does not 'solve' these challenges. Instead, implementation of the reformed AQF ensures the AQF is an enabler of these outcomes, not a barrier to their achievement.

[55] OECD, *Qualifications Systems: Bridges to Lifelong Learning*, Education and Training Policy, 2007, p.22.
[56] Australian Universities Accord, *Interim Report,* 2023, p.122.

Identified barriers

- Progress towards AQF reform has suffered due to a lack of whole-of-government ownership, uncertainty between levels of government, and absence of clear accountability to focus reform and address challenges and concerns from the sector.
- Differing perspectives, a multifaceted stakeholder environment, language and interest differences between different industry sectors and stakeholder groups have discouraged ambition or risk-taking in pursuit of AQF redesign, despite the major shared benefits that could arise from successful reform.
- The VET sector has limited capacity to engage with and absorb AQF reform tasks, given the significant body of reform and implementation work currently in train.

The AQF Review concluded with the release of a final report in 2019. This report included a comprehensive set of reforms coupled with sensible, realistic options for implementation response and was received positively by the sector. Despite this decisive vision, broad appeal and clear pathway to reform, there has been little progress towards implementation in the 4 years following its release.

Our consultation found that a reason for this inertia is a confluence of several factors including timing, the prioritisation of significant reform activity in the VET sector, and discordant attitudes to reform (ranging from ambivalence to hostility).

Underpinning each of these is a notable lack of a single ‘champion’ or whole of government ownership of the AQF reform agenda to drive change and address challenges as they arose, particularly around more contentious elements of the reform agenda.

Lack of reform leadership and governance

Governance and ownership of the AQF reform agenda was flagged in the 2019 AQF review as ‘essential to give effect to the finalisation and implementation of the decisions flowing from the recommendations’ and manage the broad impact of reform across the tertiary sector, as well as into skills migration, industrial awards and student payments legislation.[57]

In recognition, it recommended the establishment of an ‘independent governance mechanism’ tasked with implementing, reviewing, refreshing, and refining the AQF as required and coordinating reform across sectors, amongst other responsibilities.

[57] Australian Department of Education and Training, *Review of the AQF: Final Report*, 2019, pp. 89-91.

So far, the failure to act on this recommendation and establish a motivated, well-funded governing body tasked with overseeing the AQF reform was cited by most as the key reason for a lack of progression.

Compounding this lack of institutional governance, the passing of Review Chair Peter Noonan in 2022 saw the loss of a public 'champion' and thought leadership to keep AQF reform on the agenda and drive advocacy, as was evidenced in many stakeholder discussions. This leadership has been provided by Professor Noonan's fellow review panel members, by Professor Peter Dawkins AO, and by a group of cross-sector advocates operating largely outside of government. However, the need for clear public and institutional leadership for the next phase is clear.

Today, responsibility for AQF reform and linked outcomes is difficult to progress across so many government stakeholders. There is opportunity for greater ownership of this reform project, given the mandate to manage risks associated with the more complex aspects of the reform; conduct cross-system dialogue around the most important changes, including around contentious topics such as impact on industrial awards, definition of general competencies and the flow-on impact of changes for Commonwealth and state legislation (52 and 34 pieces respectively).

Weak justifying narrative for AQF reform

Despite its crucial importance in providing common language and guidelines for the design, description, and pathways between qualifications, the AQF is rarely perceived as a critical factor in shaping the education and training landscape in Australia. Instead, elements such as funding, governance, regulation, and institutional responsiveness are commonly perceived as having a 'far greater influence on education and training than the AQF'.[58]

This characteristic makes it easy to overlook the central importance of the AQF in shaping the Australian tertiary education system. While the AQF Review provides some context on the importance of AQF reform, it does not go far enough in communicating the benefits of AQF reform to the broad users of the tertiary system.

The absence of a compelling narrative about the influence of the AQF on the structure, experience and culture of tertiary education in Australia is one of the key reasons the reform agenda has stalled since the release of the report in 2019. This element of advocacy and communication must be in place to navigate the trickier and more contentious reform recommendations and build a broad base of support for reform within the sector.

[58] Australian Department of Education and Training, *Review of the AQF: Final Report*, 2019, p.8.

Capacity of the VET sector to absorb change

Reform of the AQF was highlighted by stakeholders as a difficult issue within the VET sector. On one hand, some representatives of the VET sector aligned with the view that several elements of AQF reform would support parity of esteem between the VET and HE systems, particularly recommendations related to the reduction of hierarchical levels to the preferencing of qualifications, and the development of a common credit point system.

Tethering this enthusiasm are practical concerns regarding the readiness and capacity of the VET system to engage with and negotiate reform actions given the significant body of reform and implementation work underway in VET. There are two significant bodies of work underway in the VET sector at a national level: the implementation of a new National Skills Agreement to commence in 2024, and a comprehensive VET Qualifications Reform process, committed to by the Skills Ministers in 2022 that may lead to significant reshaping of VET qualifications from 2025 onwards.

Options for reform

- Implement the recommendations of the AQF Review Panel, including suggestions for a design and consultation workplan and implementation approach, in full.
- Establish interim governance arrangements to pursue broadly agreed and less contentious reforms.
- Establish an AQF reform governance and implementation body as part of the TEC, working with Jobs and Skills Australia per recommendation 20 of AQF Review.
- Allocate three years to fulfilling proposed implementation stages 1-2 of AQF reform: revision and redesign of the current AQF and transition to revised AQF.
- As part of the review, reform and implementation process of both, ensure AQF and ASC are developed in alignment.

The recommendations and implementation plan outlined in the 2019 Noonan review are still largely fit-for-purpose. The challenge in 2024 and beyond is how best to crystallise the implementation effort and create inclusive momentum for the reform. Following a re-assessment of the suitability of the AQF Review recommendations and implementation plan, this section outlines two options for progressing reform in 2024 and beyond.

Assessment of AQF reform recommendations and implementation plan

The review of the AQF presented an integrated body of work that could be implemented as an entire package. It distinguished between formal recommendations for redesign of the core framework, trials of some new integrated approaches (e.g., a common credit point system) and improved guidance (e.g., Microcredentials and Pathways). As such, there was no recommendation for partial implementation of the framework.

RMIT has assessed the alignment of the AQF Review Panel recommendations with the key objectives of the Australian Universities Accord Interim Report (see Appendix B). This assessment confirms the extremely strong alignment of *the full suite* of recommendations, particularly to the objective of supporting a better connected and integrated tertiary education system that enables lifelong learning.

The approach to implementation proposed by the Noonan Review panel recognised that its recommendations were only the start of a process of system change. It outlined that significant detailed consultation, design, impact assessment, and mitigation may be required before the new AQF was finalised, and that existing qualifications would migrate into the new AQF through their natural reaccreditation cycles over a period of 5-7 years following the launch of the redesigned AQF. This roadmap remains a useful and relevant artefact to guide implementation.

Option 1: Establish AQF reform leadership and governance structure.

The AQF Review recognised the importance of strong, shared governance structures to support the reform. Owing to the disestablishment of the AQF Council in 2014, the AQF Review recommended the reconstitution of an ongoing governing body, accountable to National Cabinet (see detail below). Given the complexity of reform and divergent views on the suitability and desirability of the AQF reform recommendations across the sector, implementing the reformed AQF will require strong leadership and a governance structure that is sensitive to the following:

- The collective interests in VET and higher education by federal and state governments
- Interdependence of the AQF with a complex web of legislation and regulation
- Complexity of the existing VET reform agenda
- The skill and nuance required to navigate the requirements of a plethora of stakeholders who will be highly impacted by any change in the AQF.

Given the proposal arising from the Australian Universities Accord Panel for the establishment of a Tertiary Education Commission, it may be appropriate to consider the role of the proposed AQF governance body and implementation secretariat be housed and supported by the TEC, in appropriate alignment with Jobs and Skills Australia. Given the cross-sectoral, systemic nature of the AQF reform and its key

focus on a better connected and integrated tertiary system, it is essential that HE and VET are equally represented on any governance body, and potentially in the governance of the TEC itself. While all AQF Review Panel recommendations for implementation should be adopted, Recommendation 20 will need to be reviewed in the context of the proposed establishment of the Tertiary Education Commission and its relationship with Jobs and Skills Australia, depending on their sectoral focus, final role and functions.

Excerpt: Recommendations from AQF Reform Final report regarding leadership and governance strategy

Recommendation 19. Establish a governance body, accountable to the relevant Council of Australian Governments (COAG) Councils[59], with representation from government, schools, VET, higher education, industry and professional bodies, and with authority to convene and oversee technical working groups to undertake specialist tasks, to implement agreed reforms to the AQF.

Recommendation 20. In addition to implementation of agreed AQF reforms, the governance body would meet as required to:

- liaise with higher education, VET and schools standards bodies and regulators about matters related to the AQF
- monitor developments in education and training and the economy and their implications for the AQF, including shorter-form credentials and general capabilities
- advise on the addition or removal of qualification types in the AQF
- make recommendations and oversee additional reforms where necessary.

Recommendation 21. Strengthen alignment between the AQF, the Higher Education Standards Framework and the Standards for Training Packages and RTOs.

59 Note that this excerpt is from a 2019 document that refers to COAG; a governance mechanism that has been subsequently replaced by National Cabinet.

Option 2: Begin work by fulfilling recommendations 1-2 from AQF Review implementation plan

The AQF reform provides the following advice on the proposed 'first stage' of AQF reform implementation following the establishment of an AQF Council or central governing body:

Excerpt: Recommendations from AQF Reform Final Report regarding implementation[60]

Recommendation 1. Revise and redesign the current AQF

- The first step would be to revise the current AQF based on the recommendations that are agreed by the governments flowing from this report. Technical working groups under the ongoing governance body could assist with this work.

Recommendation 2. Transition to revised AQF

- The second step would be to transition to the revised AQF, which would require changes to regulation; grandfathered arrangements for current students; the potential commissioning of further enabling work; and revision to some qualifications within the normal cycle of review.

Furthering these two actions remains a sensible start to reform. The AQF review proposed a timeframe of two years for the revision and redesign stage. Based on the feedback received during our stakeholder engagement, and the complexity of this work, this was seen as potentially aspirational. It is recommended that three years is allowed for this first stage of work, meaning the new AQF would become active at year four of the process. Given the establishment timeline for the TEC, the development of interim Governance arrangements (potentially jointly between DoE and DEWR) should be established to restart, reform, and shepherd it until such time responsibility can be provided to the TEC.

Dependencies

Coordinate alignment of the AQF to the ASC

A skills-based taxonomy, such as the ASC is well placed in supporting the needs of AQF reform. The flexibility of the ASC structure could improve qualification design through the articulation of skills relevant to an occupation outcome for a course, and

60 *Review of the Australian Qualifications Framework: Final Report,* 2019, p.9.

transferrable skills, establishing direct links to employment and industry needs. The ASC articulates skills that individuals can derive from education or experience, and therefore is a strong base to support assessment design and work integrated learning experiences for students, for establishing education and training pathways, and the design of robust recognition of prior learning services.

Assessment of current state readiness for reform

Australia has made steady investment in its tertiary education infrastructure and frameworks over the last decade. However, the maturity of each discrete component is inconsistent, and investment has not been coordinated to provide whole-of-system solutions across the whole tertiary sector. The following table provides an assessment of each existing infrastructure element according to its readiness:

Element and readiness*		Current state characteristics	Ideal future state characteristics
The Australian Qualifications Framework (AQF)	R	• Two sets of learning outcomes for levels and qualification types • Hierarchical across 10-levels, levels not clearly distinguished • Short form credentials not recognised	• Full implementation of AQF reform to focus on general learning capabilities, a simplified framework, credit pathways, and principles for institutions to align micro-credentials to qualification types
National Credentials Platform (NCP); my eQuals (future Skills Passport)	R	• Designed by and for the HE sector • Focussed primarily on qualifications, no current recognition of microcredentials and general capabilities	• A verified portfolio that documents an individual's skills, qualifications, and capabilities, as acquired through learning experiences, credentialing or certification conducted by a recognised provider. • Connected to skills demand analysis to enable tailored career advice based on regional and sectoral shortage • Potentially searchable by employers for access to prospective candidates
The Australian Skills Classification (ASC)	A	• Incomplete (85%) coverage of occupations within the ASC • Insufficient specificity in ASC skills data • Difficulty in classifying emerging occupations • Not currently widely utilised to support common skills language In-train project to update led by JSA	• Expanded to cover all occupations in the labour market relevant to VET and higher education • Built up with rich skills descriptors and aligned to assessable learning outcomes and VET competencies[61] • Ability to be updated for emerging skills/occupations • Mapped to open standards to accelerate adoption

[61] Bean and Dawkins, *University-Industry collaboration in teaching and learning*, 2021, p.33.

Element and readiness*		Current state characteristics	Ideal future state characteristics
Training and education guidance portals	A	• Information spread across disparate platforms, usually siloed by VET / HE sector – pathways and opportunities difficult to uncover. • Careers advice and occupational information not integrated with learning and training resources.	• A common platform based on global open standards that provides learners with a reliable single source of truth for information related to education, skills, employment, and industry
Unique Student Identifier (USI)	G	• Automatic creation for all incoming award students in both VET and HE • Recently expanded to encompass HE • Inconsistent coverage of VET and HE students due to staged roll out across sectors	• Provides coverage of whole system, microcredential attainment, skills acquisition within the schooling system, complete coverage of VET from 2015 and retrospective coverage for graduated students where possible

** Readiness ratings: green (fit-for-purpose, only minor adjustments), amber (some additional investment), red (significant reform). Readiness may be a proxy for investment required to meet ideal state.*

5 Tertiary education system outcome measurement

In this section we seek to distil the methodological approaches, outcomes and relevant measures that will support a 'system-level' understanding of how responsive the tertiary education system is. Initially a methodological approach is developed that seeks to move beyond education attainment as the most appropriate measure for system responsiveness and then seek to explore how student participation (and attainment) could be complemented with additional labour market analysis to better identify demand-side skills gaps and their relationship to tertiary education provision.

Prioritised policy options:

1. Develop a national tertiary education 'system' attainment target for 2030, 2035 and 2040 and sub-targets for HE/VET and equity[62]
2. Introduce adjusted equity targets for participation which capture the whole tertiary system and which may be specific to disciplines, geographies and other factors
3. Confirm Jobs and Skills Australia's role as underpinning skills-led workforce and demand analysis for the tertiary system and invest in the development of agreed methodological approaches and interoperable data standards

Challenge and response

Challenge:

Australia currently has a limited coherent or unified understanding of how the tertiary education system is responding to education and skills needs required by the community and economy. Relevant measures are siloed within vocational education and training *or* higher education and often fail to capture skills formation that is not fully captured in qualifications attainment metrics.

Response:

By moving toward system-level tertiary measurement design and developing linkages between skills supply and demand we can progressively have a more coherent and timely understanding of the performance of the tertiary education system and its ability to meet emerging skills needs.

62 Note that the National Skills Agreement, which commences on 1 January 2024, also requires the development of targets for VET sector outcomes and priorities by June 2024. The proposed tertiary targets should be developed consultatively to ensure a consistent and aligned approach across government.

5.1 Participation and attainment targets

The case for reform

Participation and attainment targets outlined in the Interim Report

To forecast future tertiary education requirements over the next thirty years and develop an updated attainment target, the panel commissioned Oxford Economics to assess the current state of the system. The objective of this work was to determine both the quantity and nature of demand for tertiary education in the next 30 years. Oxford Economics developed a model that considered both the supply of graduates (domestic and migrants) and demand.

Key findings from the Oxford Economics review are summarised below:

Demand for Higher Education Qualified workers

Over the next three decades, economic growth in Australia is projected to lead to the creation of 5.8 million jobs needing higher education qualifications, totalling 10.8 million higher educated jobs by 2052.

The proportion of jobs requiring a higher education qualification across the working age population is expected to rise from 36% in 2022 to 55% in 2052, reflecting a continuation of the historical trend towards jobs requiring higher education qualifications.

Over the past ten years, higher educated employment has grown at a significantly faster rate than overall employment, and this trend is predicted to continue.

Growing demand, skills deepening, and labour market churn are expected to necessitate an additional 603,000 higher education qualifications per year on average to 2052, including 696,000 on average per year between 2042 and 2052. Without skilled migrants, there is an anticipated average labour market deficit of 215,000 qualifications per year throughout the forecast period.

Enrolling more students will also require substantial growth in participation from groups currently underrepresented in Australian higher education. Given the increase needed in 2035, and to meet population parity, around 60% of the additional students in the system will need to be from low SES backgrounds, around 53% from regional and remote areas, and around 11% would need to be First Nations students.

Supply of Higher Education Qualified workers

Over the next 30 years, it is anticipated that Australia's higher education system will contribute 388,000 graduates yearly to the labour market on average. Both domestic and international students are included in this supply, with international graduates making up about 17% of the total number of higher education graduates available to supply the domestic labour market.

