

Future focus

2013 National Workforce Development Strategy



**Australian Workforce
and Productivity Agency**

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March 2013

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Letter to the Minister

Dear Minister

On behalf of the Australian Workforce and Productivity Agency (AWPA), I am pleased to present *Future focus*, the second national workforce development strategy for Australia. The strategy builds on the work undertaken for *Australian workforce futures*, our inaugural strategy published in March 2010.

Our vision is to realise Australia's growth potential through a highly skilled and adaptable workforce where skills are used effectively to meet the increasingly complex needs of industry, and individuals are able to fulfil their potential. This report demonstrates how workforce development can help us achieve our vision, with benefits for industry, individuals and the national economy.

The changing nature of work poses a new set of challenges for the future, with new technologies, a growing focus on digitisation, and demand for flexibility in both the workplace and the home. The future is uncertain, but we need to be ready to meet it—whatever it holds. To this end, AWPA has used a scenario approach to gain an insight into possible futures, with modelling to underpin planning for what is likely to occur, and what is more uncertain.

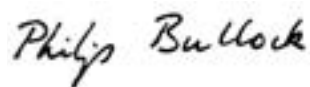
Building on the scenarios and the modelling based on them, the new strategy is directed towards two goals: to take account of issues that have emerged since 2010, and to prioritise those areas where more change is needed.

If we are to maximise our productivity and strive for innovation, we will need to ensure that Australia has the right skills in the right place at the right time. But, crucially, we will also need to make sure that individuals, enterprises and industries alike are using those skills to their full advantage.

This strategy was born out of a collaborative process, with input from colleagues in industry, the education and training sector, state training boards, enterprises, and not-for-profit organisations. The 84 submissions received from stakeholders in response to the initial discussion paper were invaluable in shaping the development of the strategy. Briefings, discussion sessions and forums were held across the country during the consultation period.

I would like to express my gratitude to the external members of the expert steering group, Dr Tom Karmel, Professor Sue Richardson, Mr Glenn Wightwick and Professor Glenn Withers, for their invaluable insights and guidance. We are also fortunate to have a very committed board and secretariat, who have brought considerable energy and dedication to this challenging and critical project.

Yours sincerely

A handwritten signature in dark ink that reads "Philip Bullock". The signature is written in a cursive, slightly slanted style.

Philip Bullock
Chair, Australian Workforce and Productivity Agency
March 2013

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Abbreviations and acronyms

ABS	Australian Bureau of Statistics
ACE	adult and community education
ACSF	Australian Core Skills Framework
ALLS	Adult Literacy and Life Skills Survey
ANZSCO	Australian and New Zealand Standard Classification of Occupations
AQF	Australian Qualifications Framework
ASQA	Australian Skills Quality Authority
AWPA	Australian Workforce and Productivity Agency
COAG	Council of Australian Governments
CSPA	Core Skills Profile for Adults
DEEWR	Department of Education, Employment and Workplace Relations
DSP	Disability Support Pension
GDP	gross domestic product
IBSA	Innovation and Business Skills Australia
ICT	information and communications technology
JSA	Job Services Australia
LLN	language, literacy and numeracy
NCVER	National Centre for Vocational Education Research
NSSC	National Skills Standards Council
NWDF	National Workforce Development Fund
OECD	Organisation for Economic Co-operation and Development
R&D	research and development
RTO	registered training organisation
SME	small and medium enterprise
SOL	Skilled Occupations List
SpOL	Specialised Occupations List
TAE	Training and Education Training Package
TAFE	Technical and Further Education
TEQSA	Tertiary Education Quality and Standards Agency
TIMSS	Trends in International Mathematics and Science Study
PIRLS	Progress in International Reading Literacy Study
VET	vocational education and training
VETiS	VET in Schools
WELL	Workplace English Language and Literacy Program



Overview

Overview

Australia has enjoyed sustained prosperity over the last two decades. Real GDP has doubled and employment has increased by more than 50 per cent, while the nominal value of household wealth in Australia has more than quadrupled.

The challenge now is to sustain this prosperity by developing the nation as a knowledge-intensive economy, growing our capacity for cutting-edge innovation and supporting productivity growth while also building our communities and supporting environmental sustainability. This has to be achieved at a time of rapid change, when Asian economies such as China, India and Indonesia are growing rapidly, our economy is restructuring and developments in technology mean that even the smallest business feels the impact of globalisation.

There is a widening gap between the expected supply of higher level skills and expected industry demand. This has implications for Australia's productivity performance. By 2025, according to modelling developed for this strategy, Australia could be 2.8 million short of the number of higher-skilled qualifications that industry will demand.¹

At the same time, many Australians lack the language, literacy and numeracy (LLN) skills to participate in training and work. Only just over half (54 per cent) of Australians aged 15 to 74 years have been assessed as having the prose literacy skills needed to meet the complex demands of everyday life and work. Results were similar for document literacy with 53 per cent and numeracy with 47 per cent achieving this level.² People with poor LLN skills are less likely to find a job, or benefit from training that depends on those skills.

Our vision is to realise Australia's growth potential through a highly skilled and adaptable workforce where skills are used effectively to meet the increasingly complex needs of industry, and individuals are able to fulfil their potential. The responsibility for realising this vision will be shared between industry, government and individuals. We are committed to seeking partnership among all stakeholders to pursue this critical national agenda.

AWPA believes that the way to achieve this vision is through workforce development. Workforce development is concerned with:

- ✔ providing knowledge and skills in tertiary education
- ✔ matching tertiary provision to the needs of industry, individuals and society
- ✔ using knowledge and skills effectively at work
- ✔ further developing knowledge and skills in the workplace.

To manage change and make the most of future opportunities, 'adaptive capacity'—preparing people and workplaces to respond flexibly and creatively to changing circumstances—will be essential.

With a view to avoiding skills shortages, improving productivity and enhancing participation, AWPA has developed a suite of scenarios for Australia to 2025 as a basis for modelling Australia's workforce needs and developing policy to help meet those needs. The four scenarios—The Long Boom, Smart Recovery, Terms of Trade Shock and Ring of Fire—outline possible, plausible futures for Australia that help us to plan for an uncertain world. The Long Boom is a scenario of sustained prosperity and a restructured economy. Smart Recovery sees uncertainty in Europe and the United States resulting in low growth to 2015 followed by a knowledge-based recovery. In Terms of Trade Shock, resource prices fall, resulting in a more balanced economy. Ring of Fire is a risky world with multiple shocks and ongoing lower growth.



The modelling of the scenarios allows us to compare projections of the future demand and supply of labour and the characteristics of that demand and supply.

Analysis of our scenarios and associated modelling has identified some themes that are common to all scenarios. These indicate areas of relative certainty for policy makers. One such area is Australia's ageing population and the effects this will have on participation rates and health costs. The need for growth in qualifications, especially high-level qualifications, is the most important common theme arising from the scenarios. This will be particularly important in the delivery of services to Asia. The fastest occupational growth is projected to be in professional and managerial areas and the fastest industry growth in Health Care and Social Assistance.

Building on our scenarios and the modelling based on them, our new strategy is directed towards two goals: to take account of issues that have emerged since Skills Australia published *Australian workforce futures*, the first National Workforce Development Strategy, in March 2010, and to prioritise those areas where more change is needed.

To enhance workforce development in Australia we need to act across a range of areas:

- ✓ positioning Australia as a knowledge economy through skills development and targeted planning
- ✓ improving productivity in the workplace
- ✓ building labour force participation to meet the current and future needs of industry and individuals and promote social inclusion
- ✓ equipping Australians with the language, literacy and numeracy skills needed for full participation in community life, education and work
- ✓ enabling individuals and the tertiary system to respond flexibly and creatively to change
- ✓ strengthening quality in the tertiary sector
- ✓ investing in the tertiary system and workforce development strategies to meet our skills needs.

Positioning Australia as a knowledge economy through skills development and targeted planning

Conservative estimates suggest that increasing non-resource exports to Asia through improved Asian capabilities could benefit the Australian economy by \$60 billion to \$115 billion over 10 years.³

For Australia today, the growing wealth and influence of Asia bring new opportunities but also competitive challenges, including for talent. Technology is rapidly changing not only the way we work and do business, but also the way we teach and learn.

Regardless of what eventuates in the future, investment in skills must be a priority. Skills more than pay for themselves and are part of the solution to participation, skills shortage and productivity challenges.

Our modelling shows that demand for skills will be strong in the years to 2025, with the total demand for qualifications held expected to increase by between 3 and 3.9 per cent on average each year in the three higher growth scenarios. On this basis, Australian governments will need to support the achievement of a minimum annual growth of 3 per cent in tertiary enrolments. This demand for qualifications is driven by the increasing size of the labour market, changing employment composition, retirements, skills deepening and skills broadening.

Projected growth in industry demand for total qualifications held (as opposed to persons holding qualifications) is expected to be strongest at higher qualification levels, including postgraduate, undergraduate and diploma/advanced diploma. The rate of projected annual growth in industry demand for postgraduate qualifications is between 3.9 per cent and 4.9 per cent in the three higher growth scenarios, while for undergraduate qualifications it is between 3.3 per cent and 4.1 per cent. For diplomas and advanced diplomas projected annual growth is between 3.3 per cent and 3.7 per cent.

Industry demand for Certificate III and IV qualifications is projected to grow between 2.8 and 4.0 per cent in the three higher growth scenarios, while the demand for Certificates I and II shows more modest growth. AWPA recognises the importance of Certificates I and II in increasing workforce participation and as a pathway to higher level qualifications, especially for those from backgrounds of disadvantage. Nevertheless, the modelling confirms the importance of supporting progress from lower level to higher level qualifications.

With the advent of a student demand-led system in higher education and increasingly in vocational education and training (VET) and the associated move away from the rationing of student places, it has become more difficult to anticipate the future supply of qualifications. In this environment the development of workforce development plans for priority sectors and the monitoring of skills supply, especially for specialised occupations, will remain a critical element in meeting our workforce needs.

Improving productivity in the workplace

In recent years, the high Australian dollar has increased the purchasing power of household incomes. But this will not continue indefinitely, at least not in its present form. If we want to continue to lift our standard of living we will need to look elsewhere—to productivity improvements.⁴

Skills that are acquired in training are of little use if they are wasted in the workplace. Improved work organisation and job design make better use of employee skills and capabilities, with productivity benefits for the enterprise as well as the economy.

Workforce development occurs most naturally within the enterprise. It is influenced by many factors including the commercial realities which influence decisions regarding choice of skills, upskilling staff, improving utilisation of skills and addressing issues around recruitment and retention. Within this environment governments have limited direct influence but there is scope for government-funded training programs to encourage better use of skills through changes to work organisation.

While employers do invest significantly in training, more enterprises need to see skills development and utilisation as an investment rather than a cost. There is a role for government and industry peak bodies in raising awareness of the need for productivity improvement, especially in small and medium enterprises (SMEs). Business improvement services help small enterprises to reach their full potential and AWPA supports further expansion of the successful Enterprise Connect program. We also support further efforts to align government programs to facilitate workforce development.

Workplaces with effective leaders and managers are generally more productive and innovative, and have better financial returns. Our modelling shows increasing demand for managers across all scenarios. It is important to ensure they have the skills to foster high-performing workplaces and better use of skills. It is time for a new comprehensive review of leadership and management to ensure that Australia has the management capability to meet our potential.



Across Australia we see excellent examples of successful programs led by regional partnerships designed to enhance the sustainability and growth of their region. These plans are often holistic in scope, with skills playing an important role. These region-based and -led initiatives offer great potential for enhanced outcomes through the more effective and efficient use of limited funding and resources, not to mention the committed 'ownership' of the stakeholders.

Building labour force participation to meet the current and future needs of industry and individuals and promote social inclusion

The annual expansion in qualification completions of at least 3 per cent per annum that we recommend to meet the needs of industry will also make a major contribution to lifting labour force participation rates, increasing social inclusion. People aged 25–64 holding a qualification are nearly 20 per cent more likely to be in the labour force than those without a qualification.⁵ If this relationship continues to hold, the increase in the proportion of the population with qualifications projected in our main scenarios will support a lift in labour force participation from the current rate of 65.1 per cent⁶ close to the goal we advocate of 69 per cent.

However, meeting the projected expansion in demand for qualifications requires greater participation in tertiary education from less advantaged sectors of the population. Simply expanding the availability of places in tertiary education is not enough. Additional funding is required to expand training delivery strategies and wraparound services to support people who are disadvantaged to participate in training and employment.

Significant gains could also be achieved through a better alignment between job services providers and training providers and investment in extended post-placement support for job seekers to convert more placements into sustainable employment.

We know that there are, and will increasingly be, skills shortages in industries that traditionally have a predominantly female workforce such as Health Care and Social Assistance, and in industries that have a preponderance of male workers such as Mining. There is merit in supporting industry-led initiatives to increase the participation of men and women in non-traditional industries in sectors where growth is anticipated.

Older people with qualifications who are already in work are likely to be able to continue in employment over the age of 55 if they wish to do so.⁷ However, those who are lower-skilled are vulnerable to unemployment. Consideration should be given to upscaling programs designed to address the needs of older workers seeking to remain in employment, such as the Experience+ program, as these programs currently cater for numbers that are small relative to the scale of the problem.

Equipping Australians with the language, literacy and numeracy skills needed for full participation in community life, education and work

Without an urgent effort to improve LLN in Australia, we will be unable to achieve either the skills deepening or the increased participation that the Australian economy requires.

Around 6 million people have less than the minimum prose literacy skills required to function fully in life and work.⁸

Information about the impact of LLN skill development programs and initiatives is limited, since the Adult Literacy and Life Skills Survey is conducted only every five to 10 years. A national sample survey for the assessment of literacy and numeracy levels of the adult population based on Australian Core Skills Framework levels would provide a tool to regularly monitor the supply of LLN skills in Australia, allowing programs to be targeted more effectively.

In *Australian workforce futures*, Skills Australia recommended establishing a National Foundation Skills Strategy. While this recommendation has been taken up, little funding is available to progress the initiatives, including the priority to raise awareness and commitment to action.⁹ We believe more needs to be done to progress implementation as a matter of urgency.