It is likely that about half of domestic completions are to be in postgraduate degrees by 2052, due to an increase in demand for postgraduate qualifications from the labour market.

Taking into account skilled arrivals and their skill levels there will be an average labour market surplus of 62,000 higher education qualifications per year. As Australia's population growth slows and net overseas migration becomes a more influential factor, higher educated arrivals are predicted to play a larger role in meeting demand for highly skilled labour.

Imbalance in demand and supply of qualifications at industry level

While a combination of domestic students and skilled migrants are forecast to provide the qualifications required by the labour market as a whole, gaps/shortages may remain at the industry level. Oxford Economics analysis suggests that skilled migrant arrivals will not be sufficient to address the shortages in the public administration and professional services industries.

The industries with the most significant projected qualification shortages in the absence of skilled migration are professional services, public administration, manufacturing, wholesale trade, and education.

Despite the aggregate surplus of qualifications, imbalances persist at the industry and field of education levels. The education industry and field of education face significant shortages, with an average annual deficit of 36,000 qualifications within the education sector.

Targets provide an impetus and guide for policy development to increase participation and attainment. They also provide an important metric for tracking and measuring progress. Setting targets for equity groups and implementing comprehensive strategies will ensure that individuals from disadvantaged backgrounds are not left behind and have an equal opportunity to pursue tertiary education. Targets that capture the whole tertiary education system rather than discrete components of it provide additional information to inform more effective tertiary designs and policy.

Identified barriers

There are several limitations to the current higher education-focused attainment targets:

- They do not incorporate VET or short-form learning, which makes up a significant part of the labour market's qualifications.
- The Interim Report notes that achieving the target HE attainment will be difficult with existing cohorts and will rely on more equity cohort participation. While parity in attainment for equity cohorts is a desirable goal and aligned to policy priorities, it comes with a risk of higher student attrition, as students from disadvantaged cohorts are often less equipped to succeed in the education system. Additional support for equity cohorts to mitigate this risk is discussed in the section "Increasing " in following dependencies section.
- Current targets are also static, and do not account for changes in the mix of skills and qualifications over time. For example, the emergence of new occupations in the clean energy sector is likely to lead to shortages in a number of specific trades, technical and professional occupations, which will not be tracked simply by an overall attainment target.

Set and forget will not work: high risks mean real reform is needed

While new occupations will emerge, many existing jobs will undergo skills and context change, like mechanics learning to work on electric vehicles. The impact of these changes, particularly on the skills system, should not be underestimated.

Reaching net zero by 2050 will require a workforce transformation in Australia that is substantial but not unprecedented. The scale resembles our post-war industrial transformation and the digital transformation of the late twentieth century that spawned new roles in information technology and impacted many more. We will likely have sufficient workers overall and enough higher education graduates over the next thirty years. What we are at high risk of experiencing, is:

- A shortfall of workers with the necessary VET qualifications and workplace experience to fill the large numbers of expected roles for electricians and other trades and technicians.
- Competition between the clean energy workforce and other sectors requiring electrical, mechanical and civil trades, technicians and professionals (as well as competition for these workers from overseas.

- A mismatch between employment demand and available skills. The risk of this mismatch is particularly high in regional Australia, which otherwise has great benefits to gain from the path to net zero.[63]

There are also limitations that can be addressed by a skills-based approach as described in Section 5.2:

- There is the risk of universities focusing on highest attainment rather than skills relevance. This may cause pockets of overqualification in the labour market, which carries risk of skills atrophy and "scarring effects" on individual careers. This is discussed in further detail in Section 5.25.2.
- The current targets do not acknowledge the complex link between education and the stock of human capital, which has more to do with quality of education rather than quantity. This is also discussed in further detail in Section 5.2: *Labour Market Outcomes and Modelling*.

Options for reform

Introduce new and adjusted attainment targets to measure the whole tertiary system

This report puts forward two options for participation and attainment target measurements that better reflect the move to a lifelong learning system with the intent to inform the conceptual basis for updated, expanded 2050 attainment targets.

A whole-of-tertiary education system target is appropriate because both HE and VET participation will need to increase if we are to meet Australia's future skills needs. There will be a need to expand the entire system by bringing in students who are not currently participating in tertiary education and that are beyond school-leaver cohorts alone, rather than simply shifting students between the two systems.

These targets, if broadly accepted by the sector and community, can be used to incentivise the behaviour of providers, government and regulators, and encourage a cultural shift towards a better-connected tertiary system centred on the principle of lifelong learning. If operationalised appropriately, a 'whole of tertiary' target would:

- Allow for lessened competition between provider types (i.e. remove competition for the same students and funding to achieve growth); facilitate a more harmonised tertiary sector.

[63] Jobs and Skills Australia. *The Clean Energy Generation.* October 2023.

- Support changes in the mix of skills attainment required by the economy over time, also reducing competition and encouraging efficient provision.

The view of a majority of stakeholders was that in order to meet Australia's emerging skills needs, higher education, VET and short-form attainment all need to be prioritised and 'measured' as such. As a consequence, there is a need to expand the entire understanding of the tertiary system by identifying student cohorts who aren't participating in tertiary education and supporting them in further study.

Possible options for measures and targets of attainment which encompass the entirety of the tertiary system include:

- **Individual higher education, VET and short-form attainment targets** could be used to provide guidance for planning purposes such as places and funding. This would capture the mix of skill levels needed across the labour force:
    - **A higher education attainment target** is already outlined in the Interim Report. The need for 55% attainment of a bachelor-level or higher qualification (Skill Level 1) by 2050 is alternately described as a target for the working age population, and the 25-34 age group throughout the report. Oxford Economics is currently working on supplementary modelling of the labour market in order to determine the need for tertiary-qualified workers across HE and VET, which may lead to the alteration of the higher education attainment target. Emerging findings are that the HE-educated workforce will represent 51% of the total workforce, as opposed to earlier estimates of 55%.[64]
    - **A VET attainment target** would operate the same way and capture the number and proportion of the population with a qualification of Skill Level 2, 3 or 4. This could also be calculated using existing ABS data, in the same way as higher education. Oxford Economics' latest modelling suggests that the VET-educated workforce will represent 31% of the total workforce.[65] This may be a starting point for developing VET attainment targets[66].
    - **A short-form learning attainment target** would be more complex to develop and would not likely be able to be calculated with existing datasets. It would need to capture students who have completed one or more tertiary-level short-form qualifications but who have not completed a VET or HE qualification (although they may have dropped out of one). In

[64] Oxford Economics Australia. *Future Demand for Tertiary Qualifications: Initial results*. October 2023.

[65] Ibid, p. 3.

66 National Skills Agreement signed in October 2023 requires the establishment of outcome and priority targets for the VET system by June 2024 see National Skills Agreement | Federal Financial Relations, particularly Part 3.

order to calculate the measure, it would require the threshold for sufficient learning to be developed, as well as data to be captured on approved short-form learning completions. This would likely require a formal definition of microcredentials and short-form learning, and for the AQF to formally recognise certain types of short-form learning, which may come with funding implications. In order to set appropriate targets for short-form learning, further modelling of the labour market and the need for short-form learning would also need to be undertaken.

    - **Specific attainment targets** for particular industries, geographies and qualification levels may also be warranted. For example, there is a need for particular occupations to meet emerging demand from the clean energy industry. Jobs and Skills Australia has a number of existing and in-progress work programs which can be leveraged to set targets. JSA could also have a formal role in measurement and reporting of progress against attainment targets over time. The existing and in-development work programs of JSA are discussed in further detail in Section 5.279.

- Alternatively, or in addition, a **unified index of tertiary attainment** can be developed, capturing the number and proportion of population of tertiary-educated people, which could be cut by age groups, discipline, equity groups, etc. Tertiary-educated people would include all people with a VET or above level qualification, as well as those who have met the defined threshold for short-form learning. This could be used to set targets for particular industries of significance (e.g. clean energy).

Introduce new and adjusted equity targets for participation which capture the whole tertiary system

The view of a majority of stakeholders was that equity targets for participation should incorporate consideration for VET and short-form learning as well, as we need to encourage participation across the entire tertiary education system.

Similarly to attainment, there are potential options for suitable equity participation targets, including:

- Individual equity participation targets for HE, VET and short-form learning:
    - **Equity targets for participation in the HE sector** are articulated in the Interim Report, which notes that 60% of the additional students in the system by 2052 will need to be from low SES backgrounds, around 53% from regional and remote areas, and around 11% would need to be First Nations students. These imply overall participation targets for the HE sector which would need to be clearly defined building on the

labour market modelling conducted by Oxford Economics. These could be expanded to **equity targets for participation in the VET sector**, based on Oxford Economics' in-progress supplementary modelling of the VET system.

  - Folding in **equity targets for short-form learning** may also be a possibility, but would require further modelling not yet in scope, as per the attainment targets. A desired policy outcome articulated is that lifelong learning is not predominantly for the wealthy and highly-educated, and ambitious targets of equity participation in short-form learning could address this concern.
  - As with attainment targets, equity participation targets for HE, VET and short-form learning could be developed for specific disciplines, age groups, geographies and other factors, leveraging the work of JSA, and with JSA responsible for developing measurement strategies and reporting.

- Similarly to attainment, **unified participation targets for specified equity groups** across the tertiary system could also be developed, including HE, VET and defined short-form learning which meets the threshold.
- Another alternative is to track **attainment for equity cohorts, rather than just participation**, as this would incentivise the system to prioritise completion over participation. This is also addressed in the next section with a measure of student progress.

Introduce new measures of tertiary learner progress

- A set of **new measures for tertiary learner progress** would help alleviate the risk of a push for higher attainment driving an increase in participation of equity cohorts who are more likely to drop out, leaving them with a student loan and potentially limited employability skills as an outcome.
- The student progress rate would prevent tertiary providers from prioritising student numbers and ignoring the likelihood of a student succeeding in a particular course of study. For example, it might incentivise a dual-sector university to recommend a VET qualification over a HE qualification for a student more suited to a VET pedagogy. It would also ensure that providers are on the hook to provide sufficient support to at-risk students to prevent them from dropping out.
- A potential measure for student progress currently used in government and universities is outlined overleaf, using available data from DoE.

Student progress rate definition

Student progress rate (SPR) is the proportion of units of study passed in a given year. Passed number of units is divided by the number of units passed, assessed and withdrawn. It means any unit of study yet to be commenced in the year or still in process of completion or completion status not yet determined are excluded. Further, any unit of study which is reported to the Australian Department of Education (DoE) as work experience in industry should be excluded the calculation.

$$Student\ Progress\ Rate = \frac{3}{1+2+3}$$

Unit of study completion /status code

1. Withdrew without academic penalty
2. Failed
3. Successfully completed all the requirements
4. Unit of study to be commenced later in the year or still in process of completing or completion status not yet determined
5. Recognition of prior learning (VET only)
6. Withdrew due to medical reasons

This analysis can be undertaken by institution, by citizenship status, home residence, commencing or returning status, discipline and others for VET and HE students.

- An analogous **student progress rate for short-form learning** would also need to be developed which accounts for the different nature of these, with differently defined units of study. However, this will be dependent on short-form learning being included in standard data collections post inclusion in the AQF. The measure should also account for students exiting a qualification early into a shorter, nested qualification (e.g. HE certificate).
- A **target student progress rate** could also be considered, in order to create an aiming point to incentivise higher rates of progress and completion. This would require some consideration from DoE as to the appropriate target level of student progress; while it would be desirable to aim for equal progress for all cohorts, it is likely that different targets for different cohorts will be needed in the short-term.

Dependencies

Data interoperability

In order to undertake system-level measurement more effectively and ensure that measurement is consistent across the system, an interlinked data environment between VET and HE (and short-form learning) is necessary. JSA has developed a VET National Data Asset, which provides course-level data on VET courses, which could be expanded to HE. This is discussed further in Section 5.281, where the potential role of JSA in system measurement is outlined.

Increasing accessibility

To enhance accessibility to tertiary education, several strategies will be needed. Financial aid in the form of income support, scholarships and work-study programs can assist students in overcoming financial barriers. Providing more inclusive entry requirements or allocating more places for equity groups and streamlining admission criteria across various institutions to recognise prior qualifications, skills, knowledge and experiences can also help improve participation.

Creating outreach and counselling programs that specifically target high schools and communities with historically low participation rates can impart much needed guidance and information to prospective students. Enhancing the quality of primary and secondary education can have a direct impact on tertiary education participation and achievement by ensuring students possess a strong foundation. Implementing comprehensive career guidance programs can aid students in making informed decisions regarding their options and prospective career paths.

Tertiary institutions can strengthen additional support services such as tutoring, mentoring, and counselling to enhance retention and completion rates. Utilising technology and online learning options in tertiary education can enhance access to learning resources and offer flexible learning options. Strengthening partnerships between tertiary institutions and industries can help develop curriculum that helps develop skills that are needed by industries. Providing internship and traineeship opportunities (see Chapter 4 for discussion of placements and Industry partnered learning), and job placement services will help improve employability and encourage prospective students to pursue higher education. Lastly, establishing quality assurance mechanisms can guarantee that institutions meet specific standards and offer a high-quality education. Enhancement of enabling and other preparatory courses could assist students to be better prepared for the demands of tertiary study.

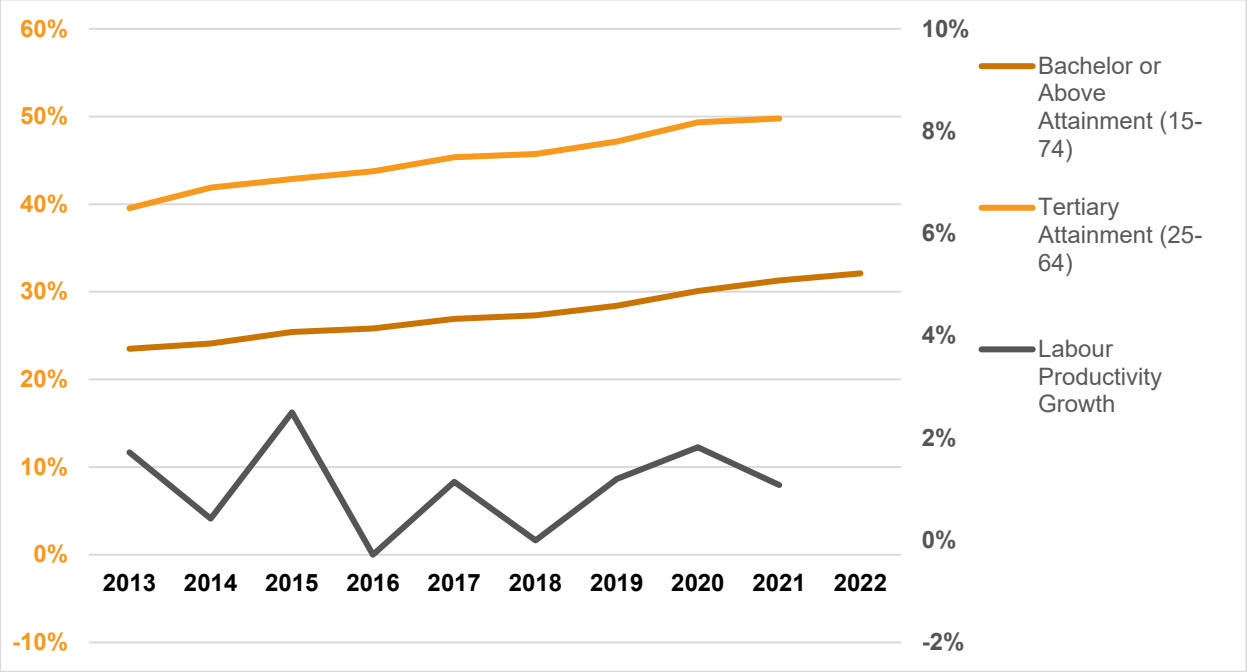
5.2 Labour market outcomes and modelling

The case for reform

Better understanding how investments in tertiary education can help to support positive labour market outcomes is a central tenet of a more responsive tertiary education system that is better able to meets jobs and skills needs both now and into the future.

Risks of a qualification attainment-centric approach to system measurement

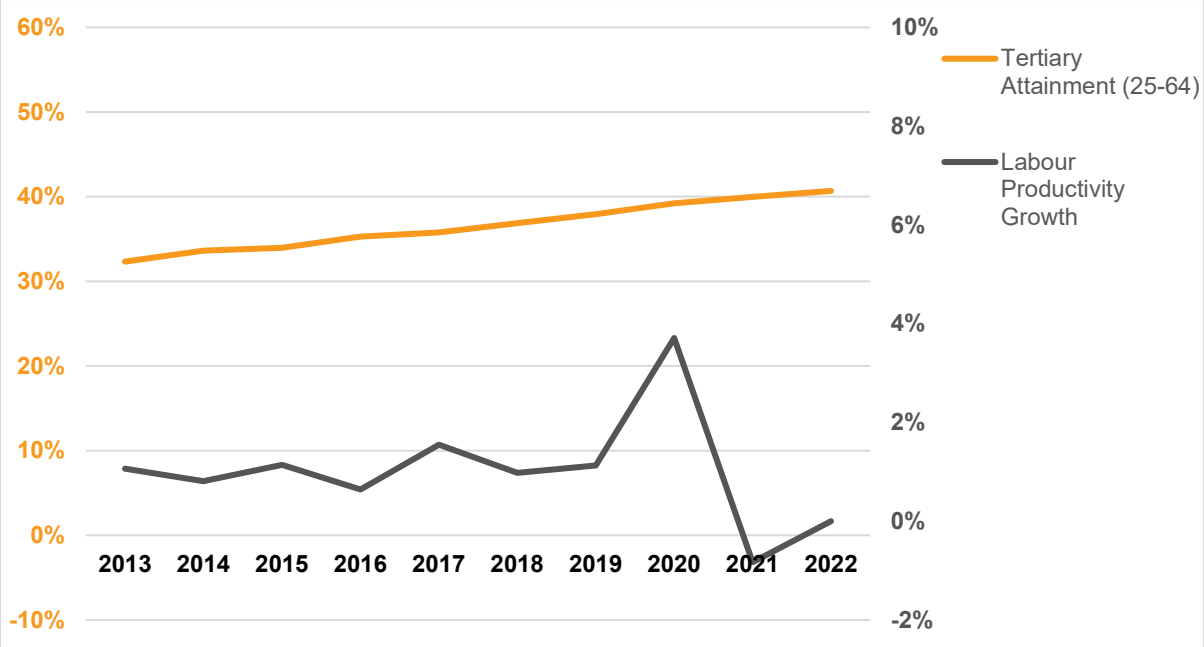
In addition to the broader democratic and participation benefits of tertiary education attainment, there is a fundamental benefit to investing in skills formation for Australia's economic prosperity. Significant work and investment has gone into raising higher education participation in Australia and this has been effective. Australia's higher education and overall tertiary attainment has risen in the last decade, to the highest percentage in history. However, in the corresponding period, Australia's labour productivity growth has been slow, and seemingly unaffected by rising levels of education.



Source:

- *OECD (2023), Population with tertiary education (indicator). doi: 10.1787/0b8f90e9-en*
- *OECD (2023), OECD Compendium of Productivity Indicators 2023, OECD Publishing, Paris.*
- *Australian Bureau of Statistics, Education and Work, Australia, May 2022, Table 34 HIGHEST NON-SCHOOL QUALIFICATION: Bachelor degree level or above, 2013 to 2022, Persons aged 15–74 years*

This trend is also true for OECD countries on average, with tertiary attainment rising from 34% to 41% without a related increase in productivity growth:



Source:

- *OECD (2023), Population with tertiary education (indicator). doi: 10.1787/0b8f90e9-en*
- *OECD (2023), OECD Compendium of Productivity Indicators 2023, OECD Publishing, Paris.*

OECD research on a new measure for productivity suggests that productivity is more closely linked to the quality of education than the quantity of education, with significant implications for policy design.

> The elasticity of the stock of human capital with respect to the quality of education is three to four times larger than for the quantity of education. The new measure has a strong link to productivity with the potential for productivity gains being much greater from improvements in the quality than quantity component of human capital.[67]

Jobs and skills mismatch is a concern for economies – skills atrophy if not all skills are used

World Economic Forum analysis reveals the significant disadvantages of unused skills for individuals and the economy, which are particularly evident in times of economic downturn.

[67] Source: Égert, B., C. de la Maisonneuve and D. Turner. "A new macroeconomic measure of human capital exploiting PISA and PIAAC: Linking education policies to productivity", *OECD Economics Department Working Papers*, 2022, No. 1709, OECD Publishing, https://doi.org/10.1787/a1046e2e-en

[A] worrying phenomenon is sizeable qualification mismatch. Affecting workers, firms and the overall economy, qualification mismatch occurs when a worker's qualification level is higher or lower than that required by the job. Although the match between what people can actually do and the content of their jobs may improve over time, qualification mismatch can be persistent and leave an adverse or "scarring" effect on an individual's career. In addition, unused skills will atrophy, resulting in a partial loss of the (initial) investment in them.[68]

NCVER research reveals substantial overqualification in Australia:

Around 19% of Australian workers report that they are not using all of their skills at work. About 35% of workers are overqualified, potentially contributing to this level of skill underutilisation.

The likelihood and perceived importance of skills utilisation appears dependent on the type of job held. High-skilled, complex jobs provide more opportunity for workers to draw on a broader range of their skills than low-skilled jobs.

Employers in the early childhood education and care sector believed that all employees were using their skills. Analysis of HILDA data, however, showed that around 16% of workers in selected occupations from that sector reported they were not using all of their skills.

Employers in the manufacturing sector were less confident that employees were using all of their skills, depending on the specific occupations considered. The HILDA Survey shows that around 14% of workers in selected manufacturing occupations report that they are not using all of their skills, with the highest level being metal engineering process workers (31.3%).

Employers believe that skills utilisation is important for staff satisfaction and retention, but there were very few formal mechanisms in place in the case study organisations for understanding workers' skills and ensuring their optimal usage. Where mechanisms were used, they tended to be aimed at understanding skills needs, rather than ensuring skills utilisation.

Employers were unsure whether support from government (or other bodies) would help them to be more active in utilising the skills of their employees. There was no sense that the lack of such support was the reason why these organisations were not addressing skills utilisation more actively. Instead, most

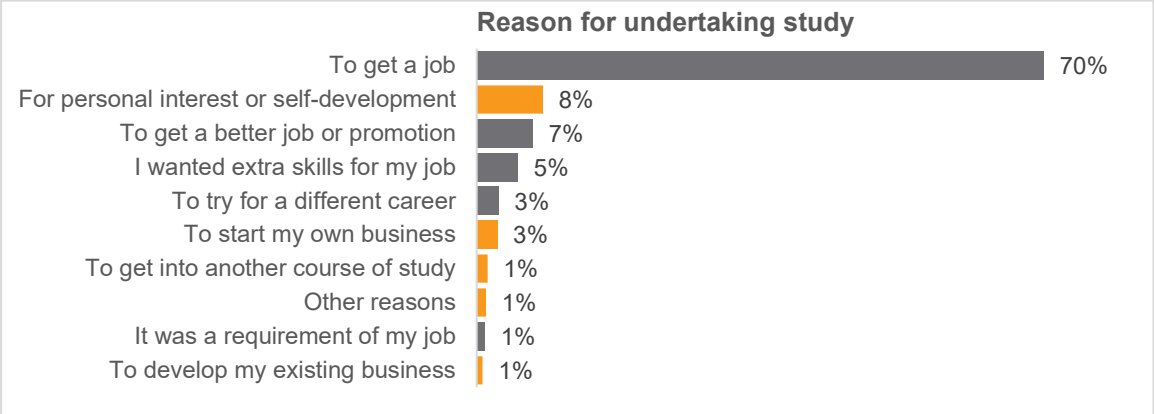
[68] WEF Jobs and Skills Matching Report
https://www3.weforum.org/docs/GAC/2014/WEF_GAC_Employment_MatchingSkillsLabourMarket_Report_2014.pdf

turned the conversation towards skills development, including interest in financial support for training, which they see as a higher priority.[69]

Benefits of a skills-based approach to system measurement

A potential system shift that we heard consistently throughout the stakeholder interviews and in identifying relevant international best practice was the potential benefits of taking a skills-led approach to the education system and labour market, that is supplementary to a qualifications-led approach. Some of these benefits included:

- **Government:** A skills-centric view of the system will allow a better understanding of the mismatch between jobs and skills and where there is over or under-skilling in the labour market, which will enable better policy and investment decisions in education and other government departments.
- **Students:** For a large percentage of students, the goal of undertaking tertiary education is to find employment or seek advancement in their career.



Internal RMIT data shows that roughly two thirds of all enrolments across HE and VET offerings are undertaking study to get a job, plus another 16% for other career-related reasons such as promotion, upskilling for work, or career change.[70]

- **Institutions:** A skills-centric view can drive better qualification design from institutions to be more job and career-relevant, creating a better value proposition for students looking to choose an educational program.
- **Employers:** Hiring on the basis of skills rather than merely on qualifications will broaden the pool of available workers, rather than narrowing down to a

[69] NCVER Skills Utilisation Report: https://www.ncver.edu.au/__data/assets/pdf_file/0045/9669528/Skills-utilisation-in-the-workplace-the-other-side-of-the-coin.pdf

[70] Source: RMIT Enrolment data, 2023 (Australia only).

single qualification type, overcoming cognitive bias. It will drive better and more inclusive hiring decisions and better matching between jobs and skills with associated flow on benefits to the employment market and the broader economy. The benefits of skills-based hiring has already been demonstrated by a successful pilot organised by Microsoft and Markle, which involved development of tools and resources to support organisations in identifying the skills needed of a potential hire.

Skillful: Building a Skills-Based Labor Market

Markle's Skillful initiative [is] a data-driven approach to connecting American workers and businesses in a rapidly evolving labour market. While advances in technology have helped the economy overall, some American workers are being displaced. Jobs in growing sectors increasingly require new skills earned through a post-secondary degree, certificate or credentialing program. Particularly vulnerable are the nearly seven out of 10 Americans who have transferable skills, but not a four-year college degree.[71]

Skillful has developed resources, partnerships, and initiatives to help the nearly 70% of people in America without college degrees get good jobs based on the skills they have or the skills they can learn – creating new opportunities for success in the digital era.

In partnership with Microsoft and others, Skillful developed resources to accelerate the adoption of skills-based practices to reduce bias in hiring and talent management and open more opportunities for more people. This includes training and tools for employers and an innovative training program for career coaches, created in collaboration with state governments, local employers, educators and workforce development organisations.[72]

[Aqua-Hot, a manufacturer in Colorado facing difficulty in finding appropriately-skilled workers], learned from Skillful that [their] hiring managers needed to take a different approach to attract the right talent.

In looking to hire an engineer, for example, the company changed the description in the job listing and broadened the search to include people who might have related skills and versatility. Instead of asking for a specific degree, such as a bachelor's in mechanical engineering, or a certain number of years'

[71] https://news.microsoft.com/2017/06/27/the-markle-foundation-and-microsoft-partner-to-accelerate-a-skills-based-labor-market-for-the-digital-economy/
[72] https://www.markle.org/skillful/

experience, the team described the exact skills needed to fill the role -- and struck gold.

"What did we want an engineer to do? And a certified diesel mechanic looked at that and went, 'I have all of those skills,' " Harter said, noting the person had no degree or background in engineering. "And we hired him and he was a rock star -- he did a great job for us."

The lesson for Aqua-Hot and other employers? People often end up working in a field or job that doesn't match their degree or prior training, and that doesn't mean they won't excel.[73]

JSA analysis also supports the case for a skills-led approach to training and hiring in addressing labour market shortages, as described in more detail overleaf:

[73] https://www.cbsnews.com/news/small-business-hiring-workers/

Benefits of skills-based hiring

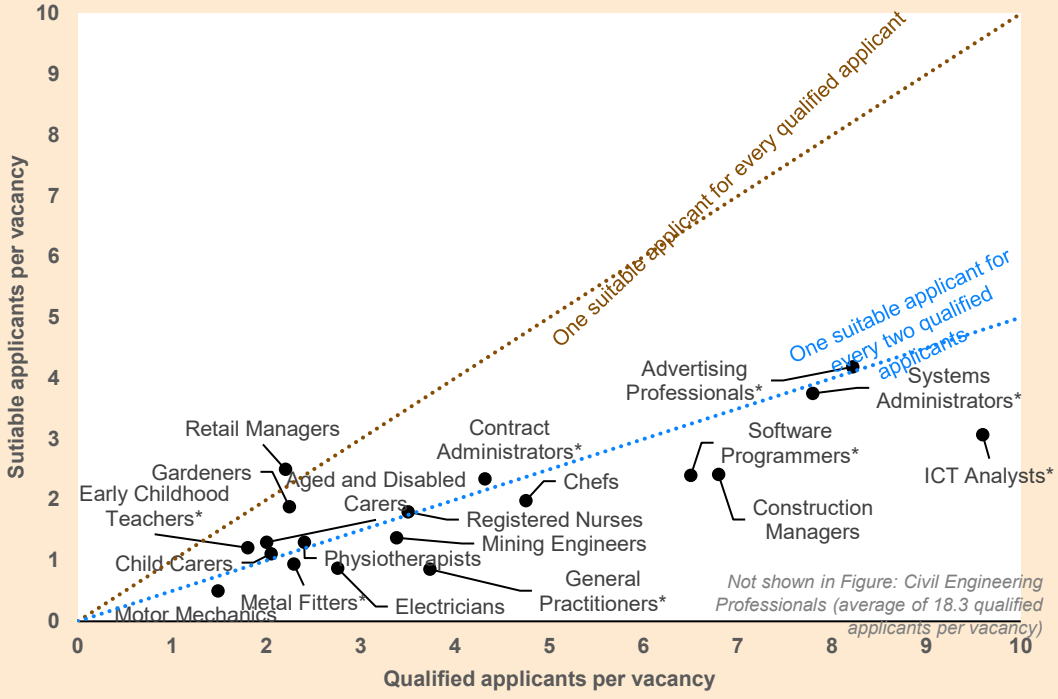
In an optimally working education and training system, the skills demanded by the economy are supplied in proportion. Whilst the real world will never perfectly match such ambition, it is an important goal aspire to so that the settings and the design of the system are responsive and able to meet the challenges at scale and in time.

The below diagram illustrates the recruitment difficulty for a selection of twenty occupations. It shows the number of qualified applicants per vacancy and the number of suitable applicants per vacancy to estimate recruitment difficulty in each occupation.

Employers across different occupations receive different numbers of applicants, have different mandatory qualification and experience requirements, thus find different proportions of applicants to be suitable.

If every qualified applicant was also suitable for a position, there would be a one-to-one relationship between these metrics and all occupations would lie on the 45º line. However, as the figure reveals, most occupations in shortage fall well below this line. Indeed, many occupations in shortage have fewer than one suitable applicant for every two qualified applicants.

Recruitment difficulty for 20 occupations:



Source: Jobs and Skills Australia, Labour Market Update, February 2023

Recent LinkedIn data shows that the skills that employees need for a given position have shifted by around 25% since 2015 which, by 2027 is expected to double. A recent survey confirmed that 88% of hirers agree that they are filtering out highly skilled candidates just because they lack traditional credentials such as past job title or degree.

A facile system allows increased participation and improves productivity through raising the human capital of people. If an individual is able to acquire new skills as they emerge, they can add that to their existing skill (and knowledge base), which will allow them to be more productive.

The LinkedIn report estimated that a shift to skill-based hiring resulted in a nearly ten-fold expansion of the talent pool when using a skills-first approach.

A 2022 study of the value of human capital and of experience by McKinsey estimates that human capital represents roughly two-thirds of an individual's total wealth. Skills can be acquired both formally and on the job. In fact, skills acquired or deployed through work experience contribute an average of 46 percent of this value over a typical working life.[74]

Identified barriers

A shift to a skills-led approach will take significant and consistent efforts on the part of governments. It is a relatively new approach and will require work to develop, validate and socialise.

In RMIT's stakeholder interviews, we identified some resistance about a skills-led approach from different parts of the sector. In general industry groups were supportive of such approaches but were passive in this support (a 'believe it when we see it' approach) but remained somewhat sceptical about the ability to overcome disagreement over how occupations are described as well as concerns that changing the description of skills (and thus competencies) would disturb professional pathways.

Views in the sector ranged from philosophically opposed to 'skills' being associated with higher (university) education; to quite supportive of the potential to better identify skills within existing qualifications and support for program redesign.

There is also a proliferation of closed skills taxonomies and jurisdictional efforts to develop skills-led approaches to inform localised or industry specific skills needs and related policy. Ensuring there is a harmonisation and broad agreement to a National

[74] Jobs and Skills Australia. *A skill based approach to lifelong learning*.

Skills Taxonomy (the Australian Skills Classification) is also a potential barrier to overcome in this work.