Those requiring LLN support may be older workers looking to update or refresh their skills. They may be people from culturally and linguistically diverse backgrounds, or individuals who left secondary school early and are looking to upskill. They may be existing workers or unemployed. Increasing the public's understanding that low LLN skills affect a significant portion of Australians would help reduce stigma and allow people to feel comfortable seeking assistance.

A public awareness campaign to promote awareness of the issue and showcase the assistance available is still needed. There is also no central point for people to access information about assistance with LLN or to link them to the programs that are available. If demand for LLN training is to increase, we need a comprehensive national information service to provide a gateway for people to access training and support.

The majority of LLN training is delivered in the VET sector, including by adult and community education providers. To ensure that LLN is delivered effectively through qualified specialists, including in the Australian Government's Workplace English Language and Literacy Program, Language, Literacy and Numeracy Program and Australian Migrant English Program, further support and funding for the LLN Practitioner Scholarships Program is needed and we need to provide professional development to better equip VET teachers to recognise the issues and refer or deal with them as appropriate.

It is important to think beyond programmatic responses. One way of doing this is to fund a Workplace Champions Program to foster a culture of lifelong learning and promote foundation skills training in the workplace. This will help raise the profile of LLN training and connect employers and employees with information they need if they are to seek help.

Enabling individuals and the tertiary system to respond flexibly and creatively to change

Over half of Australians stay in their jobs for less than five years.¹⁰ The notion of a 'job for life' is already largely a thing of the past. The changing nature of work and workplaces, combined with the uncertainties of industry structure across the scenarios, highlight the importance of building adaptive capacity across all the important transitions of a working life. The tertiary system, too, needs to be flexible and forward-looking, with the capacity to respond quickly to meeting changing industry and individual needs. Developing adaptive capacity in the individual and the tertiary system will in turn facilitate innovation.

The demand for flexibility and mobility in the future world of work will impact the way people manage their careers. Currently there is little research or data about career advice, but indications are that access is patchy and quality is variable. There is an important role for industry in providing career development advice underpinned by up-to-date labour market information and a 'real life' perspective¹¹ so that student interests and those of mobile job seekers can be aligned with industry needs. Australian governments need to align and strengthen career development services to encourage greater industry involvement and ensure high-quality services, and we advocate the creation and promotion of a national brand for career development advice.

Industry demand for qualifications is not static, and we caution against the use of a 'firstness' approach, limiting access to public funding for more than one VET qualification. This approach may prevent people from retraining in crucial areas, especially due to structural adjustments in the economy. In addition, for casual and contract workers, and individuals on low incomes who may be in jobs with little opportunity for progression or improved pay, it may be difficult or even impossible to afford an additional qualification for a new industry or occupation. Restrictions to the funding of individual learners may stifle the adaptive capacity needed for the future world of work.

To this end, we propose that jurisdictions review their approaches to entitlement to ensure people are supported to undertake a further qualification in areas in need of skilled workers or to develop foundation skills, regardless of whether they have already 'used' their entitlement in a different field of study.

In workplace surveys, employers routinely rank work experience as among the most important attributes they need in their staff.¹²

Employers are demanding work-ready graduates. One way of bridging the gap between higher education and work is via work-integrated learning, in which work practice informs theory either within formal curriculum or via co-curricular means.¹³ However, opportunities for students are limited, and employers, particularly small businesses, find that it is costly and time-consuming to make opportunities available. This may also be the case for internships, a form of on-the-job training, usually unpaid, also known as 'work experience' or 'industry placements'. Another way of bridging the gap is via professional cadetships, where an employer agrees to contribute to, or subsidise the cost of, an employee's education. There is benefit in collaboration between government, providers and industry to expand opportunities for work-integrated learning and to support further development of professional cadetships in identified higher education occupations and higher level VET qualifications.

Recent reforms developed by the National Skills Standards Council (NSSC) have made training packages more flexible for industry and individuals. Inclusion of language, literacy and employment skills is now mandatory and more tightly linked to assessment requirements. At the same time, there is evidence that methods of teaching focused on developing entrepreneurial skills, creativity and teamwork will become increasingly important. We advocate that the NSSC and Industry Skills Councils further develop the reforms in *VET products for the 21st century* to investigate how training packages can most effectively build adaptive capacity for the changing context and nature of work.

VET in Schools programs can play an important role in helping young people transition from learning to earning. However, outcomes can be variable and there is industry concern about consistency in implementation within and across jurisdictions and about involvement in structured on-the-job training as opposed to simulated environments in school settings. More broadly, we support a review of policy for VET in Schools delivery across jurisdictions.

Apprenticeships are closely aligned to the economy and provide industry with the skills it needs to grow, while also giving individuals pathways to skills formation. We need to ensure that they are consistent, flexible and adaptable. Insights from overseas experience suggest that the definition of apprenticeships may have been stretched too far and that it is important to refocus on the relationship between the employer and the worker that is the core of the apprenticeship. Apprenticeships must continue to adapt to the changing world of work and AWPAs welcomes the exploration of new delivery models by a number of jurisdictions.

Progress towards better integration between VET and higher education—for example in the provision of joint programs—is welcome. The importance of creating flexible pathways that enable learners to move seamlessly back and forth between VET and higher education, depending on the skills they are seeking, cannot be overstated. It is disappointing, however, that there has been less progress in the provision of Commonwealth-supported higher education places for specialist vocational degrees awarded by the VET sector.

While there are good practice examples demonstrating progress on pathways from VET to higher education, more needs to be done. We need evaluation of their effectiveness and consideration of other ways to systematise articulation arrangements. We believe there is benefit in a broad review of the interface and overlap of delivery between VET and higher education to build on the good examples of integration and pathways that exist.

Strengthening quality in the tertiary sector

Shifting to a demand-based funding system has not always been easy for the public VET provider, Technical and Further Education (TAFE). TAFE systems, infrastructure and organisational arrangements were established for a more certain world. But TAFE institutes are the bedrock of the national VET system, offering vital programs in industry areas and geographical locations that other providers would find problematic. While many individual institutes have coped well with these new challenges, AWPA supports those authorities that have recognised TAFE's distinctive role and position in the national VET system and have funded it appropriately.

Quality remains a concern in the VET sector, where there has been a persistent decline in funding per annual student hour, and where total funding is failing to keep pace with the substantial growth in full-time equivalent students. The Productivity Commission reports a 14 per cent decrease in government expenditure per student annual hour between 2006 and 2010. A review of funding in the VET sector is needed to determine an appropriate price for the delivery of high-quality VET.

AWPA welcomes the review of national standards for the regulation of VET. This is considering issues we have previously supported, including lifting entry barriers for new registered training organisations (RTOs) and provisional registration. However, we believe the review should also consider introducing a requirement for externally set and administered assessments for identified high-risk qualifications and more stringent requirements for RTOs delivering high-risk qualifications such as the Training and Education Training Package.¹⁴

Australia needs a national and broad-based approach to VET workforce development. Skills Australia's 2010 report, *Skills for prosperity*, recommended that there should be a national workforce development strategy for the VET workforce that would elevate the issue as a central national priority. Given the patchiness of measures to address quality in teaching, learning and assessment in the VET sector, AWPA supports the establishment of a new national program and overseeing body based on the model of the Office for Learning and Teaching in the higher education sector. The new body would prioritise professional development for VET teachers in developing learners' adaptive capacity, addressing LLN, e-learning and the delivery and assessment of higher level qualifications.



Investing in the tertiary system and workforce development strategies to meet our skills needs

To sustain Australia's economic growth and meet industry demand for qualifications at between 3 and 3.9 per cent per annum, we recommend that total real spending on tertiary education increase in line with the long-term real GDP growth rate. This is estimated at an average of 3.3 per cent in our higher growth scenarios and by Treasury at 3.1 per cent. If spending on tertiary education is maintained at today's share of GDP, as recommended, Australia will be spending 0.1 per cent of GDP more in this area in 2025 than currently projected by Treasury.¹⁵

To realise Australia's capacity for growth we recommend additional investment of public and private expenditure per year to 2025, with this additional expenditure increasing at an annual rate of \$1.3 billion by 2025. The suite of measures we advocate will position us well to meet our future skills and workforce development needs, regardless of what the future holds. They are underpinned by strategies to improve productivity by supporting workforce development, improve quality and ensure we have the adaptive capacity to meet the challenges of the future world of work.

In addition to improved productivity, avoidance of skills shortages and opportunities for individuals through better skills and greater labour force participation, there are also significant financial benefits to be realised.

We have compared our recommended additional investment to the increase in expenditure as estimated by the Treasury, consistent with a continuation of existing policy and the projections of increased participation from the 2010 Intergenerational Report. We estimate that the additional expenditure over and above the projected cost of maintaining existing policy would amount to around \$2.1 billion by 2025. However, the additional revenue relative to continuing existing policy from the increases in participation, employment and output, would amount to around \$24.8 billion in the Long Boom, \$6.7 billion in Smart Recovery, and \$10.3 billion in the Terms of Trade Shock scenario.¹⁶

Clearly these increases in revenue very substantially exceed the increase in costs from AWPAs proposals. Therefore we can say with confidence that the additional expenditure involved in funding our proposals is a sound investment.

To meet Australia's future skills needs we need an overall expansion in real terms of public and private funding of the tertiary sector of at least 3 per cent per annum to meet industry demand. This would require an additional \$860 million in public and private expenditure in 2014, compounding annually to reach \$1,190 million in 2025.

We recognise the resources already in place to provide support for building the skills and labour force participation of disadvantaged groups in VET but believe more investment is required. The 2008 Bradley Review of Australian Higher Education recommended additional support for learners from low socio-economic backgrounds to enable greater participation in higher education, and this was accepted by the Australian Government. The VET sector currently provides for more than three times the number of students from the lowest socioeconomic background than higher education, and it is the potential port of entry for students currently not accessing tertiary education. In advance of an exact assessment of needs arising from the VET funding review, we recommend an additional expenditure similar to that provided in higher education of at least \$200 million per annum, which is above that of the Bradley Review but at the same time recognises the investment already made by the jurisdictions.

To address the critical issue of low levels of LLN that continue to hold us back, we recommend funding of \$16 million in 2014 for a number of specific recommendations to support the National Foundation Skills Strategy and address other gaps we have identified. This issue will also be addressed through the funding attached to our broader recommendations to increase tertiary qualifications and to provide extra support to less advantaged people.

We recommend funding other areas in our suite of measures, including tertiary sector quality and workforce development, at a total additional cost of \$100 million in 2014. These include expansion of business improvement services for SMEs, strengthening and aligning career development services and measures to ensure quality teaching and learning in the VET sector.

Our recommendations apply to both public and private expenditure. Given the constraints on public expenditure and the private benefits that are received especially from higher level courses, consideration should be given to ways of raising the level of private contribution. Most domestic undergraduate students in higher education use income-contingent loans to cover fees. Repayments of loans by former students now make a major contribution to offsetting government advances for loans. In the VET sector under a Council of Australian Governments (COAG) national partnership agreement, income-contingent loans are being made available at diploma and advanced diploma level and are to be trialled at Certificate IV.¹⁷ Another model is the Australian Government's National Workforce Development Fund (NWDF), where fund participants are contributing between 33 per cent and 66 per cent of the cost of training, far higher than the average private contribution to the usual publicly provided VET.

It is important to consider ways to increase the efficiency of the tertiary system so that available public and private funds are used to greater effect. A number of recommendations in this strategy support this objective. One area for particular attention is completion rates, which are especially low in the VET sector. Expanding partnerships between tertiary providers to share facilities, equipment and infrastructure will also contribute to increased efficiency in the use of resources.

The investment we advocate will pay dividends. Our productivity will grow as industries are able to meet skills demand, while increases in participation will bring benefits for both individuals and the wider community.



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List of recommendations

List of recommendations

To meet Australia's future workforce skills needs and position Australia as a knowledge economy through skills development and targeted planning

Recommendation 1.1 That Australian governments support the achievement of a minimum annual increase of 3 per cent in tertiary education qualifications to 2025 to meet national demand for skills and qualifications, recognising that higher level qualifications will grow relatively faster.

To enhance Australia's prosperity by improving productivity in the workplace through increased skills development and improved skills utilisation

Recommendation 2.1 That the Australian Government adjust the National Workforce Development Fund guidelines to allow other workforce development activities that maximise the use of employee skills and complement training delivery.

Recommendation 2.2 That the Australian Government explore joint funding between Enterprise Connect and Skills Connect (including the National Workforce Development Fund) to achieve greater alignment of business improvement and skills programs to support workforce development for small and medium enterprises.

Recommendation 2.3 That the Australian Government fund the extension of Enterprise Connect services to labour-intensive industries such as retail and hospitality so that business improvement services are more readily available to small and medium enterprises in these industries.

Recommendation 2.4 That the Australian Government commission a comprehensive review of leadership and management, including front-line management.

Recommendation 2.5 That Australian governments co-fund proposals that support regional employment and workforce development partnerships to increase the efficiency of resource allocation at the local level.

To increase labour force participation to meet the current and future needs of industry and individuals, and to promote social inclusion

Recommendation 3.1 That the Australian Government adopt an aspirational goal of 69 per cent labour force participation by 2025 to meet the projected demand for labour, noting that this will be supported by raising skill levels within the workforce and community.

Recommendation 3.2 That the Australian Government provide co-contribution funding over three years for industry-led initiatives to support employment for men and women in non-traditional occupations in skills shortage areas.

Recommendation 3.3 That the Australian Government consider significantly upscaling successful approaches to help older workers (45+) to re-enter the workforce, such as Experience+.

Recommendation 3.4 That the Australian Government provide additional funding to cover the expansion of training delivery strategies and wraparound services to support the less advantaged to participate in training and employment.

Recommendation 3.5 That the Australian Government, in the review of employment services beyond 2015, revise the contract to achieve the following:

- ✔ better alignment of incentives for Job Services Australia to work with registered training organisations to provide training for disadvantaged job seekers that is more flexible, fit for purpose and more closely linked to job outcomes
- ✔ additional funding for a revised schedule of payments to provide incentives for the provision of coaching and other support services for the most disadvantaged job seekers through the first 52 weeks of a job placement including directed career advancement interventions post-placement.