Australian Skills Classification

In Australia, the current frameworks for skills, qualifications, and training programs are fragmented and do not fully capture the wide range of skills needed by employers and workers. This includes not only technical skills, but also employability skills, specific job tasks, and digital literacy. To bridge this gap, the Australian Skills Classification (ASC) is being introduced. This comprehensive system brings together existing frameworks and translates them into a standardised language. By using data analysis, the ASC reveals the connections between skills and occupations, helping individuals understand how their skills can lead to various job opportunities in different settings. The Australian Skills Classification (ASC) is designed to categorise skills in jobs into three types: core competencies, specialist tasks, and technology tools. It is built around the concept of transferrable skills, enabling identification of skills that can be used across different occupations, employers, and industries. Understanding transferrable skills can help workers articulate their skills and explore career transition options. It can also assist employers in finding talent outside traditional qualifications. However, the ASC has limitations, including incomplete coverage of occupations and insufficient specificity in skills data. Curriculum mapping using ASC is currently being piloted. Implementation of curriculum mapping using ASC at scale would require policy considerations, data acquisition, modelling, and validation. Human validators are currently used to validate the accuracy and reliability of the mapping models. Recommendations to strengthen the ASC include:

- Expansion to cover all occupations (including emerging) in the labour market relevant to VET and higher education
- Built up with rich skills descriptors and aligned to assessable learning outcomes and VET competencies[75]
- Mapped to open standards to accelerate adoption

[75] Bean and Dawkins, *University-Industry collaboration in teaching and learning*, 2021, p.33.

Options for reform

Introduce new targets for skills attainment to better capture the skills stock of the labour force

A supplementary target for skills attainment is an alternative which would better track the ability of the tertiary system to meet the skills needs of the sector, rather than simply measuring qualification attainment.

This could be measured (with appropriate targets) through:

- An index of specific skills attainment of the labour force. This would be based on skills acquired through qualifications and employment, and could be broken down by sectors, geographies, disciplines, ages and other factors. This would require:
    - A consistent, nationally standardised framework for Recognition of Prior Experience to account for skills gained in the workplace
    - An agreed upon National Skills Taxonomy, which may be agreed upon as part of the National Skills Passport work. A National Skills Taxonomy is one of the most critical pieces of digital / data infrastructure underpinning any effective and accessible lifelong learning system. It provides the 'common language' to shift analysis from occupation based to skills based. From here, a skills taxonomy would enable analysis on skills needs in various areas, direct funding and provide basis to assess the effectiveness of the skills system. It can assist with course design and identify generic and common specialised skills across qualifications but can also be an input into the National Skills Passport to build a portfolio of skills for an individual as well as assisting with RPL and RPE.

      While JSA has developed an Australian Skills Classification as a potential candidate, there is known pushback on the concept of a skills taxonomy from industry and union groups, due to disagreement over how occupations are described as well as fears that changing the description of skills (and thus competencies) would disturb progression pathways as defined by current awards. There are also other considerations such as how to make the agreed upon skills taxonomy dynamic and responsive to the emergence of new jobs. Further work on a National Skills Taxonomy with JSA will be necessary to support these measures:
- An index based on proxy metrics tied to frequency of engagement with the tertiary system. While this is not as comprehensive as a measure of specific

skills, this would have more detail than simply the highest level of attainment, since someone with more qualifications is likely to have a broader set of skills.

This may be an interim, short-term solution while the more comprehensive skills index is developed. As per the more comprehensive measure, this could be broken down by sectors, geographies, disciplines, ages and other factors.

Renew student graduate outcome measures and set targets

In order to measure the effectiveness of the tertiary system in preparing students for the workforce, existing measures of graduate employment outcomes should be consolidated across sectors and improved with further detail, as described below:

- Graduate outcomes measures should incorporate VET, HE and short-form learning. This will require: additional data collection which would allow for short-form learning and aligning an approach to VET and HE outcomes measures, consistent across all states and territories.
- Surveys do not typically capture longitudinal data, which makes analysis of transitions between occupations over time difficult, and also means that – with the exception of GOS-L surveys – students are only captured at a single point in their post-study life. A continuous or periodic recording of their employment status would make for richer analysis
- Graduate outcomes measures should incorporate more detail: for example, there should be consideration of the appropriateness of the skill-level necessity of the occupation. It would be undesirable for higher-educated learners to be employed in lower skill-level occupations when a VET or short-form qualification would suffice. Measures should account for commensurate employment benefits from skills
- It is also worth considering appropriate targets for graduate employment that could be applied to the system at various levels (sector, geography, equity cohort, discipline).

Introduce system-level measures for occupation and skill matching in the labour market

Measures of the quality of skills and occupation matches in the labour market are needed, to measure how effective the education system is supporting one of its key purposes – the supply of suitable graduates to the labour force. New measures capturing the entirety of the labour force will need to be developed in collaboration with JSA, with their extensive modelling leveraged and developed further. Appropriate measures could include:

An index of over and under-skilling in the labour force, which would:

- Measure over and under-skilling on the basis of skills needs, which can be tied to jobs and also qualifications
- be based on a robust and comprehensive picture of supply and demand
- include consideration as to the different types of skills gaps that exist in particular areas
    - Insufficient supply of skilled labour in a particular area
    - low suitability of skilled workers for job vacancies
    - above average job mobility / low average job retention
    - wages having not adjusted to an appropriate level
    - other reasons
- include consideration of the magnitude and persistence of skills gaps
- be broken down by sectors, geographies, disciplines, ages and other factors, allowing for policy decisions to be made in response to emerging skills shortages
- may include appropriate targets to drive policy decisions within government to address inefficiencies in the labour market via appropriate educational responses

Leveraging the existing work of JSA on skills shortages and labour market demand and supply modelling will be critical in developing this measure (and potentially targets) – this is further discussed in the following section81.

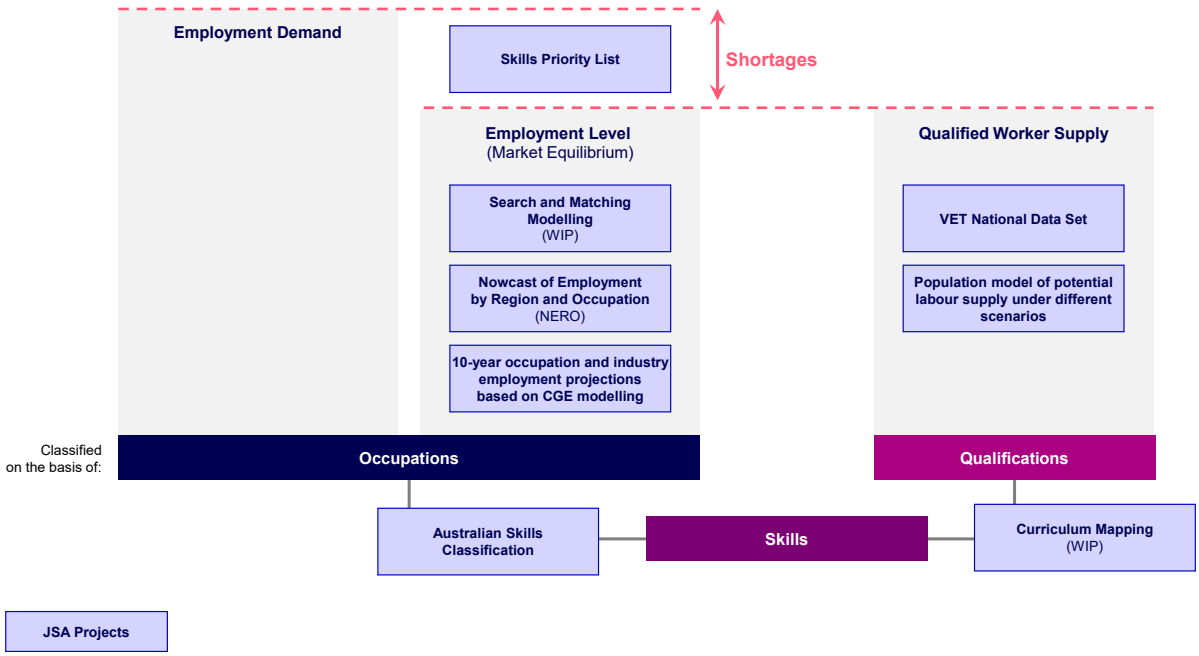
Dependencies

Formalisation of Jobs and Skills Australia's role in supporting development of measures and targets

JSA was formally established in November 2022 and was initially intended to have a remit focusing on VET. This has been recently expanded to include HE. Although JSA in its current form is still a relatively new organisation, it has developed a rich set of data assets and analysis products which are highly instructive in understanding labour market dynamics and linkages to the education system.

JSA should have a clarified and formalised role in providing insight to the sector and working with DoE and DEWR to inform policy decisions and appropriate measures and targets, to ensure a high-functioning labour market. JSA's capability should be leveraged and strengthened to develop a dynamic picture of the labour market which encompasses a granular view of both the supply of skilled labour, and industry demand for workers.

A detailed description of the various existing and in-progress work of JSA and how they support a future comprehensive view of the labour market and tertiary system is illustrated below:



Existing and emerging work programs of JSA which help inform skills, occupations and labour market demand estimates are provided in Appendix D.

Assessment of current state readiness for reform

There are some existing participation and attainment targets, measures of student progress and other labour market system measurement mechanisms. However, these are largely ad-hoc, focus on specific segments of the education system, and are not well-integrated with Departmental planning and policy setting. A more formalised and visible set of measures and targets will ensure appropriate incentives for the tertiary system as a whole.

Below is a summary of existing and proposed measures to be developed:

Element and readiness*		Current state characteristics	Ideal future state characteristics
Attainment Targets	A	• A target attainment rate for Higher Education was articulated in the Interim Report and is being reviewed • An analogous VET target is also in development	• HE, VET and short-form learning should be incorporated into the suite of targets, either separately or a combined index • Specific attainment targets could also be developed for priority industries or geographies, informed by JSA analysis • Targets are monitored, evaluated, reported, and updated as required
Equity Participation Targets	A	• Equity participation targes have been articulated in the Interim Report for low SES, regional and remote, and First Nations students for Higher Education.	• Equity participation targets should be expanded to include HE, VET and short-form learning, either separately or combined index, for the same equity groups
Skills Attainment Measures	A	• No measure for individual skills attainments have been developed yet	• Formalised indices for skills attainment developed and formalised, linked to qualifications and employment • This requires an agreed National Skills Taxonomy building on JSA's work
Occupation and Skill Matching Measures	A	• Some information on jobs and skills matching and labour market dynamics more broadly in JSA's existing analysis (e.g. Skills Priority List, 10 year projections of labour supply)	• Formalised indices for the effectiveness of skills matching in the labour force, based on further JSA analysis
Graduate Employment Outcome Measures	A	• HE graduate employment is captured in the Graduate Outcomes Survey • VET graduate employment is captured in the National Student Outcomes Survey • Lack of standardisation across sectors, lack of longitudinal data, and lack of data on short-form learning limits the usefulness of this data somewhat	• Renewed, integrated and standardised employment outcome surveys and measures across the entire tertiary system, including short form learning and with longitudinal data reporting • Targets for specific areas of the tertiary education system as necessary to encourage providers to develop job-relevant qualifications
Student Progress Rate Measures	G	• Existing student progress rate measure currently used throughout the tertiary education system	• Formalised student progress rate measure with appropriate targets overall and/or in specific pockets of the tertiary system

** Readiness ratings: green (fit-for-purpose, only minor adjustments), amber (some additional investment), red (significant reform). Readiness may be a proxy for investment required to meet ideal state.*

6 Tertiary education system planning and implementation

In this section we seek to develop an evolutionary pathway toward system-wide reform of the tertiary education system. This reform develops and seeks to implement adaptive planning and networked forms of coordination as a responsive and responsible planning and coordination approach. It also develops options for tertiary education system governance, strategy and delivery to support increased responsiveness.

Prioritised policy options:

1. Establish a tripartite approach to developing a national lifelong learning strategy
2. Design and establish a Tertiary Education Commission to support the identified system accountabilities outlined in this report
3. Create a National Skills Delivery Fund to prototype tertiary skills (delivery) coalitions in priority sectors/geographies, with appropriate, risk based, delivery, accountability and regulatory settings.

Challenge and response

Challenge:

While the current system is capable of developing limited skills solutions to meet current market demand, the pace, fitness and scalability of these responses is inhibited by segregation between the VET and HE systems and the fragmented governance and regulatory environments that uphold this division.

Response:

To overcome these challenges, Australia should transition to a collaborative tertiary governance model, that prioritises inclusive innovation and builds consensus over time, signified by the establishment of a Tertiary Education Commission and articulation of a National Lifelong Learning Strategy.

The case for reform: tertiary education system planning and implementation

The ambitious vision for the future of the Australian tertiary education and skills system outlined in the Interim Report can only be achieved through greater collaboration and alignment between the diverse sectors and interests that comprise the Australian tertiary education system.[76]

There is already a latent culture of collaboration and innovation in the Australian tertiary education system. Providers, industry, and government have engaged in collaborative experimentation even in the absence of top-down coordination or incentivisation.

There are strong examples of innovative system interventions co-designed and piloted by diverse groupings of VET, HE, government, community, and industry, particularly in program architecture, qualifications and non/in-formal learning design and delivery models that combine knowledge and applied skills, and novel industry partnership models that tackle sectoral and regional challenges (see Appendix E). Many of these examples have been surfaced and celebrated in this report and the Interim Report.

Identified barriers

The capacity to coordinate and scale successful interventions is limited by incumbent structures, regulations, and design criteria at the systems level, such as the lack of equivalence between qualification design, fragmented and unreliable funding arrangements and inconsistent incentives for industry engagement across the sector. To transition to a more responsive, connected lifelong learning system, legacy governance structures and other processes that inhibit innovation will need to be reviewed and reformed. Focus should be on breaking down structures that undermine the potential for innovation between and across the sectors, laying the foundations for cultural change, and incentivising new models of collaboration and system behaviour underpinned by a common language of skills *and* knowledge.

[76] Australian University Accord, *Interim Report*, 2023, p. 25.

Options for reform

Define specific accountabilities for the Tertiary Education Commission

Design and establish a Tertiary Education Commission to support the identified system accountabilities outlined in this report

Per section 3.1.4 of the Universities Accord Interim Report, a primary task of the Review is to 'consider the benefits of the establishment of a Tertiary Education Commission (TEC), charged with overseeing the development of a fit-for-purpose tertiary system.' As discussed throughout this paper, many of the reform options outlined in this report would be strengthened by the stewardship and coordination of a TEC or other central governance group.

As outlined in the Interim Report and confirmed during consultation with relevant members of the Department of Education, the most developed understanding of responsibilities assigned to a future TEC is system stewardship and having independent oversight over core elements of the tertiary system, including but not limited to:

- System performance measurement and reporting
- Funding and pricing
- Strategic policy
- Regulation, including HE standards (HESP)
- Coordination, load planning and resource allocation, including coordinating intervention in geographies and industries of need

In addition to these important responsibilities, it is vital that the delivery of a responsive tertiary education system is a core accountability of the TEC. Augmenting the list defined in the Interim Report (above), the following additional responsibilities should be considered:

- *System connection and integration:* addressing the HE and VET disjuncture by coordinating state and federal government.
- *Engagement and consultation:* an expanded sector engagement, consultation and communication role, advocating for skills reform, coordinating buy-in from industry, communities, and diverse provider types, addressing concerns and challenges.
- *Lifelong learning strategy ownership:* Set a long-term lifelong learning strategy and roadmap, set with cyclical planning models that allow for reflection and adjustment according to demand.

- *Awareness and assessment:* conduct research to surface and assess pockets of excellence and innovation that could be scaled; manage insights and sharing of best practice across the whole tertiary stakeholder ecosystem; identify and manage duplication of effort and activity.
- *Design, delivery and assessment of whole-of-system incentives* including lifelong learning entitlement, national priority industry linkages fund, and others.

Case study: Potential role of TEC in standardising RPL / RPE Processes

RPL / RPE credit transfer is currently offered on a discretionary manner and in a non-transparent fashion, with no clear linkages between the request for RPL and an outcome of credit towards skills recognition.

One potential way to mitigate this risk and align the benefit and efficiency of RPL would be a standardised process for RPL across providers and to introduce a fee for RPL services that may be covered under a student's HECS-HELP loan. This process would be aligned to industry standards and centrally managed to ensure consistency across providers and jurisdictions. Oversight and management of this centralised, national, paid RPL process could be within the domain of a TEC.

Stakeholders involved in RPL process suggested that while this would appear to beneficially lower the administrative burden on providers initially, in practice the offerings of particular courses from different providers could not be accurately assessed remotely. RPL assessors within providers work closely with faculties and course content to provide tailored assessment of a candidate's suitability to receive credit toward a provider's particular qualification design and learning outcomes. Stakeholders suggested that while providers wished to maintain a flexible approach to applying RPL assessment, there was a call for a better communicated rationale for the processes involved, as well as the assumptions within RPL practices such as the 10-year time limit on granting previous credit. Additionally, stronger definitions from TEQSA's guidance notes on RPL and Credit Transfer would reduce the mixed usage of definitions regarding Credit, Advanced Standing, RPL and RPE used across the tertiary system.

While efforts to redesign and implement a reformed AQF is underway, the TEC could play a role in coordinating and managing the revision of current processes and move to a more standardised approach. That way, RPL/RPE processes are ready to help students 'realise' the benefit of AQF reform in a consistent, managed way.

A national lifelong learning strategy

Establish a tripartite approach to developing a national lifelong learning strategy

To develop reform and achieve system change, Australia must establish a comprehensive national lifelong learning strategy that articulates a common vision for the tertiary education and training system and builds the capabilities to deliver it. In general, national plans of this type seek to:

- Articulate a shared vision for lifelong learning
- Provide mid- and long-term objectives and policy direction
- Put forward targets and measures of success
- Capture and outline dependencies between different elements of a lifelong learning system
- Communicate Australia's commitment to lifelong learning on the global stage and provide the foundation to connect with other countries and international organisations (i.e. UNESCO Institute for Lifelong Learning[77], OECD Learning for Life Unit[78])

In addition to these generic aims, a national lifelong learning strategy could drive change in the area of skills, growth and tertiary connection in the following way:

- Further refine and socialise the 'challenge' of lifelong learning outlined in Chapter 1 of this report.
- Outline and manage an underpinning tertiary education data strategy.
- Articulate guidance and management of the proposed Lifelong Learning Entitlement

Case Study: Application of a lifelong learning strategy through reform in Finland

In 2020, Finland introduced a new 'Continuous learning reform' to continue its progress in the area of lifelong learning. Like Australia, Finland has focused on the areas of healthcare, social welfare, and the education sector as its key targets for meeting skills shortages. It has proposed in its reform to do the following[79]:

[77] UIL, https://www.uil.unesco.org/en
[78] OECD's Learning for life initiative https://www.oecd.org/education/learningforlife.htm
[79] Case study as described by Ministry of Education and Culture, https://okm.fi/en/continuous-learning-reform

Education and training that is designed for adults and leads to a qualification or degree will be targeted at raising the level of education of students or improving their labour market position. Financial resources will be used to encourage the provision and completion of micro-credentials. These will be planned in cooperation with business and industry so that the skills and competence meet the demand. Language teaching for immigrants will be reformed to better integrate it into the education that prepares immigrants for the labour market or further studies.

Finland needs to become better at harnessing the untapped skills and competence potential that already exists in society. For example, we must improve the inclusion and competence of those who are in disguised unemployment and those with impaired capacity to work and disabilities. The Government will reform the operation of employment services and increase cooperation.

Parliamentary reform of continuous learning:

At the end of 2020, the parliamentary group on the reform of continuous learning outlined a vision and goals for 2030, and 27 measures to achieve them. The reform focuses on the potential for upskilling, reskilling and developing competence over the course of people's careers.

Reform vision and objectives:

Everyone develops their skills and competence during their careers.

- Opportunities for everyone to upskill and reskill proactively, so that they can develop in their work, find a new job and advance in their careers.
- More equitable participation.

Everyone has the knowledge, competence and skills required for employment and a meaningful life.

- A higher level of competence.
- A higher employment rate.
- A higher number and proportion of 25 to 64-year-olds with a higher education degree and lower number and proportion of 25 to 64-year-olds without a post-primary qualification or degree.

Competence renews the world of work and the world of work renews competence

- A labour force that is skilled supports sustainable growth, innovation and competitiveness, and consequently wellbeing.
- Skilled workforce for employers.
- Workplace communities advocate learning new things.

The development of a spectrum of delivery coalitions

> Develop a National Skills Delivery Fund to prototype tertiary skills coalitions in priority sectors/geographies with relevant regulatory flexibility

To realise the full benefit of a coordinated governance approach and to ensure the tertiary education system is *dynamic* and *adaptive* to evolving and increasingly complex community needs, investment in a diverse range of place-based interventions, delivery coalitions and qualification types is required.

To drive what will be a complex reform agenda over a 12+ year timeframe, government needs a catalogue of delivery partnerships ready to respond to different types of occupational, sectoral, and regional challenges. Many of these can build on existing anchor institution and partnership arrangements and be leveraged to support specific priorities and skills needs. A range of existing delivery coalitions and details of their use cases are outlined in Appendix E.

These place-based interventions are also a powerful means of accelerating the development and scaling of skills solutions. The clustering of industry, VET, HE, research, and the community in physical or envisioned 'innovation ecosystems' creates an environment fertile for creativity and collaboration, accelerating cycles of sectoral innovation.

Although these innovation ecosystems do not always rely on physical locations, proximity and physical access provides a unique environment that supports continuous connections and dialogue that overcomes siloed thinking and supports innovation. Learnings and working models that arise from targeted interventions can be assessed for relevance and replicability and scaled across the system.

Discussion of existing delivery coalitions

In the absence of a mandate for full coordinated system reform, the Australian Government and tertiary providers have invested in the design and piloting of innovative system interventions over the past decade. Thus, there is already a diverse 'toolkit' of existing and emerging institutional arrangements and partnership models that mobilise collaboration between VET and HE and may be leveraged to scale system level solutions and meet urgent skills needs (refer to Appendix E).

The following section surfaces innovative partnership models that have already been deployed in specific industries and geographies of needs. What is common to each is a sense of clarity around the learner market and specific workforce challenge it seeks to address, gained through deep and authentic partnership with the community, industry, and local skills system. These partnership models generally specialise in the delivery of new and emerging qualification types that support quicker and more adaptive course development, that are more closely aligned with

industry skill needs and are also more attractive to learner cohorts who are typically underserved by traditional HE or VET programs.

Dual sector universities

Australia's six dual sector universities occupy unique position in the tertiary education sector landscape, operating across the full spectrum of Australian qualifications and effectively playing a role of 'system integrators' in pursuit of a more coherent tertiary sector. Unlike TAFEs registered for both vocational and higher education, dual sector universities were each constituted under governance that offers a unique distinction as the 'only 'full-service providers' with legislative mandates and obligations to meet community and industry needs across both the higher education and VET systems.[80] Examples of dual sector models in practise can be found in Appendix E.

Clean Energy case study – leveraging the capability of dual-sector institutions to meet demand for combined qualifications.

- The clean energy workforce will require a mix of higher order theoretical as well as applied knowledge to successfully transition Australia to a net zero economy. Not only will this mix be required across the spectrum of clean energy occupations, but also within occupations themselves. JSA predicts that many emerging occupations in the space will require a unique blended skill set that transcends the typical scope of VET and HE qualifications and combines elements of traditional trades and professions i.e. accredited electrical engineers with A-Grade electrical licenses.[81]
- The current tertiary system is not well-equipped to meet this demand at scale due to the disconnect between HE and VET providers, curriculums, and pedagogies.
- Single-sector providers could address this demand through collaboration and partnership agreements. For example, a university could look to forming collaborative partnerships with VET providers or TAFEs to offer combined qualifications, perhaps through a Centre of Excellence or NSW 'New Education and Training Model' style arrangement.
- However, dual sectors already have the necessary infrastructure and institutional capability to develop qualifications of this type quickly and

[80] Maddocks, S, et al. *Reforming post-secondary education in Australia: perspectives from Australia's dual sector universities*, 2019. http://hdl.voced.edu.au/10707/502120.
[81] Jobs and Skills Australia, *The Clean Energy Generation,* 2023, p. 204.

efficiently. In fact, there are already several active schemes piloting this type of qualification design.

- For example, the Ai Group Centre for Education and Training is partnering with Federation University to create an electrical dual qualification, due to commence in 2024. This course combined the A-Grade Electrical Apprenticeship (Certificate 3 In Electrotechnology – Electrician) and Bachelor of Engineering (Electrical and Information Engineering) to produce highly skilled, STEM proficient licensed A Grade Electricians. Learners can expect to achieve this combined qualification in a six-year timeframe.[82]

TAFE-led skills delivery coalitions

Australia's TAFE network is critical to delivering skills solutions to regions and sectors of need. Through its competency standards and training package system, the Australian TAFE network offers democratic access to relevant skills training, labour market entry and re-entry pathways, and an 'unremitting' focus on workplace needs.[83] This culture of industry partnership in training design and delivery allows learners to transition seamlessly from training to work. This capacity for deep partnership with industry has been demonstrated. There are many strong examples of TAFE-industry partnerships being deployed to rapidly meet critical workforce demand, notably within the Australian mining sector (see Appendix E). In addition, the 2023 *White Paper on Jobs and Opportunities* outlines the innovative capacity of the TAFE network, arguing that 'TAFEs can lift the quality of VET by trialling innovative teaching and learning approaches, developing new curriculum and course materials, and supporting VET workforce initiatives'.[84]

As the 'example of best practice' in skill delivery, the TAFE network is well positioned to partner with HE and industry in tripartite skills delivery coalitions. Today, 10 out of 25 of Australian TAFEs now operate as effectively 'dual sector' tertiary institutions, with registrations in both vocational and higher education. Furthermore, several TAFE-led delivery models have already been successfully designed and piloted in specific areas, notably TAFE Centres of Excellence (recently announced), TAFE Institutes and Cooperative Skills Centres (proposed).

Several recent policy and funding announcements reflect and realise this vision:

[82] Federation University, 2023, Dual Electrical Qualification .
[83] Think, Change, Resolve. *Tertiary Education Innovation Report*, 2023, p. 6.
[84] *Working Future: The Australian Government White Paper on Employment*. pp. 122-123.

- The 2022 *Jobs and Skills Summit Outcomes statement* featured Commonwealth, state, and territory agreement on a joint $1 billion 12 month National Skills Agreement for additional 'free-TAFE' place funding in 2023 and to accelerate provision for 450,000 additional 'free-TAFE' student places through 2024-26.
- The 2023 *White Paper on Jobs and Opportunities* supported the expansion of institutional models including the NSW IATs and 'dual-sector TAFEs', with support for the expansion of Commonwealth Supported Place (CSP) student funding to numerous TAFE higher education institutions for micro-credentials.
- The *2023 Clean Energy Generation* report also identifies TAFE-based delivery coalitions as vital to supporting Australia's transition to a net-zero economy, particularly in emerging geographies of need.

Supporting the expansion of TAFE-led delivery coalitions is key to delivering accessible educational experiences that transcend VET and HE pedagogical and institutional boundaries and equip graduates with the necessary knowledge *and* skills required to engage in meaningful work.

Clean energy case study: a transition powered by TAFE

- In addition to niche and emerging roles requiring new pathways, Australia will need to dramatically increase the number of tradespersons graduating out of the VET system to meet skills forecasts.
- These will primarily come from 'foundation trades' such as electricians, electrical distribution trades, mechanical engineering trades and technicians. The biggest shortage is predicted to be for electricians. Preliminary modelling suggests that we will need 32,000 electricians in the next seven years, representing 27% more than projected supply.
- JSA has reported Australia is currently at 'high risk' of experience 'a shortfall of workers with the necessary VET qualifications and workplace experience to fill the large numbers of expected roles'.[85] Without addressing the capacity of the VET system, Australia will not be able deliver the workforce it needs for the transition.

[85] Jobs and Skills Australia. *The Clean Energy Generation*, 2023, p. 258.

Dependencies

Funding collaboration, innovation, and participation

Stakeholders indicated that current competitive 'surge and retreat' special project funding models has created a relatively 'risk-averse' culture within the tertiary education system and acts as a barrier to authentic and equal collaboration between HE, VET, and industry. It was also noted that 'research centre funding mentality' creates a barrier to authentic and equal collaboration between VET and HE providers as funding models can disempower VET compared to HE counterparts.

Several examples of flexible funding for special projects already exist in Australia, notably the National Priorities and Industry Linkages Fund Pilot and the NSW Collaboration and Innovation Fund. However, there is currently no national funding scheme that is focussed on skills delivery innovation, inclusively tertiary, and consciously tripartite in nature.

To drive reform and realise the vision outlined in this report, it is recommended that the TEC be responsible for the design, delivery and assessment of a new *National Skills Delivery Fund* that supports system innovation and collaborative experimentation. This fund could be accessed by tertiary delivery coalitions who wish to design, pilot or scale skill solutions in priority sectors and geographies. It would seek to support a culture of partnership and experimentation between tertiary providers and industry and underwrite risk for delivery coalitions serving ultra-thin but critical student markets (including skills delivery to regional and remote areas or to specific demographic groups).

The following principles and objectives should be considered when designing the fund:

- Transcends fragmented VET and HE BAU funding arrangements by allocating *similar* and *equal* funding to collaborators regardless of provider type.
- Non-restrictive and flexible in how funding is used, allowing providers to design system solutions around their distinct strengths, weaknesses and institutional mission and respond to specific demand from local communities.
- Long-term and not strictly performance based to create space for delivery coalitions to experiment and perhaps fail within healthy pilot, learn, improve, and grow cycles.

Case study: National Priorities and Industry Linkages Fund Pilot[86]

The National Priorities and Industry Linkages fund (NPILF) is a pilot initiative running from 2020-24 as part the Job-Ready Graduates package. The fund is designed to enhance engagement between providers and industry, promoting innovative practice towards industry-partnered learning and increase work-integrated learning opportunities, with the goal of better preparing graduates for work. What is significant about this pilot is its dual mandate to disrupt providers' legacy culture of risk-aversion and build innovation practice, with mechanisms to promote and formalise *test, learn, scale* methodology, and system learning baked into pilot design.

The NPILF allocates block grant funding to participating providers across a 3-year pilot duration. Providers are required to submit a plan for the proposed activities and outcomes across the pilot, tracked against metrics and targets set by providers with flexibility to achieve objectives relative to their unique circumstances and missions. Three case-studies are to be produced by each participating provider classified as either 'best-practice' (demonstrating best-practice or scaling of successful programs), or 'innovation' (case-studies that are highly innovative by nature that address unique or community specific needs). NPILF will publish these case-studies on the DESE website to create visibility of good practice, enhancing system-wide learning.

Creativity, risk taking and innovation are encouraged through the design of the pilot and case-study approach, with a 'fail-fast' mechanisms built into the pilot's cadence and case-study assessment design. Prioritising *learning from failure*, rather than the *outcome of the program*, case-study assessment approach is designed to drive behaviour change in the institutions, giving a license for creativity and promoting faster organisational learning and iteration towards successful outcomes over time. Solidifying this, the first year is the 'learning year' where institutions are allowed to pivot as many times as necessary, provided there is evidence-based reasoning for the decision.

[86] https://www.education.gov.au/job-ready/resources/npilf-final-report

Regulatory reform to support scaling of TAFE-led skills delivery

The potential for TAFE-led delivery coalitions to be deployed quickly and at scale is hindered by legacy regulatory and governance processes, particularly related to the TAFE Training Package system, regulatory frameworks and underlying institutional governance processes. The governance of TAFE remains largely unchanged since the 1974 Kangan Commission articulation of TAFE responsibility and management. Regulation arising from this Commission mandates that TAFEs operate as non-self-accrediting Registered Training Organisations (under Training Packages).

In 2018, founding architects of the original Training Package scheme were commissioned to review the TAFE South Australia system. Their report made significant findings against Training Packages and the underpinning regulatory system, and ultimately questioned whether TAFEs should remain non-self-accredited.

Case study: Findings from the Review of the TAFE South Australia System (2018)[87]

The Government of South Australia commissioned Terry Moran AC[88] and former Victorian senior education bureaucrat Kim Bannikoff to undertake a review of the TAFE South Australian system in 2018. In their report, *TAFE SA: Strategic Capability Review 2018*, Moran and Bannikoff addressed poor completion rates in VET, and evidence of frustration from industry in demanding more tailored training responses from TAFE, which had been responding to quality complaints raised by the national regulator ASQA. Their report supported both a shift to higher qualifications within the AQF, and attainment of specific skills through skill sets or micro-credentialing. The report proposed greater flexibility in curriculum and in this regard, proposed returning to the state under a new academic board responsibility to accredit courses where training packages were unsuitable.

The report noted,

> *Regulation through ASQA fills the current policy and strategic vacuum by applying detailed, risk-averse controls at the delivery end of the system – an approach that polices the VET system in line with what Training Packages regard as competencies and the way they are assessed. This undermines*

[87] South Australian Government. *TAFE SA strategic capability review*, 2018, pp. 25-26.
[88] A founding architect of the original Australian National Training Authority (ANTA) which oversaw the establishment of Training Packages.

the type of innovation that would come from the interaction of capable providers and employers.

It is essential for the ongoing relevance of the VET system – and indeed for future workforce development – that this system changes.

The report added,

It is therefore imperative that the VET system moves quickly towards a new style of regulation, directed towards the professional capability of RTOs, rather than a deadening attempt to micro-manage delivery in a highly prescriptive manner.

More recently, TAFE Directors Australia formally called for TAFEs to be granted self-accreditation and for change in reporting requirements to TESQA to support more efficient and responsive updates to training package curriculums.[89] TDA offered case studies showing the variance of Training Package units of competency frequently create blockages to ready articulation pathways and credits for vocational students into higher education.