To equip Australians with the LLN skills needed to underpin the skills development required to meet industry needs and to fully participate in the community, in education and at work

Recommendation 4.1 That the Australian Government fund and develop a national sample survey for the assessment of literacy and numeracy levels of the adult population based on Australian Core Skills Framework levels, with a view to introducing a five-yearly assessment (commencing in 2015) to provide a mechanism to more regularly monitor and report on progress towards the National Foundation Skills Strategy for Adults 2022 target.

Recommendation 4.2 That the Australian Government fund and develop a national public awareness campaign to promote the development of LLN skills as a mainstream issue and showcase the assistance available.

Recommendation 4.3 That the Australian Government fund and develop a new, comprehensive national LLN information service underpinned by an interactive website to better link Australians with the range of LLN assistance available.

Recommendation 4.4 That the Australian Government fund a Workplace Champions Program to help foster a culture of lifelong learning and promote training in the workplace.

Recommendation 4.5 That the Australian Government upscale the Language, Literacy and Numeracy Practitioner Scholarships Program and fund it beyond 2014 to address current and anticipated skills shortages in the LLN practitioner workforce.

Recommendation 4.6 That the Australian Government undertake a national pilot of an online foundation skills assessment following an evaluation of online LLN assessment models such as the Core Skills Profile for Adults and the RU Ready? program.

To ensure individuals have the adaptive capacity to embrace the opportunities available in the future world of work and the tertiary system has the capability and responsiveness to meet changing industry and individual needs

Recommendation 5.1 That Australian governments align and strengthen career development advice services to ensure high-quality services. Strategies should include:

- ✔ improving the coordination of career development and advisory services in Australia to facilitate lifelong career development advice and opportunities for all Australians

- exploring ways to more actively involve industry in career development advice to ensure labour market information is current and supports people to match their skills, interests and abilities with areas of opportunity in the labour market.
- establishing a national brand to unify and better market career development services.

Recommendation 5.2 That Australian governments review their entitlement systems to ensure any restrictions to publicly subsidised qualifications do not undermine the capacity of individuals to adapt to changes in the labour market.

Recommendation 5.3 That the Australian Government work with VET and higher education stakeholders and peak industry bodies to support transitions from higher level VET and higher education to employment by expanding work-integrated learning and by establishing a co-funded professional cadetships program for identified specialised higher education occupations and higher level VET qualifications.

Recommendation 5.4 That the National Skills Standards Council and Industry Skills Councils further develop the reforms in *VET products for the 21st century* to investigate how training packages can most effectively build individuals' adaptive capacity for the changing context and nature of work.

To equip Australia's tertiary education system to provide the skills that industry needs for Australia's future workforce and support the lifelong learning of individuals

Recommendation 6.1 That the Australian Government commission a review of funding in the VET sector to determine an appropriate price for the delivery of high-quality VET.

Recommendation 6.2 That the National Skills Standards Council's review of the standards for the regulation of VET consider implementation of the following measures:

- development of a requirement for externally set and administered assessments for identified high-risk qualifications
- introduction of higher level requirements on registered training organisations seeking initial and renewal registration to deliver the Training and Education Training Package and other identified high-risk qualifications.

Recommendation 6.3 That a national body and program be established, based on the model of the Office for Learning and Teaching, to:

- drive excellence in VET teaching, learning and assessment
- design and promote teaching and learning strategies that can be used to develop adaptive capacity in individual learners
- promote effective use of technology in teaching and learning
- provide a substantial program of professional development in teaching and learning strategies to improve language, literacy and numeracy
- develop and implement a national VET workforce development strategy.

To meet Australia's future skills needs through investment in the tertiary education system and workforce development strategies

Recommendation 7.1 That the Australian Government extend student start-up scholarships to full-time VET students in receipt of government income support.

Recommendation 7.2 That Australian governments support an expansion of public and private funding of at least 3 per cent per annum to meet industry demand and commit further funds to support the implementation of the suite of measures outlined in this strategy, with this additional expenditure increasing at an annual rate of \$1,266 million (2011–12 prices) by 2025. These measures include:

- supporting the less advantaged to participate in training and work
- addressing the clear and urgent need to improve LLN skills
- increasing productivity by supporting workforce development
- improving quality and equity
- ensuring we have the adaptive capacity we need to meet the challenges of the future world of work.



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1

**Positioning Australia as a
knowledge economy through
skills development and
targeted planning**

1 Positioning Australia as a knowledge economy through skills development and targeted planning

The world of work is changing rapidly, driven by technological change, globalisation and the opportunities in the Asian century, yet a high degree of uncertainty remains. Australia needs to be flexible in its policy responses and ensure that the nation has the adaptive capacity to cope with change.

In considering future workforce needs for Australia, AWPA developed four scenarios to help manage this uncertainty. The scenarios were used in economic modelling of the supply and demand for skills to project Australia's workforce and skills needs to 2025.

The modelling projects a higher skilled future for Australia. Industry demand for total qualifications held is expected to increase at an annual rate of between 3 and 3.9 per cent in the three higher growth scenarios. Growth is strongest at higher qualification levels.

To meet industry demand and position ourselves as a knowledge economy in the Asian century, it is imperative for qualifications in tertiary education to increase by a minimum of 3 per cent per annum in the years to 2025, recognising that higher level qualifications will grow considerably faster.¹⁸

Australia needs to have a multilayered approach to planning in the face of considerable uncertainty. In particular there is a need to monitor the occupations which are high risk in the sense that shortages could impede productivity. And while longer term forecasts provide an initial context there is a need for ongoing industry studies drawing on a range of quantitative and qualitative data.

1.1 What the future holds for work and workplaces

Technology continues to drive change

Technology has always played a role in driving change in workplaces, and we can be reasonably certain that this will continue to be the case. Since 1970, investment in computers and software has increased exponentially in real terms, reflecting the rapid improvement in the quality of computers over time and their range of uses. Across the world internet usage grew by 566 per cent between 2000 and 2012.¹⁹

Cisco expects this growth to continue, forecasting that globally there will be 10 billion networked devices in 2016, exceeding the world's population.²⁰ The tools that underpin the use of technology—both hardware and software—are getting cheaper and the scope for future growth is significant, particularly when we consider that currently only about 15 per cent of the African population and 27 per cent of the Asian population use the internet.

Forecasting how and when technology will bring about change can be an uncertain business. The technologies that are likely to have the biggest impact on work and workplaces over the next two decades have most likely already been developed,²¹ but it is hard to predict their rate of take-up, how big their impact will be or how long it will take for their effects on productivity to become apparent.²²

It is because of the uncertainties of forecasting that AWPB approached the task of planning for the future by developing multiple scenarios for Australia to 2025 rather than making a single set of projections based on historical trends. Scenarios are a way of helping to manage uncertainty by identifying a range of possible, plausible futures.²³

As Peter Shergold commented at the AWPB and Industry Skills Councils 2012 conference on the future of work:

Most frequently the future of work is anticipated on the basis of technological innovation but it is often very difficult to place those developments within the contextual swirl of demographic trends, economic and social developments, evolving cultural mores and family structures and the impact of a wide range of possible political interventions.²⁴

The scenarios were developed to take into account the broad drivers that can be expected to influence work and workplaces in Australia to 2025:

- ✔ social, demographic and cultural trends
- ✔ economic and financial trends and globalisation
- ✔ labour force, industrial and workplace trends
- ✔ science, technology and innovation
- ✔ governance and public policy
- ✔ sustainability (with a focus on water, energy and population).

These drivers can interact to determine outcomes. For example, the rate of take-up of the National Broadband Network (NBN) in Australia 'will be heavily influenced by the economic environment and its impact on government and business behaviour'.²⁵

In the highest growth scenario, the Long Boom, changes brought about by technology stimulate innovative approaches and new business models. The Mining sector uses increased automation to offset skilled labour shortages. In the Smart Recovery scenario, as its name suggests, take-up of new technologies and other innovations brings about a revitalised knowledge economy after some years of low economic growth. Developments in machine-to-machine connections supported by strong Australian research capacity that feature in this scenario include:²⁶

- ✔ smart power grids and transport systems
- ✔ identity management
- ✔ smart campuses
- ✔ smart emergency response systems
- ✔ electronic medical management systems.

In the third scenario, Terms of Trade Shock, the material content in many products is reduced through advanced engineering design, which in turn decreases worldwide demand for commodities. Small technologies and micro fabrication help drive the reestablishment of a viable Australian manufacturing sector based on technology and innovation. Giant 3D printers and robotics replace assembly lines. Environmental challenges spur research and development (R&D) to reduce water wastage.

The fourth scenario, Ring of Fire, shows the darker side of communication technologies as cyber technology enables globally networked crime. Labour demand in the resources sector drops as remote mining technologies, not necessarily operated from within Australia, come increasingly into use. Scientists and entrepreneurs move overseas, finding the Australian climate averse to start-ups and wary of inherent risks in venture capital investment.²⁷

It has been suggested that teleworking is set to be 'one of the biggest structural changes to the labour market this decade'.²⁸ Responses to a 2012 survey suggest that telework could have a substantial effect on participation. For example, 60 per cent of mature-aged workers reported they would take up telework if it was available to them and as a result delay retirement by an average of 6.6 years, and 66 per cent of people with disability who were not in the labour force said they would take up a telework employment opportunity if one was available to them.²⁹

Along with working from home, smartphones and tablets, cloud computing has been identified as an office 'tool' that is rapidly becoming ubiquitous.³⁰ Cloud computing is a means of pooling technologies and associated skills between firms, with hardware and software increasingly being kept offsite and 'rented' rather than purchased outright by businesses. Another benefit to business is that the high-level skills needed to design, install and maintain these systems (or other aspects of a company's work) may not need to be maintained in-house, but can be accessed on a temporary basis through contracting or outsourcing arrangements. The government is currently exploring high-level cloud computing strategies for business and government and digital skills more generally. This includes the development of a digital economy white paper and consideration of the impacts of cloud computing within the National Digital Economy Strategy.³¹

Case study: Cloud-based solutions—Growthwise

Growthwise, a three-year-old accountancy business based in Newcastle, has reduced its IT overheads by around \$60,000 a year by using Xero, an online accounting services company. Growthwise is a small business with five members, but cloud computing means it is now servicing firms around the country from its Newcastle base.

Not being able to quickly access information on revenue, debts, loans and cash flows can make some small businesses slip into financial trouble and even bankruptcy. This is where cloud-based solutions which offer businesses a dashboard on their current position can save not only money, but sometimes even the firm itself.

Cloud-based services are allowing Growthwise to advise its clients on budget, cash flow and payment problems in real time. It's enabled the company to shift its focus from quarterly accounts-based compliance work to providing proactive business advice to improve clients' efficiency and productivity.

Using the cloud has also allowed Growthwise to access computing power and software worth millions of dollars. While larger firms can purchase such equipment and software, without the cloud, they were out of reach for Growthwise due to the cost. Now that the company has good in-house IT infrastructure it can focus on its core business.

With new links to super-fast broadband providing opportunities, Growthwise is working to make local businesses in Newcastle more aware of the benefits of the cloud. Cloud solutions and high-speed broadband technology allow businesses to employ staff based in other locations across Australia and can open up part-time work opportunities, since people are able to telework at their own convenience.

Cloud solutions can also reduce business losses and inconvenience to clients because they allow providers of accounting, legal and other services to run their businesses and provide services while away from the office, or even on holiday abroad.

Source: Department of Innovation, Industry, Science, Research and Tertiary Education.

Emerging economies are both producers and consumers of high-level skills

As the contemporary workforce becomes ever more globalised, interconnected and diverse, Australia is likely to experience an increasing demand for flexibility and mobility from employers and employees alike.

The liberalization of trade and capital flows, together with enormous improvements in communications and transportation [means] that more and more workers and employers are increasingly competing on a global market to sell the output of their labour.³²

The impact of globalisation and the international economy will exert a profound influence on the demand for high-level skills to 2025.

Globalisation is a feature of all four scenarios, even the protectionist Ring of Fire. Depending on the global economic situation, Australia's resources sector does more or less well in the first two scenarios as Chinese and Indian urbanisation and industrial development drive demand for commodities. The Terms of Trade Shock scenario sees falling commodities prices as resource-hungry China and India find other sources of supply. Chinese exports in complex manufacturing and industrialised construction compete away many lower skilled jobs. However, in this scenario Australia's declining terms of trade and the associated decline in the value of the Australian dollar open up opportunities for trade-exposed industries, including education, manufacturing and tourism. Rapid growth in demand for protein foods and westernised diets brings opportunities for agricultural exports across the scenarios.

In recent years we have seen unprecedented growth in the supply of university-educated workers in both developed and emerging countries, leading to a global competition for talent. This is continuing in spite of a reduction in skilled migration due to the tightening of migration criteria in many countries (including Australia) after the global financial crisis.³³ These 'global knowledge wars' are not confined to affluent Western nations in terms of either demand or supply. Until relatively recently, some commentators have contended, there has been a failure to understand this changing dynamic, which is 'shattering the view that the economic world would remain divided'.³⁴

Case study: Training 'globally aware' professionals

Students at Australia's RMIT University are undertaking industry work experience and research with international companies and organisations to ensure they are equipped as global citizens to be globally employable.

Through the university's International Industry Experience and Research Program, undergraduate students are supervised by industry professionals while they complete six- to 12-month placements with companies and organisations in Asia, Europe and North America. Postgraduate research projects, which usually have a duration of about three years, enable the students to access state-of-the-art research infrastructure, expertise and generous company scholarships.

These opportunities are available to undergraduate and postgraduate students from all disciplines, and so far more than 2,000 students have completed vocational training and research projects at world-class businesses and institutions through the program. For example, an RMIT aerospace engineering student recently returned from a placement at the Mercedes Benz Technology Centre in Germany, where he contributed to the design of a new retractable trailer mounting.

Leading companies from a number of industry sectors are involved in the program, including firms such as Rolls-Royce, BMW, Fujitsu Computers, Siemens, Bentley Motors, Audi, Airbus, Bosch and Nestlé.

The program is a key part of RMIT's commitment to providing its graduates with a 'global passport' which it believes will make them more competitive in the international job market. At the same time, the program provides the university with a way to assess the quality of its students from a global perspective.

The students who participate are gaining valuable overseas work-based learning opportunities and exposure to work ethics in different cultural environments. RMIT believes this gives them a chance to gain competencies and attributes that will assist them to live as global citizens and perform effectively as professionals in a globalised world.

Sources: RMIT, www.rmit.edu.au/riierp, accessed 9 October 2012; RMIT, www.rmit.edu.au/browse;ID=9aj0yw775dshz, accessed 12 February 2013.

One certainty for Australia across all scenarios is the ageing population and its impact on the health care workforce. Yet the scenarios show how uncertainties arise in meeting Australia's health care workforce needs through migration, as competition for skills develops with other countries that are also experiencing economic success and have their own ageing populations.³⁵

Just as consumer goods and high value-added products and processes are no longer the preserve of the affluent West, but of a global marketplace, emerging societies are proving to be both producers and consumers of high-level skills. The availability of so-called 'cheap brainpower' is challenging the notion that developed societies have a competitive advantage in the skills market. As Brown et al. claim, we have failed to recognise:

how the global economy allows emerging economies to leapfrog decades of industrial development to create a high-skill, low-wage workforce capable of competing successfully for hi-tech, high-value employment.³⁶

The digital revolution has aided the dissemination of skills and the movement of 'white collar' and high-tech work across the globe.³⁷

The Asian century and demand for high-level skills

Over the past half century, 'dramatic economic growth in a succession of Asian economies has seen an increase in their global economic and strategic weight'; in fact, India and China have almost trebled their share of the global economy over the past two decades.³⁸ In contrast to many Western countries, Asian economies were largely resilient during the global financial crisis.³⁹ Australia has benefited from this growth in Asia by supplying resources to underpin Asia's industrial expansion phase. In the future Australia will have a further opportunity to benefit through the provision of other goods and services, particularly in those sectors in which we have a competitive advantage such as in agricultural exports and education services.

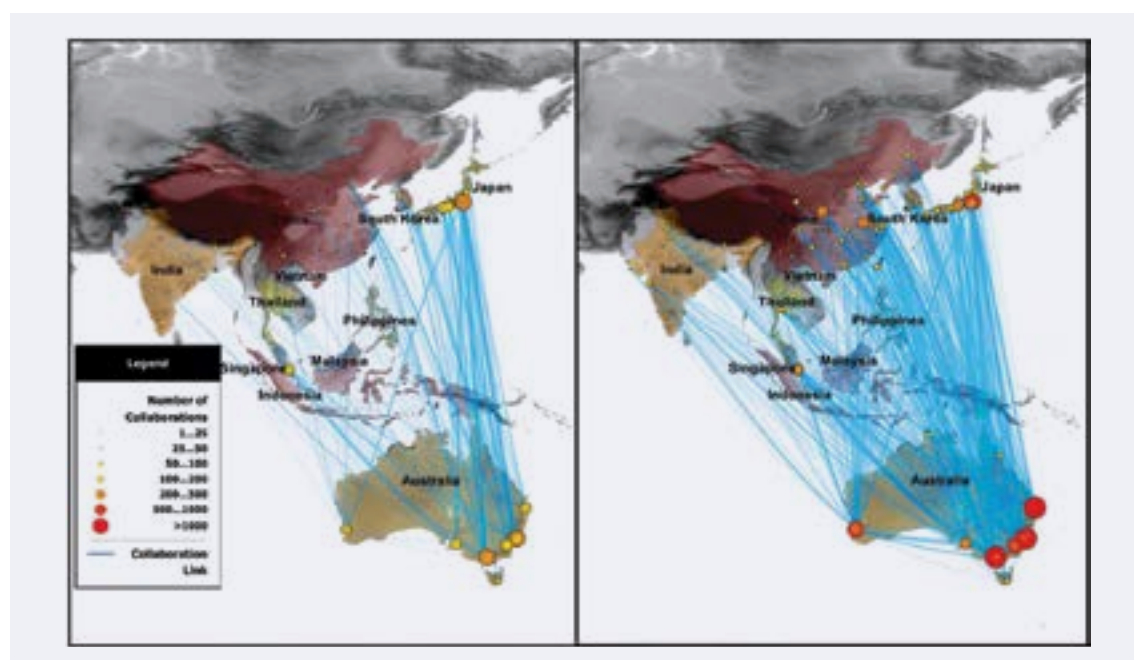
The economic prosperity of the region has enabled governments to invest in their future by increasing funding to higher education and R&D at a time when others are under considerable fiscal pressure. China is aiming to have 200 million graduates by 2030⁴⁰ and to have nine Chinese universities ranked within the top 50 universities globally.⁴¹ Further, Asia is investing heavily in R&D and technology—in fact, ‘in 2009 Asia’s spending accounted for one-third of that spent globally on R&D’.⁴² This situation has been linked to broader developments such as increasing urbanisation and growth in the middle classes in the region.⁴³

Since 2004, Australian businesses have traded more with Asia than with the rest of the world combined.⁴⁴ Three of Australia’s five biggest trading partners are in Asia (China, Japan and the Republic of Korea).⁴⁵ Today, China, Japan, the Republic of Korea, Indonesia and our other Association of Southeast Asian Nations neighbours absorb around three-quarters of our merchandise exports and supply half our imports. A 2007 report from the McKinsey Global Institute suggested that India’s middle class could grow by more than 10 times from its current size of 50 million people to 583 million by 2025, with Indian incomes expected to triple.⁴⁶

These developments represent significant opportunities for Australia—particularly in the field of education services, an area in which large Asian economies such as India and China are likely to face capacity constraints. International education is already Australia’s third largest export industry. In 2010–11 international education contributed \$16.3 billion in export income to the economy.⁴⁷ The increasing demand for education from emerging economies in Asia provides a significant opportunity for the Australian education sector.

Involvement in science and R&D is crucial to drive knowledge production and innovation in the region, and access to the technology developed will also drive productivity in Australia. There is evidence that the partnerships across the Asia–Pacific region, particularly in the areas of science and R&D, have grown significantly over the past decade (see Figure 1). Australia is renowned internationally for having a high level of scientific expertise and world-class researchers. Strategic engagement with Asian counterparts in the field of R&D could provide Australia with a comparative advantage in the future.⁴⁸

Figure 1 Scientific links between Australia and Asian nations, 2002 and 2010



Source: Australian Government, 2012, *Australia in the Asian century white paper*, Commonwealth of Australia, Canberra.

The *Australia in the Asian century white paper* notes that improving the capabilities of all Australians will raise our productivity performance and enable all Australians to participate and contribute in the Asian century. It also notes that Australians need to build 'Asia-relevant' capabilities—both broad-based and specialised.

Asialink argues that conservative estimates suggest that increasing non-resource exports to Asia through improved Asian capabilities could benefit the Australian economy by \$60 billion to \$115 billion over 10 years.⁴⁹ However, more than half of East Asia's trade now takes place within the region. It is likely that the percentage will increase as the number of highly skilled Asian graduates grows, so Australia cannot be complacent and assume that our current economic relationship with Asia will be sufficient for us to succeed in the future.

There is already strong support for Australians to be more proficient in Asian languages from both business and government. However, research by Asialink shows a close correlation between business success with and in Asia and the presence of a developed set of individual and organisational capabilities.⁵⁰ The capabilities are outlined in the Asialink report *Developing an Asia capable workforce* and include broad skills such as a 'capacity to deal with government' and 'tailored organisational design with tendency to local autonomy'.⁵¹

Our expectations are being challenged by changing patterns of work

Work patterns and expectations are changing. Lynda Gratton has summarised how she sees these evolving work patterns and expectations as follows:

- *Shift to mastery.* In the future generalists will face competition from thousands, perhaps even millions, of people able to perform the same work, yet faster and cheaper. To differentiate themselves and add value, future workers will need to demonstrate a deep and unique expertise.
- *Shift to connectivity.* In the future the capacity to combine and connect know-how and competencies into high-value networks will be key. Whom you choose to connect with will be one of the defining characteristics of your working life.
- *Shift to quality of experience.* We will see a move away from quantity consumed as the only measure of success. It will be more about the quality of life and reconnecting with the things that make us happy. This will be facilitated by the decline of automated work, greater choice and autonomy and the rise of home-based work.⁵²

The driving force for this change comes from both organisations and individuals.

Our scenarios show a range of lifestyle patterns depending on the economic circumstances of the country. In the Long Boom scenario, baby boomers age in style, embracing retraining, hobbies, health and wellbeing in the later years of work and in retirement. Smart Recovery shows the development of a better work–life balance, with a modest reduction in working hours. In the Ring of Fire scenario, in contrast, older people defer retirement and vacations, while young people struggle to get into work and only those whose families can afford post-school education can ultimately access well-paid work.

The 2012 AWPA and Industry Skills Councils' Future of Work Conference highlighted the shift from the conventional employer–employee relationship towards new models where businesses source the skills they need, as and when they need them, to get the work done. Under these arrangements many more 'employees' operate more as independent agents, and through the internet, workers offer their skills in a global marketplace as well as bidding for jobs that employers are seeking to fill. In this situation the contractor may have little money to spend on training. This raises the question of who should pay and who can afford to pay for training—governments, individuals or employers.

New patterns of working could bring benefits such as greater freedom for workers (including payment for outputs not inputs), less discrimination on the basis of race or gender, increased opportunities for developing nations, and more opportunity for flexible arrangements such as part-time work and working from home.⁵³

Mobility of workers and work

The Australian workforce is relatively flexible,⁵⁴ yet some employers still identify labour mobility as a key issue affecting productivity,⁵⁵ with some sectors unable to meet demand for workers.⁵⁶

While fly-in, fly-out arrangements introduced by the mining industry are a cost-effective way to address skills shortages and workforce development needs and show that flexible work practices can encourage wider workforce participation,⁵⁷ there are mixed views about the impact of these practices, as explored in AWPAs 2012 discussion paper *Future focus: Australia's skills and workforce development needs*.⁵⁸ In addition, many factors that influence labour mobility may not be open to direct policy intervention.

In the future, flexible work arrangements such as outsourcing, virtual teams, international placements and contracting and job sharing will be supported by technologies to make work, rather than workers, mobile. Benefits for enterprises that shift to a more mobile approach to work include reduced capital expenditure on resources and energy, and the capacity to respond to changing employee expectations about the flexibility of work.⁵⁹ The introduction of super-fast broadband technology should provide the opportunity for this way of working to become more widespread.

Global mobility will also play a significant role in hiring practices, as employers look internationally to recruit talented workers.⁶⁰ Crowdsourcing is becoming an important way of using global mobility to advantage and Australia has been at the forefront of this development.

Case study: Freelancer.com

Founded in 2009 by Matt Barrie, Freelancer.com is the largest outsourcing and crowdsourcing marketplace in the world. Freelancer.com connects businesses with more than seven million independent professionals globally, specialising in fields as diverse as software, writing, data entry and design right through to engineering and the sciences, sales and marketing, and accounting and legal services. In 2012, the company turned over US\$66 million.

The process for using Freelancer.com involves businesses posting projects which are then bid on by freelance workers. The business then compares and selects the bidder it would like to complete the project and it only pays when it is satisfied. The average job is completed for under US\$200, making Freelancer.com extremely cost-effective for small businesses unable to justify the expense of hiring full-time staff.

Source: Freelancer, www.freelancer.com, accessed 12 February 2013.

Increased global mobility creates opportunities for some. Yet it can also have a negative impact for others, for example where companies have moved the location of work overseas to reduce costs and find efficiencies, reducing job opportunities in Australia. It is anticipated that between 700,000 and one million jobs could move overseas in the next three decades,⁶¹ affecting all professions including highly skilled job roles.

Structural adjustment

Structural adjustment, too, is changing ways of working.⁶² Recently, it has been an outcome of the high Australian dollar in addition to technological change. As we noted in the discussion paper, however, some industries (such as manufacturing) have been undergoing structural adjustment for many years.⁶³

The restructuring of work and industry in line with new demands and technologies causes some skills to become redundant. The ready availability and affordability of training in new skills and occupations help to insure people against prolonged unemployment or underemployment and to maintain their employability and the sustainability of enterprises.⁶⁴

Many of these workers [semi-skilled with no formal qualifications] are vulnerable to structural changes in the economy, and without specific intervention, their skills could be lost to the labour market.

Skills Queensland submission to AWWPA, 2012

Those who have lower level skills are the most vulnerable to the impact of structural adjustment. Skills development becomes critical in finding new employment for these workers.

Casual workers

The nature of employment arrangements has also changed over recent years. Nearly one-fifth (2.2 million) of the 11.4 million employed in Australia are now in casual employment⁶⁵ with a further two million employed as independent contractors or other business operators, a substantial proportion of whom are in dependent contracting arrangements.⁶⁶

Casual employment is more prevalent among part-time employees, with 46 per cent employed on a casual basis, and nearly 60 per cent of all casual workers are under 35.⁶⁷ More than half of casual employees are in fact 'permanent casuals', with over 15 per cent having been in their job on an ongoing, regular basis for over five years.⁶⁸

Across the workforce, around 25.5 per cent of all female employees are working in casual positions compared to 19.7 per cent of male employees.⁶⁹

While casual work in particular can provide the flexibility that women may require to balance work and personal commitments, the flexibility inherent in the role is often at the discretion and control of the employer.

Colmar Brunton submission to AWWPA, 2012

Many people prefer the flexibility of working on a casual or part-time basis, but this is not true for everyone. Casual employment can act as a stepping stone for ongoing and permanent employment, but casual employees are also at greater risk of moving into unemployment and out of the labour force.⁷⁰

They may also receive fewer training opportunities through their employer than their permanent counterparts, thus denying them access to better paying jobs and the prospect of career progression.⁷¹

Diminishing permanent work then leads to fewer training and development opportunities.