Case study: North Metropolitan TAFE & Edith Cowen University, Western Australia[90]

- The Cyber Security pathway partnership between North Metropolitan TAFE and Edith Cowan University (ECU) allows students to complete three qualifications in Cybersecurity in 3.5 years.
- Learners begin by completing a Cert IV in Cyber Security and an Advanced Diploma of Cyber Security with North Metropolitan TAFE over 2 years. These qualifications will then give them eighteen months of RPL credit with Edith Cowan University, allowing them to gain a Bachelor of Science (Cyber Security) in eighteen months, rather than three years.
- Once the learner has gained a Cert IV or Adv. Diploma, they are eligible for part time work at cyber security industry partners while they work towards their Bachelor of Science.
- Frequent changes to VET courses can be disruptive to higher education, making them reluctant to engage in pathway programs as it requires

[89] Dodd, Jenny. "TAFEs must be able to self-accredit to avoid redundant qualifications", *TAFE Directors Australia Newsletter,* February 2023.

[90] Submission from TAFE Directors Australia to the Accord Review of Higher Education, December 2022.

additional time and effort to map out the new courses and complete the recognition of prior learning process. This lack of cohesion is detrimental to students who expect the program to stay constant for the duration of their studies.

TAFEs currently operate under significant statutory oversight; jurisdictional statutory-based boards which report to respective Parliaments, executive appointments and external audits under Ministerial remit aligned with compliance and quality measurements of performance, and legislative purpose of mission to support jurisdictional objectives on training and skilled employment economic planning. TAFE advocacy for self-accreditation of both VET and HE should be incorporated within this governance framework on quality mission and performance.

As we approach the 50th anniversary of the Kangan Commission, it is recommended that States and Territories undertake a uniform review of TAFE governance and regulation processes. At a Federal level, further reform to nomenclature is warranted, involving a referral to TEQSA as a means that may enable TAFE dual sector institutions to be fully self-accrediting institutions and thereby regulated directly under TEQSA, based on expansion of TEQSA's Provider Categories Threshold Standard. For those remaining TAFEs yet to register for higher education, potential to accommodate these institutions under this nomenclature category could be based on the criteria of auspice agreements with interstate TAFEs or local universities.

Moving from place-based *interventions* to *strategies*

As discussed above, delivery coalitions can be applied to unique regional, social and sectoral contexts. Building skills alliances that can rapidly pilot, scale and iterate solutions that meet and anticipate skills needs, specific to regional characteristics, is critical. However, the opportunity of place-based strategy holds more potential than simply addressing workforce gaps.

Looking beyond place-based interventions, strong, connected and responsive innovation ecosystems are an engine for addressing complex social, economic, environmental challenges that face societies at the local, national and global levels. This is done through the expansive development of *new* knowledge, skills, innovations and technologies. These forms of value are generated at the nexus of an interactive ecosystem of universities, government and industry, and is *expressed* through place and community.

Beyond solving timely workforce challenges, embedding skills delivery coalitions in regional place-base strategies should be seen as a function of future-focused public

planning. Location is a platform to focus and accelerate necessary collaboration, driving alignment and critical mass towards areas of public interest. Connecting and combining ecosystem strengths across skills and knowledge providers, industry, research and innovation, able to drive world-leading industries, talent and frontier innovation. The advantage of place is in the interactivity of different forms of value that individuals and institutions hold, across social, intellectual, technical, financial and creative capital present in this location.

Skills delivery solutions formally connect across different parts of the ecosystem, and are channelled through industry clusters, comprised of adjacent and complementary sectors and skills. The intentional connecting and reinforcing of networks of complementary industries and discipline clusters, are core to the formation of lively innovation hubs and districts. When powered by a highly skilled workforce, precincts and cities attract and build sustainable pipelines of talent and investment, fuelling productivity, social development and economic growth that benefits individuals, industry and society.

Assessment of current state readiness for reform

Element and readiness*		Current state characteristics	Ideal future state characteristics
System governance, leadership and incentives	R	• Fragmented governance across government departments and tertiary providers	• System governance, leadership and incentives
Tripartite delivery coalitions	A	• Strong partnerships between TAFE-industry, enshrined in training package and competency systems. • Emerging partnerships between university-industry. • Successful pilots and emerging ideas of tripartite skills delivery coalitions (i.e. TAFE Centres of Excellence, CSCs), but lacking scale and speed of deployment and coordination / incentives • Six large dual sector universities working across Australia, with demonstrated ability to develop and deliver programs across the full spectrum of AQF qualifications to meet needs of specific learner cohorts and industries	• Access to a range of trusted tripartite skills delivery coalitions and strategies that can be quickly deployed to meet complex skills needs in diverse regions and sectors. • Expanded role for the TAFE network in skills delivery and innovation, at scale and in close partnership with industry and higher education. • More flexible regulation of TAFE (i.e. via self-accreditation) to enable more efficient and responsive updates to training package curriculum. • Existing dual-sector capability is effectively leveraged to pilot range of tertiary connection and skills solutions • Expanded dual sector capability in new geographic and sectoral areas through increased investment

** Readiness ratings: green (fit-for-purpose, only minor adjustments), amber (some additional investment), red (significant reform). Readiness may be a proxy for investment required to meet ideal state.*

7 A roadmap for reform

Reform proposed by the Universities Accord process has two distinct but complementary ambitions. The first is to transition the existing system into a skills-led lifelong learning orientation. The second is to build a system that is responsive, fast-learning, and innovative; capable of building enduring resilience to social and economic adaptation among multiple sectors, whilst producing world-leading industries, technologies and talent.

Reform of this size and scale can only be realised through a shared commitment to a long-term vision, with clear steps to transformation. This roadmap should be expressed through adaptive planning cycles that absorb new data and intelligence over time.

The reform roadmap proposed in this report outlines a phased approach to implementation across a ***12-year horizon***, that seeks to drive momentum towards long-term system vision and simultaneously take immediate steps to address urgent workforce challenges. On the advice from the Department of Education, progress on all policy options put forward in this report can be undertaken in the short term, noting many of these options are currently being pursued.

Current strategies and initiatives developing out of departmental processes have been considered as part of this report and should be integrated and aligned as part of ongoing reform processes. This report, echoed by the Department of Education, identifies four crucial principles guiding roadmap phasing design, shaping an approach that connects current and proposed activities, priorities and governance across 2-5-5 year horizons.

Phase 1: Design and Prototype (2024-25)

The Roadmap proposes to start with a two-year horizon, indicating optimal timeframes to implement foundational enablers and activate immediate solutions that address urgent workforce challenges.

- **Build and align the enabling foundations**, in order to free up capacity to innovate in the short term and prepare the system and discrete policy ambitions for next stages of implementation and maturity.
- **Act first in high priority sectors, regions and cohorts**, such as clean energy and the care economy. Implementing skills innovation pilots and policy interventions that can be tested, learned from, iterated and scaled over time to new markets.
- **Build increasing alignment between concurrent education strategy and planning**. Progress critical enablers with concurrent strategies as well as the

development of governance bodies will need to be actively and progressively integrated over time, as each develops in capability and maturity.

- **Employ system learning models across interventions** that accelerate desired culture change, prioritising data-informed, iterative implementation and planning across pilots.

Phase 2: Connect and Scale (2026-2030)

Second phase builds off first phase momentum, evaluating, connecting and scaling achieved progress across system design, function and skills solutions pilots.

- **Review and evolve governance models in line with achieved levels of policy and** system maturity. Review and realign interim approaches to governance and policy options to meet next phase of implementation.
- Iterate and scale success, using data and learnings from pilot solution approaches, connect-up and scale successful models of working, partnership and policy interventions across new domains and markets of interest.

Phase 3: Integrate and Sustain (2031-2035)

- Review and consolidate system design, governance and planning models
- Prosecute next steps of policy levers through to mature state
- Develop maintenance functions where required to sustain and reinforce success against policy levers.

Reform roadmap

Policy Lever	Phase 1: Design and prototype 2024-2025	Phase 2: Connect and scale 2026-2030	Phase 3: Integrate and sustain 2031-2035
Tertiary learning provision	Phase 1: Actions • Pilot paid student placements and industry co-investment in the social care industry and develop principles for high-quality Work Integrated Learning at scale across higher education • Fund degree-level apprenticeships for VET and HE and align employer subsidies and learner support across jurisdictions • Define the thresholds for Commonwealth funding of microcredentials and make relevant legislative changes to HESA to allow equitable participation	Phase 2: Actions • Expand payment to all placements for which there is a mandatory requirement for professional registration • Provide relevant needs-based funding to support degree level apprenticeships mode of delivery alongside consistent employer co-investment in priority areas • Incorporate microcredentials into the process of a reformed AQF and integrate with a standardised (skills-based) recognition of prior learning	Phase 3: Actions • Incorporate funded placements for all undergraduate qualifications and align student outcomes with identified skills • Develop sustained industry co-investment mechanisms for Industry Partnered Learning against evidence of skills development and return on investment • Integrate microcredentials within a personalised learning record or Skills Passport that can provide skills pathway information and guidance across the tertiary system
Tertiary education system infrastructure and frameworks	Phase 1: Actions • Agree to reform the AQF, develop interim governance and commence by allocating three years to fulfilling stages 1-2 of the proposed AQF reform implementation plan • Invest in the fundamental enabling infrastructure and develop a business case for a National Skills Passport • Align student-facing digital platforms across VET, higher education, and careers information to support improved information and guidance to tertiary education and skills attainment	Phase 2: Actions • Establish an AQF reform governance and implementation body within the TEC and advance reform in full • Undertake collaborative and tripartite consultation to inform the next NPA on Skills Reform consistent with a tertiary system view • Align tertiary system infrastructure with skills attainment outcomes to prototype a National Skills Passport in a priority sector(s) or with a subset of tertiary system providers	Phase 3: Actions • Establish the ongoing maintenance and functions of AQF with the TEC and align with adaptive planning cycles • Align system infrastructure review and renewal with adaptive planning cycles across the tertiary system • Establish a personalised learning record or Skills Passport that can provide skills pathway information and guidance across the tertiary system
Tertiary education system outcome measurement	Phase 1: Actions • Develop a national tertiary education 'system' attainment target as well as sub-targets for HE/VET and equity • Confirm Jobs and Skills Australia's as underpinning skills-led labour market analysis for the tertiary system and invest in the development of agreed methodological approaches and interoperable data standards	Phase 2: Actions • Introduce adjusted equity targets for participation which capture the whole tertiary system and which may be specific to disciplines, geographies and other factors. Consider adding equity targets of attainment • Pilot new measures for tertiary learner progress, graduate employment outcomes and skills attainment that include new forms of funded skilling across the tertiary system • Align JSA and TEC roles and responsibilities across the tertiary system	Phase 3: Actions • Use tertiary system outcomes and labour market data to inform semi-autonomous skills investment frameworks and policies vis-a-vis attainment and participation targets • Integrate qualification and skills attainment into a personalised learning record or Skills Passport that can provide skills pathway information and guidance across the tertiary system • Undertake longitudinal analysis to inform national adaptative planning cycles and lifelong learning strategy updates
Tertiary education system planning and implementation	Phase 1: Actions • Establish a tripartite approach to developing a national lifelong learning strategy • Design and establish a Tertiary Education Commission against the design principles outlined in this report • Develop a National Skills Delivery Fund to prototype tertiary skills coalitions in priority sectors/geographies with relevant regulatory flexibility	Phase 2: Actions • Coordinate adaptive planning cycles across the tertiary system that are data informed and consistent with NPA processes • Transfer AQF, Skills Passport reform and functions and system stewardship to the TEC • Translate prototype learnings into sustainable program funding and legislative reform, inc. personalised learning provisions	Phase 3: Actions • Review tertiary governance, inc NPA processes, and strategy against tertiary system outcomes • Review and refine the role of the TEC to clarify role and accountabilities • Develop adaptive and semi-autonomous skills investment frameworks that are responsive to emerging skills demand • Step

Appendix A. Current state readiness assessment

Element and readiness*		Current state characteristics	Ideal future state characteristics
Tertiary learning provision			
Mandatory Placements	R	• Placements are generally unpaid, forcing students to forgo paid work to complete their study • There is bottleneck of supply for placements, particularly in care and health settings. This is at times given extra, artificial constrain by professional industry bodies regulating placement numbers and conditions • There is a highly variable quality of placement experiences and supervision • Funding arrangements do not incentivise employers to take on students on placement	• Mandatory placements in priority areas such as health, care and teaching are paid • Students receive adequate supervision and quality of experience • Placements are of adequate number and quality to support the amount of students enrolled and the needs of industry
Learning Integrated Work: (earn-and-learn courses e.g. degrees, higher apprenticeships)	R	• Current apprenticeship style courses are available for VE, but not HE • Any current attempt to offer a HE earn-and-learn course requires significant time and resources (so much so that it dissuades participation from providers) to work around current settings • Industry is explicitly calling out for these types of qualifications and the skilled graduates they create	• Higher and Degree apprenticeships are a key part of the tertiary system, in addition to existing qualifications • Employers are incentivised in a similar way to apprentice-style subsidies to employ LIW students, and students are adequately supported with the learning and work components

Element and readiness*		Current state characteristics	Ideal future state characteristics
			• There are agreed program design principles for these types of courses to be developed across different sectors and providers
Microcredentials	A	• A NMF has been developed, following significant consultation across the sector • Additional subsets of microcredentials that meet thresholds for government funding is required • Further clarification on the alignment of microcredentials with the reformed AQF is required, to establish a taxonomy toward stackable microcredentials and appropriate RPL • The current HE microcredentials pilot is a positive start to developing a funded microcredentials model for HE, but requires wider investment and co-design with industry across the whole tertiary sector, with smaller hour volume (rather than EFTSL) funding available • The current process for industry to develop microcredentials with tertiary providers (HE and TAFE in particular) is slow and doesn't meet the need for a fast-response skilling solution	• Microcredentials will provide an additional way for people to enhance and increase their skills in a fast, accessible way • Microcredentials have an agreed currency across the tertiary sector, in VET and HE • Industry co-designs microcredentials with providers to deliver timely, stackable, high-quality learning experiences • Individuals can easily demonstrate and share their microcredential qualifications for future employers • Industry knows how, and who to speak to within the tertiary sector to develop microcredentials for the skills needs they've identified • There is a dedicated, fast-tracked, and time-limited process for endorsement of microcredentials for the consideration of government funding

Element and readiness*		Current state characteristics	Ideal future state characteristics
Tertiary Education System Infrastructure and Frameworks			
The Australian Qualifications Framework (AQF)	R	• Two sets of learning outcomes for levels and qualification types • Hierarchical across 10-levels, levels not clearly distinguished • Short-form credentials not recognised	• Full implementation of AQF reform to focus on general learning capabilities, a simplified framework, credit pathways, and principles for institutions to align micro-credentials to qualification types
National Credentials Platform (NCP); my eQuals (future Skills Passport)	R	• Designed by and for the higher education sector • Focussed primarily on qualifications, no current recognition of microcredentials and general capabilities	• A verified portfolio that documents an individual's skills, qualifications, and capabilities, as acquired through learning experiences, credentialing or certification conducted by a recognised provider. • Connected to skills demand analysis to enable tailored career advice based on regional and sectoral shortage • Potentially searchable by employers for access to prospective candidates
The Australian Skills Classification (ASC)	A	• Incomplete (85%) coverage of occupations within the ASC • Insufficient specificity in ASC skills data • Difficulty in classifying emerging occupations	• Expanded to cover all occupations in the labour market relevant to VET and higher education • Built up with rich skills descriptors and aligned to assessable learning outcomes and VET competencies[91]

[91] Bean, Dawkins, 2021, *University-Industry collaboration in teaching and learning*, p.33.