Shop, Distributive and Allied Employees' Association submission to AWWPA, 2012

There are also concerns about lack of access to training opportunities for people who are self-employed.⁷² At the same time, skills development can occur through more than just training. Engaging in casual or part-time work may help equip employees with a diversity of skills that they acquire by working in different jobs, across a range of skill areas and in multiple occupations.⁷³

Australia's ability to survive and prosper in the coming decades depends on a continued effort to deepen workforce skills and capability and provide adequate and appropriate support for workers to develop the skills they need for the future. AWWPA continues to advocate policies that support individuals to develop skills to meet the broad needs of the economy and for government planning efforts and incentives to focus on specialised skills to avoid future skills shortages.

The world of work is changing in new and sometimes unanticipated ways and at an unprecedented pace. This makes it all the harder to see the change coming and plan for it. The key will be to ensure that Australian employers and employees are prepared for the future and have the adaptive capacity required to cope with whatever the future may hold.

1.2 What do the scenarios and modelling show?

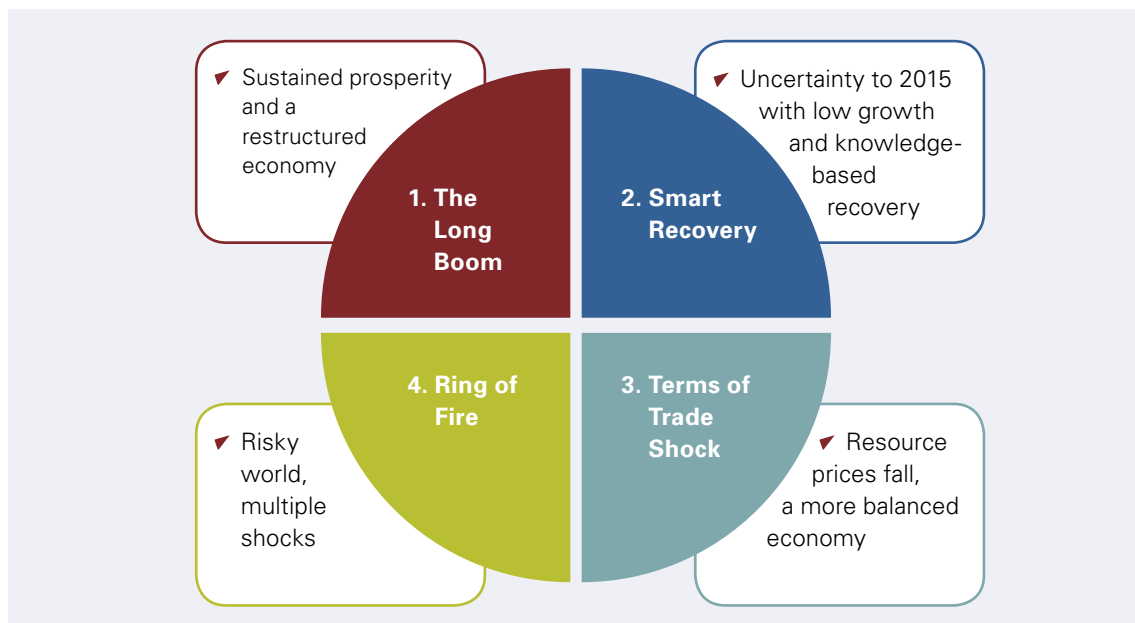
Scenarios for Australia to 2025

To deal with uncertainty and the limitations of making projections about the future, we have developed four possible, plausible scenarios for Australia to 2025 (see Figure 2). Scenarios are alternative visions of the potential future, and provide a means to make decisions that take account of uncertainty.⁷⁴

The scenarios were designed with two purposes in mind: to inform economic modelling of the supply and demand for skills, and to provide a mechanism to assess areas of relative certainty, uncertainty and potential risks against which to test possible policy solutions. The approach to the scenarios is outlined in section 1.1.

The strongest drivers for all four scenarios were economic and financial trends and globalisation. In the Long Boom scenario, the high demand for resources traded with China and other countries continues. Industries challenged by the high terms of trade undertake structural adjustment. In Smart Recovery, the challenges facing Europe and the United States affect financial markets. This means low growth for Australia to 2014–15. Growth then improves and Australia benefits from industry and government strategies to implement a knowledge economy. In Terms of Trade Shock, resource prices fall mainly due to increased supply from other countries, the Australian dollar falls and we move to a broader-based economy. Ring of Fire is a risky world with multiple economic and environmental shocks.

Figure 2 The four scenarios



The scenarios are described in full in *Scenarios for Australia to 2025*, which is available at www.awpa.gov.au.

When using a scenario approach, it is important to recognise what the scenarios have in common and where they differ. Our scenarios suggest that the relative certainties facing Australia's future are an ageing population, the key role of Asia, and increasing take-up of technology. However, there are significant differences in industry structure depending on which scenario eventuates. Environmental impacts are built into all scenarios but vary in severity, with Ring of Fire seeing the most extreme environmental impacts. In Smart Recovery and Terms of Trade Shock climate-related events are a catalyst for the development of new technologies. This underlines the need for a workforce that is adaptable and responsive to changing circumstances.

We have taken the view that as the Ring of Fire scenario is a relative outlier in terms of workforce and qualifications outcomes for Australia in the future, it should not be considered the focus of analysis and planning. Ring of Fire is the least plausible of the scenarios in the period to 2025. It implies a failure of global governance around the world, which we should not plan for but could adjust to in good time if the need arose. Ring of Fire is also the scenario that offers the highest risk, so if it were adopted as a planning tool, it would leave us vulnerable to being unprepared for the workforce of the future that the other three scenarios suggest. This would make the better outcomes of the three higher growth scenarios less attainable. Therefore the primary focus of the analysis and planning is on the three higher growth scenarios which are more similar, but do demonstrate significant potential differences in Australia's future, particularly in relation to industry structure.

What the modelling reveals

Deloitte Access Economics was commissioned to undertake econometric modelling of the four different scenarios. The modelling finds that employment is expected to increase from 11.4 million people in 2011 to between 14.1 million and 15.1 million by 2025 in the three higher growth scenarios. Based on projections from the three scenarios, we will have between 5.6 million and 6.4 million job openings in Australia in the years to 2025. This includes growth in employment and also replacement jobs arising from workers leaving the workforce.

The key finding from the modelling is that projected industry demand for total qualifications held by those employed, unemployed and not in the labour force will increase at an annual rate of between 3 and 3.9 per cent in the three higher growth scenarios. The projected demand is strongest at higher qualification levels.

It is important to note that modelling is not an exact science. In particular our modelling is attempting to capture broad trends over time, while inevitably in reality there will be cyclical and other variations around these trends. In addition, while future trends are also uncertain the modelling presented here attempts to take account of this uncertainty by modelling what is considered to be the range of plausible scenarios. Accordingly it is considered that these modelling results are helpful in illustrating what the future might look like across a range of scenarios which involve a variety of different macroeconomic circumstances. AWPAs methodology examines demand and supply separately and then brings them together in order to determine the future labour market demand for qualifications within four different future 'worlds', each with differing broad economic conditions and drivers.

Our modelling suggests that by 2025 demand for employees with higher level skills and qualifications will exceed supply, while the supply of workers with low skills levels will exceed demand. These gaps can be reconciled in ways that harm Australian prosperity, or ways that help. The harmful way is to permit a circumstance where the underskilled who do not find jobs leave the workforce and become dependent on social welfare, while increasing wage premiums due to scarcity exacerbate income disparity across society. The helpful way is to address low language and numeracy skills and to create the training places and incentives for workers to improve upon simple skills, while at the same time expanding the places available for higher level qualifications. As we argue in this report, the benefits of taking the latter course vastly outweigh the costs.

Assumptions of the modelling

Key macroeconomic parameters such as output growth, annual net migration, productivity and employment growth, and labour force participation rates are inputs to the modelling and vary from one scenario to another (see Table 1). They are selected to be consistent with the state of the world represented by each scenario and with one another. Productivity and employment growth determine economic growth, while employment is affected by population, labour force participation and unemployment. The level of economic growth in each scenario is consistent with specified characteristics of that scenario and realising that growth would require the specified level of participation.

The major driver of the projected increase in the labour force participation rate is the rise in the proportion of the population holding qualifications. This is projected to continue to grow in all scenarios. Labour force participation is strongly related to the level of qualification held.

Working within these parameters, the model identifies the implications for industry and occupations and as a consequence the supply and demand of qualifications for each scenario.

Table 1 Macroeconomic assumptions by scenario

Variable (average 2011–25 unless stated)	History (average 2001–11)	Long Boom	Smart Recovery	Terms of Trade Shock	Ring of Fire
Terms of trade (level in 2025 for forecasts)	87.5	88.0	85.0	67.0	73.2
Net migration (persons)	176,000	235,000	191,000	187,000	128,000
Population growth	1.54%	1.58%	1.32%	1.28%	0.99%
Labour force participation rate (level in 2025 for forecasts)	64.8%	69.2%	66.9%	67.3%	63.6%
Unemployment rate	5.3%	5.0%	5.3%	5.0%	6.6%
Employment growth	2.32%	1.99%	1.52%	1.59%	0.75%
Labour productivity growth	0.72%	1.86%	1.30%	1.61%	0.59%
Output growth	3.06%	3.89%	2.85%	3.23%	1.35%
Output per capita growth	1.50%	2.26%	1.51%	1.93%	0.39%
Nominal GNI per capita growth	5.34%	4.28%	3.54%	3.15%	2.06%
Real GNI per capita growth	2.46%	1.69%	0.93%	0.57%	-0.55%

GNI = gross national income

Source: Deloitte Access Economics, 2012, *Economic modelling of skills demand and supply*.

Australia's workforce of 2025 is projected to be increasingly higher skilled

Currently, just under 60 per cent of Australia's working population holds a post-school qualification. In the three higher growth scenarios, qualification holding is expected to exceed 70 per cent by 2025 (see Table 2). Conversely, this data also means that around 30 per cent of employed people will not have a post-school qualification by 2025.

Table 2 Persons employed with and without qualification by scenario ('000)

	2011	2015	2020	2025	Average annual change	Per cent with qualifications in 2025
The Long Boom						
With post-school qualifications	6,815	7,929	9,716	11,341	3.7%	75
Without post-school qualifications	4,613	4,407	4,111	3,721	-1.5%	
Total employment	11,428	12,335	13,827	15,062	2.0%	
Smart Recovery						
With post-school qualifications	6,815	7,501	8,783	9,955	2.7%	70
Without post-school qualifications	4,613	4,441	4,315	4,170	-0.7%	
Total employment	11,428	11,942	13,098	14,125	1.5%	
Terms of Trade Shock						
With post-school qualifications	6,815	7,783	9,248	10,567	3.2%	74
Without post-school qualifications	4,613	4,393	4,060	3,686	-1.6%	
Total employment	11,428	12,175	13,309	14,253	1.6%	
Ring of Fire						
With post-school qualifications	6,815	7,198	7,769	8,260	1.4%	65
Without post-school qualifications	4,613	4,553	4,499	4,428	-0.3%	
Total employment	11,428	11,750	12,268	12,688	0.7%	

Source: Derived from Deloitte Access Economics, 2012, *Economic modelling of skills demand and supply*, Tables 5.6 to 5.9.

The modelling projects that industry demand for the total of qualifications held by those employed, unemployed and not in the labour force will increase by between 3 and 3.9 per cent on average each year in the three higher growth scenarios (see Table 3). This equates to the addition of between 6.7 million and 9.3 million qualifications to Australia's total stock of qualifications held between 2011 and 2025 in the three higher growth scenarios.

Projected growth in total qualifications held is strongest at higher qualification levels. Across all scenarios, the strongest growth of total qualifications held is for postgraduate qualifications, followed by undergraduate qualifications. The rate of projected growth of postgraduate qualifications is between 3.9 and 4.9 per cent in the three higher growth scenarios. The rate of growth in undergraduate qualifications is between 3.3 and 4.1 per cent in the same three scenarios.

There is slightly more variability in demand growth for Certificate III and IV qualifications, at between 2.8 and 4 per cent in the three higher growth scenarios. This suggests there may be a need for greater flexibility in planning at this level. Projected growth in Certificate I and II qualifications is more modest, at between 1.5 per cent and 2.1 per cent in the three higher growth scenarios.

Table 3 Total qualifications held by persons employed, unemployed and not in the labour force, by scenario ('000)

Qualification held	2011	2015	Average annual change 2011–15 (%)	2020	Average annual change 2015–20 (%)	2025	Average annual change 2020–25 (%)	Average annual change 2011–25 (%)
Long Boom								
Postgraduate	1,588.0	1,908.3	4.7	2,458.7	5.2	3,104.7	4.8	4.9
Undergraduate	4,126.3	4,846.9	4.1	6,007.6	4.4	7,256.9	3.9	4.1
Advanced diploma/ diploma	2,299.5	2,654.6	3.7	3,222.2	4.0	3,842.3	3.6	3.7
Certificate III and IV	3,597.6	4,312.6	4.6	5,349.4	4.4	6,195.8	3.0	4.0
Certificate I and II	1,563.1	1,695.0	2.0	1,891.7	2.2	2,079.2	1.9	2.1
Total	13,174.6	15,417.3	4.0	18,929.6	4.2	22,479.0	3.5	3.9
Smart Recovery								
Postgraduate	1,588.0	1,816.4	3.4	2,230.1	4.2	2,714.9	4.0	3.9
Undergraduate	4,126.3	4,633.9	2.9	5,515.6	3.5	6,475.3	3.3	3.3
Advanced diploma/ diploma	2,299.5	2,550.2	2.6	2,968.1	3.1	3,428.2	2.9	2.9
Certificate III and IV	3,597.6	4,059.0	3.1	4,768.1	3.3	5,323.0	2.2	2.8
Certificate I and II	1,563.1	1,650.9	1.4	1,788.0	1.6	1,914.9	1.4	1.5
Total	13,174.6	14,710.4	2.8	17,269.9	3.3	19,856.4	2.8	3.0
Terms of Trade Shock								
Postgraduate	1,588.0	1,894.7	4.5	2,375.7	4.6	2,941.4	4.4	4.5
Undergraduate	4,126.3	4,802.9	3.9	5,794.6	3.8	6,877.5	3.5	3.7
Advanced diploma/ diploma	2,299.5	2,628.8	3.4	3,108.1	3.4	3,632.4	3.2	3.3
Certificate III and IV	3,597.6	4,194.0	3.9	5,032.6	3.7	5,671.9	2.4	3.3
Certificate I and II	1,563.1	1,673.5	1.7	1,821.7	1.7	1,961.2	1.5	1.6
Total	13,174.6	15,193.9	3.6	18,132.6	3.6	21,084.5	3.1	3.4
Ring of Fire								
Postgraduate	1,588.0	1,735.5	2.2	1,950.0	2.4	2,187.5	2.3	2.3
Undergraduate	4,126.3	4,473.2	2.0	4,943.3	2.0	5,435.7	1.9	2.0
Advanced diploma/ diploma	2,299.5	2,477.2	1.9	2,698.4	1.7	2,920.1	1.6	1.7
Certificate III and IV	3,597.6	3,886.7	2.0	4,218.3	1.7	4,441.9	1.0	1.5
Certificate I and II	1,563.1	1,647.2	1.3	1,722.4	0.9	1,774.6	0.6	0.9
Total	13,174.6	14,219.9	1.9	15,532.5	1.8	16,759.8	1.5	1.7

Source: Derived from Deloitte Access Economics, 2012, *Economic modelling of skills demand and supply*, Tables 5.10–5.17.