Element and readiness*		Current state characteristics	Ideal future state characteristics
		• Not currently widely utilised to support common skills language • In-train project to update led by JSA	• Ability to be updated for emerging skills/occupations • Mapped to open standards to accelerate adoption
Training and education guidance portals	A	• Information spread across disparate platforms, usually siloed by VET / HE sector – pathways and opportunities difficult to uncover. • Careers advice and occupational information not integrated with learning and training resources.	• A common platform based on global open standards that provides learners with a reliable single source of truth for information related to education, skills, employment, and industry
Unique Student Identifier (USI)	G	• Automatic creation for all incoming award students in both VET and HE • Recently expanded to encompass HE • Inconsistent coverage of VET and HE students due to staged roll out across sectors	• Provides coverage of whole system, microcredential attainment, skills acquisition within the schooling system and retrospective coverage for graduated students where possible
Tertiary education system outcome measurement			
Attainment Targets	A	• A target attainment rate for Higher Education was articulated in the Interim Report and is being reviewed • An analogous VET target is also in development	• HE, VET and short-form learning should be incorporated into the suite of targets, either separately or as a combined index • Specific attainment targets could also be developed for priority industries or geographies, informed by JSA analysis • Targets are monitored, evaluated, reported, and updated as required

Element and readiness*		Current state characteristics	Ideal future state characteristics
Equity Participation Targets	A	• Equity participation targes have been articulated in the Interim Report for low SES, regional and remote, and First Nations students for Higher Education.	• Equity participation targets should be expanded to include HE, VET and short-form learning, either separately or as a combined index, for the same equity groups
Skills Attainment Measures	A	• No measure for individual skills attainments have been developed yet	• Formalised indices for skills attainment developed and formalised, linked to qualifications and employment • This requires an agreed National Skills Taxonomy building on JSA's existing work
Occupation and Skill Matching Measures	A	• There is some information on jobs and skills matching and labour market dynamics more broadly in JSA's existing analysis (e.g. Skills Priority List, 10 year projections of labour supply)	• Formalised indices for the effectiveness of skills matching in the labour force, based on further JSA analysis
Graduate Employment Outcome Measures	A	• HE graduate employment is captured in the Graduate Outcomes Survey • VET graduate employment is captured in the National Student Outcomes Survey • Lack of standardisation across sectors, lack of longitudinal data, and lack of data on short-form learning limits the usefulness of this data somewhat	• Renewed, integrated and standardised employment outcome surveys and measures across the entire tertiary system, including short form learning and with longitudinal data reporting • Targets for specific areas of the tertiary education system as necessary to encourage providers to develop job-relevant qualifications
Student Progress Rate Measures	G	• Existing student progress rate measure currently used throughout the tertiary education system	• Formalised student progress rate measure with appropriate targets overall and/or in specific pockets of the tertiary system

Element and readiness*		Current state characteristics	Ideal future state characteristics
Tertiary education system planning and implementation			
System governance, leadership and incentives	R	• Fragmented governance across government departments and tertiary providers • No clear tertiary system leader to oversee system strategy and coordinate resources and investment in skills solutions • Delivery of skills solutions is possible, but reactive, slow and not scalable	• Clear articulation of national lifelong learning strategy to guide system behaviour and articulate a common vision for education and training from early learning through to tertiary education and lifelong learning. • Networked governance structures led by a central governance group (i.e. the Tertiary Education Commission) that genuinely reflects a commitment to connection and coordination across HE and VET, and state and federal jurisdictions. • System-wide financial incentives to drive collaboration and investment in skills development
Tripartite delivery coalitions	A	• Strong partnerships between TAFE-industry, enshrined in training package and competency systems. • Emerging partnerships between university-industry. • Successful pilots and emerging ideas of tripartite skills delivery coalitions (i.e. TAFE Centres of Excellence, CSCs), but lacking scale and speed of deployment and coordination / incentives • Six large dual sector universities working across Australia, with demonstrated ability to develop and	• Access to a range of trusted tripartite skills delivery coalitions and strategies that can be quickly deployed to meet complex skills needs in diverse regions and sectors. • Expanded role for the TAFE network in skills delivery and innovation, at scale and in close partnership with industry and higher education. • More flexible regulation of TAFE (i.e. via self-accreditation) to enable more efficient and responsive updates to training package curriculum.

Element and readiness*	Current state characteristics	Ideal future state characteristics
	deliver programs across the full spectrum of AQF qualifications to meet needs of specific learner cohorts and industries	• Existing dual-sector capability is effectively leveraged to pilot range of tertiary connection and skills solutions • Expanded dual sector capability in new geographic and sectoral areas through increased investment

** Readiness ratings: green (fit-for-purpose, only minor adjustments), amber (some additional investment), red (significant reform). Readiness may be a proxy for investment required to meet ideal state*

Appendix B. AQF reform mapping to Accord IR recommendations

Findings	Recommendations	Proposed Accord Recommendations
The AQF is widely used by the tertiary education sectors to underpin the validity, reputation and value of formal qualifications in the Australian education and training system. It is also used more broadly, particularly in the employment and international education sectors of the economy. The AQF requires substantial revision to make it a relevant and useful framework as the education and training needs of the Australian population intensify and diversify, and to help address emerging national policy priorities, including: • improving pathways from senior secondary education • improving the standing and effectiveness of the VET sector • creating a more coherent tertiary education system • ensuring that graduates have the knowledge and skills required for the future workforce and social participation.	1. Affirm the important role of the AQF in underpinning the design and delivery of high-quality education and training in Australia, and the standing of Australian qualifications internationally. 2. Agree that the AQF should be revised to ensure that it can more effectively fulfil its core role in defining qualification types, reflect emerging skills needs, facilitate credit recognition – including of shorter form credentials such as microcredentials – and support learner pathways within and between the education and training sectors.	**Recommendations 1 & 2.** Fundamental enablement of tertiary system integration. **Accord Action:** Accept & implement recommendations.

Findings	Recommendations	Proposed Accord Recommendations
The AQF architecture		
The current AQF taxonomy places too much weight on its levels structures rather than the qualification types that primarily guide qualification development. There are too many levels, which forces unclear distinctions between levels in terms of Knowledge, Skills and Application of knowledge and skills. This results in poor differentiation between some qualification types. The AQF has an overly rigid structure that hampers distinction between qualification types at the same level. This structure also imposes definitions that may undervalue some VET qualification types. There are gaps and inconsistencies in the types of Knowledge and Skills described between levels, making it harder to compare levels and qualification types. Lack of clarity between current AQF levels and qualification types makes it hard for qualification developers and regulators to design qualifications and assess their quality,	3. Revise the AQF, based on the model outlined at Figure 7, with the following key features: a. Focus the AQF on describing qualification types. b. Simplify the AQF to present only one set of descriptors in the revised AQF taxonomy. c. Shift the focus of the AQF to qualification types that specify descriptors for qualification design, with graduate learning outcomes more appropriately reflected in individual qualifications. d. Reduce the number of levels in the AQF from ten to eight for knowledge and to six for skills and rename levels as 'bands'. e. Enable descriptors from the bands to be applied more flexibly across qualification types within clear rules. f. Revise the descriptors for Knowledge, Skills and Application based on the approach outlined in	**Recommendation 3** – enables VET/HE system integration – foundational changes need to be implemented. The suite of recommendations in 3 support better alignment between VET and HE qualifications, and by focussing on qualification descriptions rather than levels, and also ensuring correct assessment of skill level, encourages greater parity of esteem between VET and HE. **Accord Action:** Needs to be implemented to enable other system benefits to be delivered, as described in the body of this report.

Findings	Recommendations	Proposed Accord Recommendations
and for students and employers to understand the relative benefits of the qualification types. AQF definitions of Skills, Knowledge and Application of knowledge and skills, and graduate outcomes do not adequately reflect the process of learning and do not reflect current and emerging approaches to the generation of knowledge and skills. Application is context specific and should not be rigidly linked to levels of knowledge and skills. Graduate outcomes cannot be meaningfully defined in broad qualification types because they are affected by the nature, purpose and delivery of individual qualifications. AQF qualification type descriptors should instead specify the features that should be designed into individual qualifications to achieve learning outcomes. As the nature of work changes and the emphasis on lifelong learning increases, employers and students will seek contemporary, transferable skills (general capabilities) from qualifications. Many capabilities can be acquired in the process of learning, but not all can be systematically assessed and reported. The AQF should clarify	Appendix 3, Appendix 4 and Appendix 5. 4. Revise the AQF's treatment of general capabilities to: a. List key general capabilities, such as digital literacy and ethical decision making, for incorporation in qualifications as appropriate. b. Stress they should be taught in the context of a qualification's core content. c. Include in the revised AQF taxonomy some general capabilities that can be described in a learning progression such as learning self-management, cooperation and collaboration. 5. Align qualification types to bands in a revised AQF taxonomy based on the new descriptors and considering the alignment models at Table 5, Table 6 and Table 7. 6. Consider creating new qualification types, such as a Higher Diploma, and/or renaming the existing	**Recommendation 4.** These changes update & modernise the general capabilities & provide more rigour of what capabilities can and cannot be assessed. Foundational requirement for meeting needs expressed by employers. **Accord Action.** Support as per proposed reformed AQF implementation approach in body of report. **Recommendation 5.** Fundamental enabler of alignment and integration of VET and HE quals. Will also provide underpinning support for parity of esteem of VET quals over time. **Accord Action:** AQF Review recommends consideration be given to which of three alignment models are chosen. Address as

Findings	Recommendations	Proposed Accord Recommendations
what general capabilities can be expected from AQF qualifications. In itself, the AQF cannot alter perceptions about the relative status of VET and higher education; however, a focus on qualification types and a more flexible and less hierarchical approach would highlight the role and value of individual qualifications, rather than their place in a levels-based hierarchy. The current numerical titles of Certificate qualifications do not adequately convey their purpose and types. A clearer and extended use of Diploma qualification types would set out a clearer sequence of middle level and shorter formal qualifications to help build learner pathways and provide opportunities for workforce upskilling and retraining at middle and higher skills levels.	Certificates I to IV as expressed in Table 8.	per proposed AQF implementation approach in body of report. **Recommendation 6.** Supports alignment and parity of VET quals with HE. **Accord Action:** Address as per proposed reformed AQF implementation approach, noting limited support from some stakeholders and further consultation will be needed to achieve an agreed position that is implemented (within context of a set of design principles to ensure that this results in outcomes intended from review recommendations).
Senior secondary		
The Senior Secondary Certificate of Education should not be aligned to an AQF band because the range of learning outcomes achieved by graduates makes it difficult to align the qualification type with any one band.	7. Do not align the Senior Secondary Certificate of Education to a band. 8. Revise the descriptor for the Senior Secondary Certificate of Education to emphasise its role in preparing	**Recommendations 7& 8.** Need to be considered in context of equity group participation and flexible pathways. Not directly in scope for RMIT work package.

Findings	Recommendations	Proposed Accord Recommendations
There is scope to significantly improve pathways between the Senior Secondary Certificate of Education and tertiary education, while maintaining qualification outcomes. Increasingly, young people will need to be able to transition into post-secondary education and work through a broad range of options and pathways and complete at least an initial tertiary qualification.	students for vocational education and training and/or higher education.	

Shorter form credentials, including microcredentials		
Shorter form credentials are an important way for students to access life-long learning. They can complement formal qualifications. Shorter form credentials, particularly microcredentials, will have greater value and portability if they have some quality assurance. Establishing guidelines for recognising shorter form credentials for credit into AQF qualifications will strike a balance of quality assurance without inappropriate regulation. Some students, particularly from disadvantaged backgrounds, undertake enabling courses to improve their	9. Develop guidelines in the AQF Qualifications Pathways Policy to facilitate the recognition of shorter form credentials, including microcredentials, for credit, that include the following: d. The characteristics to be included in shorter form credentials that would facilitate their recognition for credit transfer or articulation to AQF qualifications. e. The principles to be used by institutions that wish to align shorter form credentials to an AQF band. 10. Consider developing an AQF qualification type (not necessarily aligned at a band) for domestic post-secondary enabling	**Recommendation 9.** This provides guidance for credit transfer or articulation for microcredentials that can be mapped to the AQF which can also form the basis for regulation and funding by States &/or Commonwealth (see Microcredentials Section of body of this report. They can also fit within curriculum architecture standards for all types of providers & QA standards for ASQA, TEQSA and self-accrediting bodies. **Accord Action.** As per Microcredentials section in the body of this report, these recommendations provide guidance to support the regulation and funding of certain types of microcredentials.

readiness to study AQF qualifications. These courses are often linked to one institution and are not necessarily recognised by others. This can limit options for these students. A qualification type that provides a description of enabling courses could improve portability of those courses.	programs, once common learning outcomes for enabling programs have been developed.	**Recommendation 10.** Less directly linked to the system integration Accord objective, however the recommendation has broader merit.
Credit Recognition and Pathways		
The AQF Qualifications Pathways Policy provides only limited guidance on credit recognition between some qualifications. A revised AQF should provide better guidance on how to recognise previous learning toward a new qualification to encourage and support lifelong learning. Adopting a shared credit point system in Australia could improve student awareness of potential credit, encourage the take-up of pathways between VET and higher education, and facilitate better recognition of students' qualifications internationally. Additional measures including addressing funding and regulatory differences between the sectors and supporting innovation in design and delivery of cross sectoral qualifications	11. Revise and rename the AQF Qualifications Pathway to better recognise and encourage broader credit recognition, both within and between sectors. 12. Develop and test a prototype AQF credit point system for voluntary use by providers, in order to give students and providers a nationally consistent 'currency' for negotiating credit transfer. 13. Provide more detailed guidance on recognition of prior learning in the AQF Pathways Policy.	**Recommendation 11.** This is another important recommendation for enabling better VET/HE integration, and to more explicitly & proactively enable credit transfer and RPL, while retaining appropriate precautionary principles. **Accord Action.** Accept and implement recommended changes to pathways policy. **Recommendation 12.** This is a fundamental enabler of both VET/HE parity, and of both-way pathways and international recognition of quals. As noted in AQF review Australia is an outlier internationally in not doing this. Will also simplify the development of a skills passport. The change is not trivial and may threaten perceptions of institutional autonomy – the AQF review calls out the various perspectives. **Accord Action.** Implement recommendation 12 prototype development and testing, with evaluation and in the context of a national implementation framework.

will be required to improve learner pathways.		**Recommendation 13.** This provides more guidance at a system level that as noted by the review will not in itself solve the problem of uptake, however linking the guidance to the AQF helps in direction setting, enablement, and uptake. Current version of AQF has little guidance. **Accord Action.** Implement recommendation with further work required on what other forms of system enablement of RPL required.
Volume of learning		
Volume of learning performs functions that support the intent of other Review recommendations: differentiating qualification types, and providing a risk indicator to regulators to maintain quality. Expressing volume of learning in years reflects outmoded assumptions about how AQF qualifications are delivered. Specifying volume of learning for a typical learner is not clear or transparent.	14. Retain volume of learning as a benchmark expressing the notional duration, for a new learner, of all teaching and learning activities required to achieve the outcomes specified for a particular AQF qualification type. 15. Specify volume of learning's unit of measurement in hours only, instead of years and hours.	**Recommendations 14 &15.** Accept and implement as per the proposed reformed AQF implementation approach in the body of the report. As with a number of the proposed reform recommendations there are regulatory interdependencies f(in this case for international education) that need to be addressed during the design phase.
AQF Policies and supporting documents		
The AQF's guidance on qualifications issuance is important to retain for consistency and unity of Australia's tertiary sector. The policy on qualifications framework alignments should be considered a function of government.	16. To reflect their current use or allow for future needs: a. Retain and update the AQF Qualifications Issuance Policy. b. Retain and update the AQF Qualification Type Addition and Removal Policy.	**Recommendations 16, 17 and 18** are consequential changes and should be adopted.

The AQF Qualifications Register Policy was never fully implemented and is not required. The current AQF Glossary would need to be updated. The AQF website should be redesigned for a better user experience.	c. Remove the Principles and Processes for the Alignment of the AQF with International Qualifications Frameworks. d. Remove the AQF Qualifications Register Policy. e. Move the AQF Explanations into the AQF and/or appropriate policy. 17. Update the AQF Glossary. 18. Redesign the AQF website to provide a public interface that assists students and employers; and meets the needs of qualification developers and regulators.	
Implementation of reforms and ongoing governance		
An ongoing governance body will be required to give effect to decisions by Ministers on the recommendations of the Review of the AQF and to ensure that the AQF remains relevant, is effectively implemented and widely used. The AQF requires clear links through each level of sector regulation for the benefit of improvements to flow quickly and easily to users of the AQF.	19. Establish a governance body, accountable to the relevant Council of Australian Governments (COAG) councils, with representation from government, schools, VET, higher education, industry and professional bodies, to implement agreed reforms to the AQF, and with authority to convene and oversee technical working groups to undertake specialist tasks. 20. In addition to implementation of agreed AQF reforms, the governance body will meet as required to: a. liaise with higher education, VET and schools standards bodies and regulators about matters related to the AQF b. monitor developments in education and the economy and their	**Recommendations 19,20,21** are recommendations for governance, oversight and ensuring collaboration and connection at a system level. Given the scale and magnitude of the proposed changes these are all necessary. **Accord Action.** A strong recommendation for implementation of the review recommendations, and establishment & funding of the policy, governance, operational, implementation and consultative apparatus required to develop the new AQF, noting that should a Tertiary Education Commission be established, the AQF governance body could logically be housed and resourced under the auspices of the TEC, and the TEC may be a significant contributor of advice to the AQF governance body.

	implications for the AQF, including shorter form credentials and general capabilities c. advise on the addition or removal of qualification types in the AQF d. make recommendations and oversee additional reforms where necessary. 21. Strengthen alignment between the AQF, the Higher Education Standards Framework and the Standards for Training Packages and RTOs.	