The increase in total qualifications held can be attributed to five factors: the increase in employment; the change in the composition of employment towards more skilled occupations; the increase in the level of skills of those employed in an occupation (skills deepening); the demand for multiple qualifications at a particular level (skills broadening); and the demand for qualifications among persons who are unemployed or not in the labour force.

The annual demand for qualifications comprises the increase in the stock of qualifications held shown in Table 3 and the demand for qualifications to replace those who have retired. The six components of the annual demand are shown in Table 10 in Appendix 1.

Demand for additional *new* qualifications is projected to be between 705,000 and 886,000 each year on average in the three higher growth scenarios between 2012 and 2025. A significant amount of this demand is driven by Australia's ageing population. Regardless of scenario, the annual average qualifications demanded each year due to retirement is between 219,000 and 231,000. Retirement is the strongest driver of demand in two of the three higher growth scenarios. In line with demographic trends, this issue becomes more acute by 2025.

Overall, the three strongest drivers of projected demand are retirement, increased labour market size and skills deepening. Increased labour market size is projected to be the strongest driver of demand in the Long Boom scenario, with an average of 294,000 additional qualifications required per annum between 2012 and 2025. Skills deepening is also a strong driver of demand in the three higher growth scenarios, at between 138,000 and 217,000 additional qualifications required each year between 2012 and 2025.

The other three drivers of demand are projected to require an average of between 128,000 and 156,000 additional qualifications in the three higher growth scenarios each year to 2025. In more detail, this equates to the following projections:

- Skills broadening will require on average between 44,000 and 69,000 additional qualifications each year to 2025.
- Changing employment composition will require on average between 46,000 and 54,000 additional qualifications each year to 2025.
- Demand for a 'reserve' of those not in the labour force will require on average between 34,000 and 38,000 additional qualification each year to 2025.

Estimates by level of qualification are included in the Deloitte Access Economics report.

As a result of skills deepening and broadening, a considerable proportion of employed people hold more than one qualification. In 2011 the 6.8 million employed people who had at least one qualification held a total of over 11 million qualifications. This is an average of over 1.6 per person. The total number of qualifications held by employed people is projected to rise under the Long Boom scenario by 8.8 million to nearly 20 million by 2025. Of the increase, growth in employment accounts for 2.2 million qualifications, the growth in the proportion of employed people with at least one qualification accounts for 2.4 million and the attainment of second and further qualifications accounts for 4.3 million—of which about 2.8 million can be attributed to the current propensity to hold multiple qualifications and 1.5 million to an increase in the propensity.

As discussed above, qualifications are required for the people who replace those who retire. This is estimated at 3.1 million over the period to 2025. Provision to people who are unemployed or not in the labour force is estimated at 0.5 million. Adding these to the 8.8 million increase in qualifications held by employed people gives a total of 12.4 million qualifications required over the period to 2025 in the Long Boom scenario.

Changing industry and occupation trends

As part of the consultation process, we tested the outcomes of the modelling with industry and made small refinements to the industry share of the modelling to take into consideration industry outlooks for each of the scenarios.

Employment and qualifications by industry

Employment growth is expected to occur in the majority of industries. Even industries that are projected to have low or negative employment growth still have high levels of employment, such as manufacturing (see Table 11 in Appendix 1).

The industries with the largest projected increase in the total number of people employed by 2025 in the three higher growth scenarios are:

- ✔ Health Care and Social Assistance, which increases by between 643,800 and 798,600 people employed
- ✔ Professional, Scientific and Technical Services, which increases by between 353,900 and 583,000 people employed
- ✔ Education and Training, which increases by between 462,600 and 503,700 people employed.

These three industries are projected to be the highest growing industries across the scenarios, which gives us a reasonable degree of certainty that we need to plan for growth.

Another important factor in considering industry employment is where there are significant differences between the scenarios. These are industries where planning for uncertainty will be important. Industries that show a notable difference across the three higher growth scenarios include:

- ✔ Construction, which varies between growth of 258,200 and decline of 32,100 people employed. This difference is explained by the continued strong growth in the resources sector in the Long Boom scenario, unlike the Terms of Trade Shock where there is less new investment in mining construction
- ✔ Retail Trade, which increases by between 173,200 and 256,500
- ✔ Mining, which increases by between 76,800 and 132,400.

Employment and qualifications by occupation

In terms of major group occupations as defined in the *Australian and New Zealand Standard Classification of Occupations*, growth is projected in all occupations in the three higher growth scenarios. The extent of growth, however, varies significantly across occupations and scenarios. The strongest growth is in professional occupations, followed by Community and Personal Service Workers and Managers (see Table 12 in Appendix 1).

In the three higher growth scenarios, between 2011 and 2025:

- ✔ the number of people employed as Professionals is projected to increase by between 993,500 and 1.36 million
- ✔ the number of people employed as Managers is projected to increase by between 508,000 and 641,500
- ✔ the number of people employed as Community and Personal Service Workers is projected to increase by between 470,500 and 551,100.

Occupations with the lowest levels of growth between 2011 and 2025 across the three higher growth scenarios are:

- ✓ Sales Workers, with projected growth of between 121,400 and 194,200
- ✓ Labourers, with projected growth of between 108,200 and 195,500
- ✓ Machinery Drivers and Operators, with projected growth of between 63,200 and 142,000.

By 2025, across all scenarios, Managers and Professionals together are projected to constitute 38 per cent of the workforce (14 per cent and 25 per cent respectively). Clerical and Administrative Workers are projected to constitute around 14 per cent of the 2025 workforce, and Technicians and Trades Workers 13 per cent. Machinery Drivers and Operators constitute the smallest proportion of the 2025 workforce, at around 6 per cent.

The modelling projects that skills deepening (that is, where a first qualification is gained or an additional qualification is gained at a higher level than previous qualifications) will occur across all occupations. However, the degree of deepening varies depending upon which scenario we look at, and which occupation (see Table 9 in Appendix 1).

Skills deepening is expected to be strongest for Community and Personal Service Workers. At present, this occupational group has post-school qualifications broadly in line with the average of all occupations. However, this is expected to increase markedly: 80 per cent of Community and Personal Service Workers are expected to have a post-school qualification in the three higher growth scenarios. Indeed, under the Long Boom and Terms of Trade Shock scenarios, almost nine out of 10 Community and Personal Service Workers are expected to hold a post-school qualification by 2025.

The proportion of Managers with a post-school qualification increases across all scenarios, as does the proportion of Technicians and Trades Workers. The proportion of Clerical and Administrative Workers with a post-school qualification also increases across the scenarios, particularly the Long Boom and Terms of Trade Shock.

The increase in job openings to 2025 (from employment growth and retirement replacement) has also been projected across occupations at the unit group (four-digit) level and classified according to the most common level of qualification held (see Table 14 in Appendix 1). At the higher education level, Registered Nurses are projected to experience the greatest increase in employment across all scenarios, reflecting the demands from an ageing population. The remaining nine of the top 10 higher education occupations are consistent across the Long Boom, Smart Recovery and Terms of Trade Shock scenarios, with only minimal changes in ordering. These occupations include Software and Applications Programmers, Teachers (private tutors and teachers in primary and secondary school), Advertising and Sales Managers, and Chief Executives and Managing Directors.

Among VET qualifications, Aged and Disabled Carers and Child Carers are projected to experience the highest increase in employment across all four scenarios. There is a high degree of consistency in the remaining occupations across the scenarios, with the Health Care, Construction and Education sectors all represented. Notable differences include that the Long Boom is the only scenario where Plumbers are in the top 10, and where Chefs are not represented.

Among occupations that currently have no post-school qualification as the most common qualification level, Sales Assistants, General Clerks and Retail Managers are projected to have the highest employment growth across all scenarios. There is a high degree of similarity across the scenarios; the only differences in the top 10 are that Drillers, Miners and Shot Firers are replaced by Waiters in the Terms of Trade Shock scenario, and by Sports Coaches, Instructors and Officials in the Ring of Fire scenario.

Supply of qualifications from the modelling

In considering the supply of qualifications, the modelling factors in both domestic qualification completions and net overseas migration. The supply of new domestic qualifications is reasonably similar across all of the scenarios as it is largely driven by demographic changes. In the three higher growth scenarios, the flow of new qualifications increases by between 1.2 and 1.4 per cent per annum (see Table 16 in Appendix 1). This equates to between 663,635 and 691,049 new qualifications per year.

The increase in new qualifications supplied is projected to be higher in the earlier years of the scenario period, as a result of factors such as increased investment in the system. With the introduction of a demand-led system in higher education and increasingly in VET, it has become more challenging to model the future supply of qualifications, which may depend more on student demand and less on the rationing of student places.

There are bigger differences across the scenarios in the supply of new qualifications through migration. Only in two of the higher growth scenarios is there an overall increase in the supply of qualifications from migration in the period to 2025. In all scenarios, there is a reduction in migration supply of Certificates III and IV. These figures reflect the potential for migration to act as the 'swing variable' in the supply of qualifications.

Strong demand is expected in the years to 2025. To ensure that we always have the capacity to meet the required growth in qualifications, the supply of qualifications will need to be monitored given it is related to demographic factors and also to funding and student demand. Supply is therefore at risk from any changes in funding arrangements. On the balance of risks, it would be better for productivity and the economy to have more qualifications than employers require rather than less.

The projected supply of qualifications can also be compared with government targets for higher education and the targets for skills and workforce development targets set by COAG. The latest COAG National Agreement for Skills and Workforce Development aims to:

Halve the proportion of Australians nationally aged 20–64 without qualifications at AQF Certificate III level and above between 2009 and 2020. The target is 23.6% of the working age population without a higher level qualification in 2020.⁷⁵

The COAG Reform Council reports the figure to have fallen from 48.1 per cent in 2008 to 44.7 per cent in 2011. This means that progress towards the target is slow, and indeed 'we are yet to see any sign of the acceleration in the rate of qualification attainment that is required to meet this target'.⁷⁶ Our modelling projects that industry demand for total qualifications held will be lower than the target committed to by COAG.

Supply and demand balance

Modelling the cumulative surplus or deficit of annual demand and supply flows suggests that there will be a large deficit of qualifications in two of the scenarios (the Long Boom and Terms of Trade Shock). The figures are roughly in balance in the Smart Recovery scenario.

The projected growth in higher level skills is important when considering supply and demand balance by qualification level. The modelling projects an undersupply of between 1.6 million and 2.8 million qualifications at diploma level or above in 2025. There is a projected oversupply at Certificate I and II and Certificate III and IV levels across scenarios and time periods.

Note that the projections are for qualifications and not for persons. A shortfall in the projected supply, for example, does not necessarily mean that there would be shortages, in the sense that vacancies would remain unfilled. But many jobs can be filled with persons with a range of qualifications, although this is not so, or is very difficult, in specialised areas. A shortfall could result in some jobs being filled by people who are less qualified than would be the case if the assumptions of the scenarios had been realised. If in a specialised area a shortfall could lead to shortages.

In comparing expected demand from industry with the projected supply of qualifications from domestic students and migrants (see Table 15 in Appendix 1), the figures show a surplus in new qualifications in some areas and a deficit in others. However, the data do not indicate whether supply and demand for qualifications were in balance in 2012 and hence a future surplus might in part be offsetting a deficit at the start of the projection period. Hence for policy purposes the data on projected surplus or deficit of qualifications need to be considered alongside data on whether there is presently a surplus or shortage of workers in an occupation.

Furthermore, Certificate I and II qualifications are very important to workforce participation and are a pathway to higher level qualifications, particularly for those from disadvantaged backgrounds.⁷⁷ Employment rates for people who left school after completing Year 10 or below, but have completed a Certificate I or II, are around 10 percentage points higher than for people who do not have a post-school qualification.⁷⁸

A Certificate III is also considered an entry-level qualification for many industries. In addition, it is important to recognise the role of Certificate III and IV qualifications in meeting the expected growth in demand for front-line managers.

For some learners, certificate-level qualifications provide a first post-school qualification and a pathway to qualifications that are in greater demand. In this sense, these qualifications are similar to Year 12 certificates. Furthermore, the data needs to be viewed in the context of the COAG commitment to introducing a national training entitlement for a government-subsidised training place to at least the first Certificate III qualification.

Given the uncertainties, we would not recommend close adjustments of supply by field or level on the basis of longer term projections. However, the projections strongly endorse the need to support those with low-level qualifications to progress to higher levels.

An increase in human capital through better qualifications can be used effectively to improve productivity in a high-value economy. The benefits of this additional investment for Australia's productivity will be realised through improved work organisation and job design to make better use of employee skills and capabilities. These issues are discussed in more detail in the next section.

1.3 Planning for workforce development

Industry will need an increasingly qualified workforce in the future and demand for high-level skills is expected to be strong in the years to 2025. There is also a need to ensure that opportunities for upskilling are available to all. Changing economic and career structures mean that people can expect to have multiple careers across their working life, and to work in a variety of industries and occupations.