Appendix C. Consultation summary

University Accord panel engagement

Date	Presentation objectives
4/9	• Present progress report, including summary of stakeholder engagement • Present project scope • Present emerging hypotheses
3/10	• Present draft policy options

Working sessions

Date	Participating groups	Workshop objectives
3/8	Department of Education Department of Employment and Workplace Relations Jobs and Skills Australia	• Kick off project and introduce team • Deepen understanding of drivers for lifelong learning • Explore policy solution options as hypotheses • Identify areas for further investigation
23/8	Department of Education	• Present and workshop emerging hypotheses
13/9	Department of Education	• Create shared understanding and agreement with emerging actions and options • Identify gaps and areas requiring additional research • Determine final output format and structure • Define next steps and delegate responsibilities
9/10	Department of Education	• Present summary of draft policy options • Workshop options sequencing and draft roadmap

Interviews

Date	Name	Organisation / Role	Topic areas discussed
11/8	[redacted]	Jobs and Skills Australia	• Remit of JSA and current projects • System governance and outcomes measurement
22/8	Margot Thompson	RMIT University	• RPL / RPE processes • Microcredentials
24/8	Brendan Price	Department of Education	• Integrated data research projects
28/8	[redacted]	DEWR	• AQF reform implementation • Tertiary system regulation and governance • Industry & Sector groupings
29/8	Sherman Young	RMIT University	• AQF reform implementation • Lifelong learning entitlement • Microcredentials • Skill delivery coalitions • Admissions and exit pathways
30/8	Kate Pounder	Australian Tech Council	• Skilling the technology sector • Digital skills provision • Microcredentials • Earn-and-learn models • Industry support • Regional market provision
30/8	Brett Nordstrom	DoE Tertiary Policy	• AQF Reform implementation • Skills passport • RPL / RPE processes

Date	Name	Organisation / Role	Topic areas discussed
31/8	[redacted]	Jobs and Skills Australia	• Remit of JSA and current projects • System governance and regulation • Skills passport and taxonomy
1/9	Louise King Bree Willsmore	Charles Darwin University	• Skills provision to ultra-thin markets (regional and remote delivery) • Role of dual-sector universities in place-based solutions • Funding regional universities • Regulation of VET
1/9	Mish Eastman	RMIT College of Vocational Education	• Culture / esteem of VET and HE in Australia • VET admissions processes • AQF reform • Scaling VET-HE delivery coalitions
1/9	Nuria Ruiperez Karolina Szukalska	Mineral Council of Australia	• Skilling the clean energy and mining workforce • Stabilising the graduate pipeline through boom-and-bust cycles • Scaling microcredential pilots in critical areas • VET training package system • Scaling VET pilots across jurisdictions
4/9	Megan Lilly	AiGroup	• Digital infrastructure for a skills-led system (National skills taxonomy, skills passport) • National lifelong learning strategy • Implementation of AQF reform
6/9	Fiona Bastian	Newcastle University	• Tripartite skills delivery coalitions • Skilling the clean energy workforce • Incentivising industry collaboration
8/9	Dugald Murray	Victorian TAFE Association	• TAFE financing and regulation models • Skills provision in regional markets • Role of skills authorities (JSA, JSC, state-based)
8/9	Matt Brett	Deakin University	• AQF reform • Tertiary system regulatory reform • Modular learning pathways • Learner pathways between HE and VE • Equity targets and participation metrics
11/9	[redacted]	Department of Employment and Workplace Relations	• HE-VE connection • Microcredentials in VET • Work-integrated learning / earn-and-learn • Skills Taxonomy and AQF reform
12/9	Jenny Dodd	TAFE Directors Australia	• National Skills Partnership • TAFE-industry partnerships • HE-VET pathways • Tripartite skills delivery coalitions • Microcredentials • AQF reform
15/09	Patrick Bailey Jodie Trembath	Universities Australia	• Work integrated learning strategy
19/09	Troy Williams Felix Pirie	ITECA	• AQF reform implementation • Microcredentials • Regulatory convergence
20/09	Anne Jones		• AQR reform implementation • Culture / esteem of VET and HE in Australia • Dual-sector universities
20/09	[redacted]	Jobs and Skills Australia	• Remit of JSA and current projects • Skills priority list and demand analysis
22/09	[redacted]	Jobs and Skills Australia	• Remit of JSA and current projects • Skills and qualification mapping
22/09	Brett Nordstrom	Department of Education	• Skills passport • Microcredentials framework
26/09	[redacted]	Jobs and Skills Australia	• Remit of JSA and current projects

Appendix D. JSA work programs

- **Nowcast of Employment by Region and Occupation (NERO)**: an experimental dataset providing information on employment in 355 occupations across 88 regions in Australia. Previously this type of data was only readily available every five years as part of the Australian Bureau of Statistics (ABS) Census of Population and Housing. With NERO these insights can be produced on a monthly basis. NERO has been developed using an emerging methodology called nowcasting using traditional, real-time and big data techniques – including machine learning – to estimate trends within a short timeframe after the data is available, more frequently and with increased detail.
- **10 year-occupation and industry employment projections based on CGE modelling:** The modelling produces forecasts of the likely paths for employment by industry and occupation, with the method taking into account both demand for labour and supply of labour. Projections can be used to inform decision making and planning across the national skills system. Jobs and Skills Australia has worked with Victoria University to produce employment projections to 2033, using their Victoria University Employment Forecasting Model (VUEF) model which is underpinned by a computable general equilibrium (CGE) model.
- **Skills Priority List:** The Skills Priority List (SPL) provides a detailed view of occupations in shortage in Australian and by each state and territory including the future demand for occupations in Australia. The SPL is released annually as a point-in-time assessment of the labour market.
- **Population model of potential labour supply under different scenarios:** The model exists but has not been comprehensively validated. A research program is underway to enhance and improve modelling over time both on the demand and the supply side. This includes continuing to work with states and territories on a nationally consistent approach to labour market and skills forecasting.
- **VET National Data Asset:** A new integrated data asset that enables in depth, longitudinal analysis of pathways and outcomes from students who engage with the VET system. Data drawn from ABS, MADIP, NCVER, ATO earnings data, FoE analysis, student demographic data and others. The VET National Data Asset provides course level outcomes of VET courses across a range of measures including change in employment, income uplift, exists from income support and progression between VET courses and higher education. JSA would like to expand the VET National Data Asset into higher education.

Within the existing data asset we could create the same measures as VNDA at the Field of Education level.

- **Search and Matching Modelling:** The JSA search and matching modelling project is an internal experimental project that seeks to enhance JSA's understanding of labour market dynamics in Australia. At present, the model contributes to the 'expanding the evidence base' component of JSA's published work plan, as it is still in its development phase and is subject to further testing, development and validation. As a result, the expected uses and applications of the model are subject to further consideration as the model is developed and outputs are produced. No decision has yet been made regarding how the outputs will be utilised (noting JSA initially expect them to be utilised for internal use only as the model is monitored and evaluated).
- **Australian Skills Classification:** This skills taxonomy sets out the key core competencies, specialist tasks and technology tools required for occupations in Australia. The purpose of the ASC is to reveal the relationships – and potential transferability – of specialist tasks across occupations. The ASC:
    - offers a common language of skills, enabling stakeholders to identify and articulate skills using a comprehensive and universal taxonomy.
    - identifies key skills attached to an occupation. This is to highlight common and transferable skills across occupations.
    - offers a common language of skills, enabling stakeholders to identify and articulate skills using a comprehensive and universal taxonomy.
- **Skills and Curriculum Mapping:** JSA's Curriculum Mapping project links Australian universities' curriculum to the Australian Skills Classification (ASC) and identifies the skills taught in higher education qualifications. Through the use of pre-trained natural language processing (NLP) models, higher education curriculum data can be analysed alongside the ASC, with the models able to identify similarities between university curriculum data, unit descriptions and learning outcomes, and the skills listed in the ASC. Based on the degree of similarity, the ASC skills determined to be relevant and aligned were mapped to the curriculum. Connecting VET and higher education to the Australian Skills Classification will also result in subsequent data, analysis and product development which will help JSA stakeholders by:
    - Articulating the relationships between units and courses to improve credit and recognition practices, supporting learners to effectively engage in lifelong learning models.

- Contribute to other major Government initiatives which may benefit from tertiary sector data and analysis, including the University Accord, Australian Qualifications Framework reform, Jobs and Skills Councils and National Skills Agreement processes.
- Contribute to new JSA functions, such as workforce planning and national supply and demand models.
- Linking qualifications to proposed artefacts such as the Skills Passport
- Provide new products to education providers that support the improvement of skills articulation in education design.[92]

[92] Information provided by JSA

Appendix E. Delivery coalition case studies

Dual sector universities

Social service sector case study: Workforce Innovation and Development Institute

RMIT's Workforce and Innovation and Development Institute (WIDI) is a non-for-profit consultancy tasked with developing innovative skills solutions, programs and pathways to building a strong social services workforce. With a particular focus on supporting learners from diverse backgrounds to successfully complete their education and training, WIDI develops evidence-based, industry-informed models and interventions in partnership with industry, government, and the education sector to drive systems innovation and transform across the sector.

WIDI's **Higher Apprenticeship Training Program (HAP)** was developed in response to Victorian social sector system-wide skills shortages, to enable entry level and mid-tier sector leaders to better meet challenges related to service transformation, quality and demand, whilst helping to build a sustainable pipeline of future sector leaders. Adapting well established apprenticeship models seen in trades industries like construction to design of the HAP pilot, the program offers team leaders and supervisors to receive upskilling opportunities in the workplace, as well as credentialling pathways into management roles through the nationally accredited RMIT Advanced Diploma in Community Sector Management (ADCSM).

In partnership with Jobs Victoria, the **Skills in Employment Project (SKIP)** provides large scale, front-line workforce recruitment and training to promote workforce growth and development across the disability and aged care sector. Backed by a collaborative delivery partnership bringing together the employer, employee undertaking training and RMIT as lead training provider and assessor, the SKIP is a working-integrated learning model where participants gain Certificate III Individual Support (Ageing) or a Certificate IV Disability whilst undertaking on-the job training. Supporting learners through to completion, all participants receive an integrated two-week pre-service induction program and ongoing, individualised support from a Workplace Mentor. Targeting experience workers displaced through COVID-19, the SKIP program helped over 500 participants transition from adjacent industries into the care workforce, with priority groups including include women over 45 years of age, young people, long-term unemployed, and those at risk of becoming long-term unemployed.

Charles Darwin University (CDU) - integrated VET to HE course mapping in support of student employability outcomes

CDU considers how all students can benefit from attending a dual sector university through collectively improving their employability outcomes post tertiary studies. Vocational and higher education course mapping was identified as a critical dual sector opportunity that could support students in three ways:

- through recognition of prior learning, providing accreditation options to students into VET qualifications that gave them direct industry employment opportunities earlier than their undergraduate counterparts, while continuing with their studies
- integrate exit pathways into qualifications to support alternative exit points in a degree, ensuring that students can leave university with a qualification and enhance their employability outcomes even if they choose not to complete their full higher education degree and
- encouraging students to discover their credit options through an online CDU Fast-track Calculator. By selecting their prior course or a desired study program at CDU, students can quickly see how many credits they may receive towards their next qualification.

In 2018 the VET School of Community and Children's Services, English language, Literacy and Numeracy, and the College of Nursing and Midwifery completed their first course mapping, allowing a first-year undergraduate nursing student to receive recognition of prior learning into a Certificate III of Health Service Assistance. For students who take up this option, they can gain professional employment in their chosen industry much earlier than their counterparts, while continuing their studies. Allowing students to gain professional employment access into their chosen industry while continuing their studies gives them a ‘competitive edge’ in their profession, greatly enhancing their long-term professional employability opportunities.

Holmesglen Institute – transition to dual-sector status

In 2005, Holmesglen Institute became one of the first TAFE institutes to register for higher education, and proceeded to redesign its brand and educational mission toward tertiary capability. Their strategy for developing and delivering their own higher education programs was focused on improving access to bachelor degree study, particularly for under-represented cohorts within their communities, and a tighter focus on fields of study. Holmesglen annual reports evidence a concentration of resources toward tertiary pathway (VET and HE) courses in nursing, business, and building and construction.

For nursing, this began with the co-location on campus of a private hospital to enable clinical placement requirements for undergraduate degree programs. Ultimately the

tertiary strategy supported its TAFE mission on equity and community access for students; equity indicators showed that for nursing Holmesglen enrolments recorded expanding participation by under-represented groups in the Bachelor of Nursing, including 'first in family' student participation. Over the 2018 to 2022 period, 60% of commencing local students in the Bachelor of Nursing program were recorded as first in their family to study higher education (based on neither parent having attained a qualification at bachelor's level or above, excluding not stated or known data). VET pathways have also been shown to positively influence this participation. Over the same period, 44% of their commencing learners have entered with advanced standing from a VET pathway. The trend in both measures is increasing. Based on Holmesglen's achievements in expanding opportunities for under-represented groups, the Institute were awarded a short-term boost in Commonwealth Grant Scheme places for the Bachelor of Nursing.

RMIT University – mid-tier qualifications (associate degrees)

Mid-tier qualifications sit between a bachelor degree level (AQF 7), and above diploma level (AQF 5): occupying a space between these more traditional qualification levels offered at universities and TAFE. Currently, associate degrees, Higher Apprenticeships and the recent Undergraduate Certificate is also offered at this mid-tier level (though UC is not officially ranked in the AQF framework).

Sitting at the intersection of HE and VET study, qualifications at this level offer a powerful tool to address skills shortages in targeted areas, particularly where skill needs cannot be met through national Training Package qualifications but require a more rapid response than a full bachelor degree can provide. These qualifications uniquely combine high level technical skills with the theoretical knowledge from one or more disciplines, underpinned by core competencies in general skill areas including critical thinking and demonstrating initiative, judgement, autonomy, and responsibility in the workplace.

They are designed to suit learners looking to transition into, or upskill within, 'para-professional occupations' in a range of industries. Furthermore, mid-tier qualifications offer an accessible learning opportunity for those who do not have recent or completed tertiary qualifications. For example, the Associate Degree is a standalone qualification but also commonly serves as a pathway into related Bachelor degrees for students interested in engaging in more advanced and specialized theoretical study.

RMIT has leveraged the unique characteristics possible at dual-sector institutions, such as self-accrediting status and the provision of both vocational and higher education, to design and deliver the associate degree qualification at the AQF 5 level. RMIT draws on a history and culture of applied and technical learning aligned with contemporary industry demand and student priorities to become a national

leader in the design and delivery of associate degrees, offering programs in Engineering, Business Information Technology, Graphic Technology, Furniture and Computer Science among others.

A key feature of the associate degree is its status as a standalone qualification that can lead to graduate employability and serve as a pathway into bachelor degree study. Some RMIT Associate Degrees are recognised with national accreditation (i.e. Associate Degree in Engineering Technology), offering a clear 'exit' pathway into the workforce as well as a pathway to Higher Education. RMIT Associate Degrees can be achieved in 2 years of study, using intensive and flexible timetabling. The Associate Degree in Engineering Technology has a significantly higher completion rate than all Higher Education programs in the School of Engineering (71.6% and 57.9% respectively; 2018 4-year completion rates).

TAFE-led delivery coalitions

TAFE and Rio Tinto Automation Qualifications

Rio Tinto launched Australia's first accredited automation qualification in partnership with South Metropolitan TAFE and the WA Government in 2019. Originally accredited in Western Australia, Rio Tinto worked with the Australian Minerals and Energy Skills Alliance (AUSMESA) to get these qualifications into the nationally recognised Resources and Infrastructure Industry Training Package. Courses were released in October 2022:

- RII21222: Certificate II in Autonomous Workplace Operations – Data driven processes in an autonomous workplace and the human-machine interface
- RII41522: Certificate IV in Autonomous Control and Remote Operations – Control centre operations and navigating complex control systems for automated operations, fixed and mobile plant and equipment.

Western Parkland City's New Education and Training Model

The New Education & Training Model (NETM) for industry-led workforce training in West Parkland City (WPC) was developed in response to the development of the Western Sydney International Airport and the linked growth in regional demand of skills across a range of related industries. Aligned to the regions strategic visions of becoming the 'most connected, green and advanced city in the Indo-Pacific', the place-based initiative positions Bradfield City Centre as a hub for advanced manufacturing, aerospace, space and defence industry excellence. Delivered in collaboration with industry, universities, and Vocational Education and Training Providers, NETM's objective was to enliven the ecosystem of industry, research, innovation and training, providing creating greater access to quality industry-led education.

“This will ensure that as we attract new industry and create skilled new jobs, our current and future citizens have the skills and training they need to take advantage of the opportunities”.

NETM leveraged a microcredentials based model of skills provision to deliver stackable, cross-sectoral, small-scale credentials, that could be tailored to place and industry specific skills needs with flexible entry and exit points to suit a diverse cohort of working-age learners. Fully funded by the NSW government learners and employers were able to access learning at no cost during the first phase of development and delivery.