The unpredictable nature of some of these influences on the labour market (and, by extension, on demand for skills) means that Australia needs to adopt a multi-layered approach for planning for the future. Individuals and governments alike need to be equipped to deal with uncertainties if, and when, they eventuate.

AWPA is committed to a partnership approach and a shared agenda among all stakeholders to contribute to national workforce development. Cooperation and engagement between government agencies, jurisdictions, industry and the tertiary sector and strong linkages across programs is essential to realising the workforce development agenda.

As we pointed out in *Australian workforce futures*, the life span of some qualifications is short and there are a number of influences in the contemporary labour market that need to be taken into account when planning for the future:

- In today's labour market, people change their jobs with relative frequency. Two-fifths of the workforce (41.4 per cent) change their employer within less than three years, while more than half (56.1 per cent) change their employer within five years.⁷⁹
- A change in employer can also be accompanied by a change in occupation or industry. This is most pronounced among workers who changed their employer in the past 12 months, with 30.5 per cent reporting a change in industry and 22.5 per cent a change in occupation. Of people voluntarily ceasing their last job, the most common reason reported was 'To obtain better job or conditions, and/or wanted a change' (31.6 per cent).⁸⁰
- The job destinations for which people train for are often quite different to those in which they are eventually employed. The National Centre for Vocational Education Research (NCVER) reports that an average of only 40.4 per cent of VET graduates are working in the occupation for which they had trained (although the occupational 'match' for tradespersons and technicians is significantly higher).⁸¹ However, 'graduates mostly report their training as relevant to their job, despite not ending up in the "matched" occupation'.⁸² A similar pattern can be observed for university graduates, with job destinations highly variable by occupation and field of study.⁸³
- Industry requirements and skill needs are subject to constant change, influenced by new technologies and innovation, economic drivers (such as trade and globalisation), supplies of qualified workers (for example, due to retirement and training rates) and professional requirements (such as licensing and registration).

Planning for Australia's future workforce needs

Developing the capabilities of the workforce is essential if Australia is to maximise opportunities in the years to 2025 and avoid the risks of future skills shortages. Sufficient higher level skills in the workforce will enable us to create a knowledge economy as well as respond to the challenges of the future. We also need to ensure that Australians with lower level skills do not get left behind.

On the basis of the increase in qualifications projected by the modelling in the three higher growth scenarios, growth in enrolments of a minimum 3 per cent per annum is needed to meet demand and avoid skills shortages. Indeed, given that the highest growth scenario, the Long Boom, projects growth of 3.9 per cent, this can be viewed as a relatively conservative growth requirement.

In a student entitlement system, student demand may be higher than this. As discussed in more detail in Chapter 6, while funding levels were relatively high in the period from 2008 to 2011, the Treasury budget projections in the 2010 Intergenerational Report plus recent budgetary decisions suggest that overall investment is unlikely to match the required rate of increase. It is, however, an economic imperative that Australians invest in our future to meet industry demand and make the most of opportunities in the years to 2025.

Recommendation 1.1

That Australian governments support the achievement of a minimum annual increase of 3 per cent in tertiary education qualifications to 2025 to meet national demand for skills and qualifications, recognising that higher level qualifications will grow relatively faster.

Monitoring progress in meeting Australia's future workforce needs

Our modelling projects that there will be commonalities in areas of industry and occupational growth. For example, health and education are expected to increase along with professional and managerial roles. Regardless of which scenario eventuates, it will be important for individuals to be aware of the expected jobs growth and for sufficient opportunities for training to be available, including work-integrated learning.

The projections also mean that there will be different requirements for training across the scenarios. For example, industries exposed to international competition may have higher employment prospects if Australia's terms of trade were to drop suddenly, while other industries may show lower growth under those conditions.

A key challenge in planning for the future is therefore to ensure that the tertiary education system has the adaptive capacity to respond to the changing world of work and changes in demand for qualifications and skills. These issues are discussed in more detail in Chapter 5.

In the context of an entitlement system, it is also important to ensure that the needs of industry are met. Matching the needs of individuals with the needs of industry is challenging, although governments can put in place mechanisms to manage student demand. As discussed in *Skills for prosperity*, provisions to exclude, cap or introduce incentives for certain courses of study should be in alignment with the occupations on the Specialised Occupations List (SpOL) and whether they are expected to be in excess or short supply.

Currently, AWPA conducts economic modelling of the supply and demand for skills every three years. However, Australia's labour market and skills policies are evolving rapidly in the context of an entitlement system. To support the achievement of the 3 per cent growth in enrolments to meet industry need, we plan to conduct more regular monitoring of outcomes by industry and occupation.

In *Australian workforce futures* we noted that for many occupations there was not a close relationship between particular levels and fields of qualifications, although in most occupations the possession of a qualification led to higher earning and implicitly higher productivity. In about 20 per cent of jobs there was a close fit of qualifications to employment and shortages could be expected if supply did not match demand. We called these 'specialised occupations' and they are discussed in the next section.

For other occupations it was considered that market forces would generally be effective in matching supply and demand. That said, it is still likely that improved matching of education and training to occupational destination is likely to improve productivity and worker satisfaction. It may also be valuable to consider overall industry needs, the relationship among occupations, the technological change in the industry and skill use. This may go to analysis of needs beyond what can be gleaned from quantitative comparisons of supply and demand.

We therefore suggest two strands of planning:

- for specialised occupations
- for industry workforce development, through industry overviews which consider both specialised and non-specialised occupations in the industry, and qualitative factors including technology change not captured in quantitative modelling.

Planning for specialised occupations

The concept of focusing planning on specialised occupations was first raised in *Australian workforce futures*. We noted that while the labour market is generally quite effective in responding to changing skills needs and economic fluctuations, there is potential for market failure for some occupations because the labour market is less able to adjust quickly. There are certain occupational areas where the risk of shortages, or indeed oversupply, needs to be better identified and addressed. If Australia fails to address these issues, we risk recurring skill shortages and resource wastage as a result of mismatches between educational supply and workforce demands. A methodology to identify 'specialised occupations' was developed and tested in consultation with stakeholders to determine where planning attention might be best directed.

We define a specialised occupation as follows:

A specialised occupation is one where specialised skills, learned in formal education and training, are needed at entry level and the impact of market failure is potentially significant.

The specialised occupations methodology is based on identifying those occupations that have at least two of the following three characteristics:

- *Long lead time.* Skills are highly specialised and require extended learning and preparation time over several years.
- *High use.* Skills are deployed for the uses intended (that is, they have a good occupational 'fit').
- *High risk.* The disruption caused by the skills being in short supply is great, resulting either in bottlenecks in supply chains or in significant economic or community costs because an organisation cannot operate.

At present, the SpOL is updated annually prior to the annual update of the Skilled Occupations List (SOL) and is used as the basis for the SOL for general skilled migration purposes.⁸⁴ The SpOL for 2013 is in Appendix 2.

While in most cases the market will balance the supply and demand for skills, we believe there are areas where a more targeted approach is needed. The specialised occupations approach continues to meet this need and we plan to maintain this methodology.

Importantly, this does not mean that we take the view that only specialised occupations should receive government support for training.

For the majority of occupations that are not considered to be specialised, it is imperative that individuals have access to high-quality labour market information and career development advice. Without adequate information there is a risk that the labour market for these occupations will not operate effectively. It is also appropriate that non-SpOL occupations be considered in industry or sectoral workforce development planning.

Industry workforce development planning

The modelling provides projections of industries and occupations that are expected to grow in the years to 2025. In some cases there is a reasonable degree of certainty about the projected growth in particular industries and occupations, while in others the extent of growth is more variable between scenarios. Workforce development planning can play an important role in managing the projected changes and can cover both SpOL and non-SpOL occupations.

Sector workforce development plans provide an analysis of projected future demand and supply for qualifications, potential gaps and strategies to balance supply and demand. They may also address issues such as attraction, retention and work organisation. Sector workforce development plans involve the use of statistics and consultation with industry and other stakeholders. Ideally, a workforce development plan will have been agreed by multiple stakeholders and include achievable actions.

Health Care and Social Assistance; Education and Training; and Professional, Scientific and Technical Services are the three sectors projected to be the highest growing industries across the scenarios. This gives us a reasonable degree of certainty that we need to plan for growth in these areas.

We also need to plan for a mix of skills in these high-demand sectors. In the Health Care and Social Assistance industry, there will be strong demand for high-level skills obtained through higher education in the primary medical care, diagnostic and allied health fields. Yet at the same time there will be a need to grow skills in areas such as child care and aged and residential care, which will require qualifications obtained through the VET sector.

Workforce development for the Health Care and Social Assistance sector is being addressed through initiatives such as the National Health Workforce Innovation and Reform Strategic Framework for Action 2011–2015, which was developed by Health Workforce Australia. The framework provides an overarching, national platform to guide future health workforce policy and planning in Australia. It sets out key priority areas and five essential domains for innovation and reform to create an integrated, high-performing health workforce.⁸⁵

AWPA is working on a skills needs sectoral report on Professional, Scientific and Technical Services. The report will consider the projected demand and supply of qualifications for the industry and make recommendations to reduce any gaps. It is also notable that while there are high levels of projected growth in this industry, the extent of additional jobs varies quite significantly between the scenarios. This is an area of uncertainty that will be important to manage.

In relation to the Education and Training sector, we have in the past called for a VET sector workforce development plan to be put in place, but this has not occurred. The Productivity Commission has conducted research into the VET workforce. Innovation and Business Skills Australia is currently developing a VET workforce capability framework and has released a discussion paper that considers options to support professional development of the VET workforce. The framework levels describe the broad scope of activity of VET practitioners, whose work may encompass various roles, including training and assessment, learning services, instructional design, or working to link enterprises and RTOs.⁸⁶

The modelling projects growth in demand for other areas of education and training, in particular primary and secondary school teachers, so these may be other areas that may require workforce development planning to occur to ensure an appropriate balance of supply and demand.



Another important factor in considering industry employment is where there are significant differences between the scenarios. These are industries where planning for uncertainty will be important.

In the scenarios, three industries with quite variable employment outcomes were Retail, Mining and Construction. AWP is working with Service Skills Australia on workforce issues relating to the retail industry, and also produces a resource sector report on an annual basis in consultation with industry.

The Construction and Property Services Industry Skills Council released a three-year workforce development strategy in 2010 to drive further improvements in the services it offers the construction industry and in the positions it advocates within the VET system.⁸⁷

While there are a number of workforce development plans in place in different industry sectors including at the state level, there are considerable differences in what constitutes a workforce development plan and/or strategy. In particular, these plans often identify short- to medium-term solutions rather than taking a long-term perspective.

As part of our revised remit, AWP is required to develop three or four sector workforce development plans each year in conjunction with industry stakeholders. The priority sectors for investigation will be determined with reference to the Deloitte Access Economics modelling on the supply and demand for skills and other labour market indicators. The sector workforce development plans will address supply and demand issues, and in some cases will also consider broader workforce development issues such as attraction and retention.

A large, stylized graphic of a fan palm frond, composed of several triangular segments radiating from a central point, rendered in a dark red color against a lighter red background.

2

Improving productivity
in the workplace

2 Improving productivity in the workplace

Workforce development is concerned with the development of knowledge and skills in tertiary education; the matching of tertiary provision to the needs of industry, individuals and society; and the effective use and further development of knowledge and skills in the workplace. A workforce development approach can support productivity in the workplace, in industry, in regions and nationally.

This chapter argues that Australia can build workforce development by taking the following actions:

- ✓ commissioning a new review of leadership and management capability, especially front-line management
- ✓ conducting a capability review to assess the extent to which workforce development tools and standards are fit for purpose
- ✓ providing more support for innovative enterprise-based workforce development approaches through programs such as the NWDF
- ✓ funding the Australian Government's Enterprise Connect program to support more SMEs in labour-intensive industries such as retail, hospitality and construction
- ✓ supporting projects to leverage resources for workforce development at a local and regional level through co-funding to improve the efficiency of resource allocation.

2.1 Workforce development to support productivity and innovation

The innovation that takes place in Australian workplaces every day is critical to unlocking our productive potential.

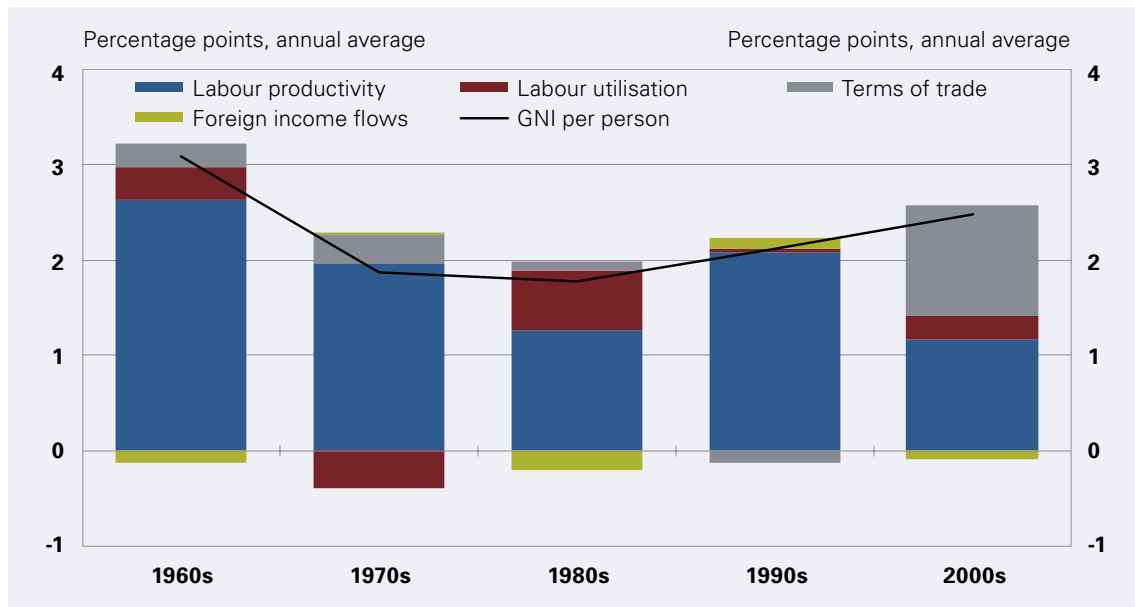
The link between innovation, productivity and skills has been described as a 'virtuous circle', with each element positively reinforcing the others.⁸⁸ While skills development is important for productivity and innovation, the investment in skills is only realised when employee skills and capabilities are harnessed in the workplace.⁸⁹ This shifts the focus to workforce development.

Australia's productivity performance underpins our continued prosperity and living standards.⁹⁰ Labour productivity growth improved during 2011–12, but has been weak over the past decade.⁹¹ Unless the improvement continues, Australia's future prosperity is at risk.

Much of the income growth in recent years has come from improved prices for resource exports, rather than improved productivity (see Figure 3). As Dolman and Gruen note:

Labour productivity growth explained less than half of the growth in average incomes since the turn of the century, compared to an average of around 90 per cent of income growth over the four previous decades.⁹²

Figure 3 Contributions to growth in average income by decade



GNI = gross national income

Source: Dolman, B and Gruen, D, 2012, 'Productivity and structural change', paper presented to the 41st Conference of Australian Economists, 10 July, Melbourne.

There is evidence that human capital positively influences the rate of introduction of new technologies. A more educated workforce has the capability to more readily identify, adapt and implement new ideas.⁹³ Increasing skills builds human capital and encourages the growth of high-productivity industries that employ highly skilled workers. Innovation-active workplaces are more productive, more profitable and more likely to train their workers.⁹⁴

Conversely, a lack of skilled people in the business or the labour market has been identified as a barrier to innovation for 30 per cent of innovation-active businesses, and 13.5 per cent of those that are not innovation-active.⁹⁵ It is of concern that the proportion of innovation-active businesses in Australia has been stagnant in recent years at around 42 per cent.

The structure of the Australian economy may pose challenges for productivity. We have a high proportion of SMEs, which face higher barriers to innovation and accordingly innovate and collaborate less often. This may create a reduced likelihood of productivity growth from SME innovation, although it has a relatively more significant payoff. However, while Australian SMEs are on average less likely to innovate than large Australian businesses and spend much less on intangible capital such as R&D, they are middle ranked relative to their SME counterparts in other OECD (Organisation for Economic Co-operation and Development) countries. By contrast, large Australian businesses rank almost last in the OECD on innovation.⁹⁶

There is sometimes a lack of clarity about what workforce development means. As *Australian workforce futures* highlighted, workforce development is not just about training. It is also about integrating business strategy, work organisation and job design. The workplace needs to be designed to ensure that:

- existing skills are used effectively
- skills are constantly developed on and off the job
- skills, techniques and improvements are shared across the organisation along with new techniques and other improvements.

Workforce development means quite different things to different stakeholders. The box below presents a picture of what workforce development means for enterprises, RTOs, regions and nationally.

What does workforce development mean to different stakeholders?

In an enterprise that takes a workforce development approach ... business strategy drives organisational development as well as skills development and use. Training is relevant to business needs and work is organised to maximise employee capabilities. Strategies to achieve change include job redesign, increased employee participation and autonomy, mentoring and applying new learning.

In an RTO or higher education provider that adopts a workforce development approach ... teachers and trainers strive to meet the needs of employers by developing a tailored curriculum and delivering it flexibly, often onsite, to match patterns of work. Partnerships are formed with employers, and the provider shares expertise with employers to facilitate adoption of new processes and technologies.

In a region or industry that takes a workforce development approach ... clusters of employers work in partnership to meet local skills and workforce needs and match supply with demand. This includes partnerships with industry associations, local councils, training providers, Job Services Australia providers and other partners.

A national approach to workforce development will be in place when ... we have a national partnership approach to skills development and utilisation. It is widely recognised that skills are important but insufficient on their own to improve productivity. Skills are aligned with innovation and industry policy and other areas that support productivity and social inclusion.

2

2.2 Enterprise workforce development

Workforce development at the enterprise level entails recognising that people in workplaces are our most important natural resource.

The main site of workforce development is the workplace, which is predominantly the responsibility of employers, their employees and unions. Government has a more limited role in influencing change at the workplace level, and has traditionally found it easier to make supply-side changes to the training system. This is a key challenge in developing a national workforce development strategy.

Better use of employee skills is a core component of workforce development in enterprises. Employers can foster the 'use of better skills' by providing training in a context that offers opportunities for newly acquired skills to be used through changes to work organisation, or they can make 'better use of existing skills' by unlocking skills and talents through changes to work organisation.⁹⁷ Ability, motivation and opportunity are all required to improve skills utilisation.⁹⁸

The business benefits of improved skills utilisation include improvements to profitability, innovation, productivity and retention. There is also a positive impact on employee motivation and job satisfaction.⁹⁹ Improving skills utilisation is among the management practices most likely to be found in high-performing workplaces.¹⁰⁰

Case Study: Dexion—Growing and valuing employee skills

Dexion, an Australian and New Zealand company with operations throughout the Middle East and the Asia-Pacific region, provides commercial workspaces, integrated systems and industrial storage solutions. The company has experienced the benefits of skills utilisation first-hand.

Dexion has successfully introduced workplace strategies to better harness the skills, expertise and ideas of its employees, 50 per cent of whom have been with the company for more than 10 years. The company has strengthened mentoring and is giving employees more autonomy—to boost information sharing and employee participation in decision making.

Dexion is also encouraging multi-skilling of its workforce. It creates opportunities for employees to work in different units and to participate in on-the-job training and external courses. The company is finding that job rotation helps to ensure operational needs are met while staff take up opportunities to learn and apply new skills.

Training initiatives, tailored to suit the needs of the business, have been introduced so more staff are able to gain, for example, technical, time-management, administrative, quality analysis and problem-solving skills.

The company has found that the training has provided staff with the skills and confidence to suggest improvements to how tasks are performed and how safety procedures are designed and implemented. There has also been an increase in productivity, a decrease in workplace injuries and a reduction in absenteeism and wastage rates. Trust between workers and management has improved, with a tangible change from a 'them versus us' approach to a greater synergy between company and individual needs. With the company increasingly recognising workers' skills, employees have reported improvements in their motivation and job satisfaction.

Source: Skills Australia, 2012, *Better use of skills, better outcomes: Australian case studies*, Commonwealth of Australia.

Unfortunately, there is little evidence about the extent to which skills utilisation strategies are adopted in Australian workplaces. What we do know is that around 37 per cent of employers report that existing skills are underutilised.¹⁰¹ An analysis of four different measures of employee reporting of skills underutilisation concluded that the rate is between 10 and 15 per cent.¹⁰²

To increase the take-up of skills utilisation strategies in enterprises, we need to better understand what drives better use of skills in Australia, and the critical success factors that make it work. Skills utilisation strategies are triggered by both external drivers such as skills shortages and internal drivers such as leadership.

Best practice skills utilisation strategies rely on five critical success factors:

- ✔ senior leaders and front-line managers are supportive
- ✔ the organisational culture creates a supportive environment where ideas can be shared
- ✔ open communication is encouraged and consultation occurs
- ✔ strategies are underpinned by good human resource practices (such as flexible working arrangements)
- ✔ employees feel motivated and valued.

While integrated programs and funding are available through the Australian Government's Skills Connect program to promote and facilitate enterprise workforce development, maximising skills utilisation in enterprises requires a step-change in the approach to workforce development. In achieving this it is important that the tools in place are fit for purpose. This includes considering what tools and frameworks are available to support workforce development and how well they are working.

To help facilitate this, AWPA plans to lead a capability review examining such questions as:

- What are the skills, tools and training available to industry to support workforce development, particularly for SMEs and regions?
- What business improvement tools are available and how well do they support workforce development?
- What is the current capacity and capability of industry, what is best practice, and where are the gaps?
- What is good practice brokerage to support workforce development?
- What is government capability and capacity—programs, promotion, policies, practices and agencies that support workforce development—and how effective are they?
- How effective are industry workforce development plans and are they used by industry?
- What is international best practice? What does a model workforce development plan look like?

The review will help highlight good practice examples of skills utilisation and workforce development that can be shared.

One of the cultural challenges that we face in Australia as a liberal market economy is that we are seeking to achieve change in employer behaviour on issues that many other countries would respond to through regulation. Here, considering international activity can provide insight into good practice.

European workplace initiatives—Scotland and Finland

Scotland: People, Performance and Productivity Tool (P3)

The Scottish government, in partnership with Investors in People has developed the People, Performance and Productivity (P3) tool. This free tool can be used by employers of any size and sector to identify areas which can drive performance and productivity and also increase job satisfaction and employee wellbeing. It focuses on leadership and people management, employee engagement, employee autonomy, skills development, management of learning, equality, diversity and a healthy organisation. The tool provides employers with tailored and practical advice, signposting for further assistance and examples of how others have successfully tackled similar challenges.

Finland: Workplace Development Program

Between 1996 and 2010, the Finnish Government funded more than 1,800 workplace development projects in businesses and the public sector through its Workplace Development Program (TYKES). The projects lasted one to three years on average and aimed to encourage long-term cooperation between management and staff. Workplaces participating in the program were able to design their own project goals and implementation strategies. The most common project aims were to improve work processes, forms of work organisation, working methods, supervisory work and human resource management. In many participating workplaces development groups were formed to assist with project implementation and ensure that staff benefited.

TYKES-supported projects show 'some' or 'clear' improvements in productivity, team-based working, cooperative workplace relations and opportunities for skill development in some 80 per cent of firms involved.

Sources: Alasoni, T, Ramstad, E and Rouhainen, N, 2005, *The Finnish Workplace Development Programme as an expanding activity. Results, challenges, opportunities*, Tykes Report no. 47; <http://www.iipscotland.co.uk/products-and-services/strategy-development/identifying-where-you-are-now/p3-tool/>; www.scotland.gov.uk/Topics/Education/skills-strategy/making-skills-work/utilisation.

Building on these examples, we can consider how Australia's NWDF can be used to encourage better use of skills through changes to work organisation.

The objectives of the fund currently focus largely on training outcomes. It would be useful to more explicitly address supply (training) and demand (skills utilisation) issues through one funding mechanism, within an overarching objective of improving innovation and productivity. This could be achieved by the Australian Government amending the NWDF guidelines so that training proposals are also eligible for non-delivery funding to support skills utilisation, for example through changes to work organisation and job design. AWPA will propose revisions to the fund's guidelines to achieve this objective.

Recommendation 2.1

That the Australian Government adjust the National Workforce Development Fund guidelines to allow other workforce development activities that maximise the use of employee skills and complement training delivery.

2.3 Workforce development in small and medium enterprises

SMEs are much less likely to have the support of human resources or other corporate services than many larger organisations. During our consultations, stakeholders raised this issue and suggested measures to address it, such as the provision of funding for assistance with workforce development activities. These could include job redesign, human resource policies, training plans and workforce planning tools.¹⁰³ SMEs will be an important consideration in the capability review outlined in section 2.2.

It is important to recognise that workforce development initiatives in SMEs are a valuable aspect of industry development. In *Australian workforce futures* we argued for the dissolution of silos that place industry development and education and training in different government agencies.¹⁰⁴ We continue to support further efforts to align government programs to facilitate workforce development. Opportunities exist for a much closer alignment between government programs such as Enterprise Connect and Skills Connect, including the NWDF.

A single entry point model, which provides employers with access to workforce planning services together with supported opportunities to work with others in partnership to solve complex skills problems, is a worthwhile approach requiring further consideration

DEEWR submission to AWPA, 2012

Enterprise Connect offers business reviews and tailored advisory service grants that assist enterprises to make changes to improve their performance. Skills Connect provides enterprises with access to government assistance, funding and resources targeted at workforce development and planning. As members of the Skills Connect National Network, Enterprise Connect and Skills Connect have a well-established relationship and have previously worked together to develop a range of workforce development tools for specific sectors.

While Enterprise Connect focuses on capability within a firm, there are opportunities to work with clients on issues relating to skills and workforce development and planning, not only to provide a better, more holistic service to clients but also to more effectively harness the skills and resources available within a business. This opportunity could be further supported through a joint funding arrangement between Enterprise Connect and Skills Connect that would see the two agencies able to develop a range of service offerings focused on supporting workforce development and planning improvements.

For instance, applications to the NWDF for skilling new or existing workers could be embedded into the tailored advisory service grants offered by Enterprise Connect. Streamlining these government program processes has the potential to offer SMEs effective avenues for implementing innovative workforce development plans. Consideration might also be given to the development of a framework for service provision which includes key performance indicators for the programs and offering and funding skill sets in workforce development to assist with the capability development of service providers.

Recommendation 2.2

That the Australian Government explore joint funding between Enterprise Connect and Skills Connect (including the National Workforce Development Fund) to achieve greater alignment of business improvement and skills programs to support workforce development for small and medium enterprises.

Enterprise Connect offers comprehensive, confidential advice and support to eligible Australian small and medium businesses to help them transform and reach their full potential.¹⁰⁵ Since 2008, Enterprise Connect has approved over 6,800 business reviews, provided almost 3,500 Tailored Advisory Service Grants to implement recommendations from the business review and assisted almost 19,000 firms through a range of core and complementary services.

On average, Enterprise Connect clients implement five business review recommendations, with 96 per cent of clients implementing at least one.¹⁰⁶ Enterprise Connect clients have reported average labour productivity growth of 5 per cent in the financial year following a business review, an increase in productivity or efficiency and an increase in profits.¹⁰⁷ The work of Enterprise Connect has helped to build lasting capability and address gaps for large numbers of SMEs in the manufacturing, resources and clean technology, defence, tourism and creative industries sectors where there are opportunities for value-add.

SMEs are prominent in labour-intensive industries such as retail, hospitality and construction. AWPA believes that Enterprise Connect services could be extended to provide greater support for organisations in these industries. AWPA intends to report on the retail sector in 2013, and this report could consider ways in which Enterprise Connect services could effectively be extended to the sector.

Recommendation 2.3

That the Australian Government fund the extension of Enterprise Connect services to labour-intensive industries such as retail and hospitality so that business improvement services are more readily available to small and medium enterprises in these industries.

2.4 Leadership and management for productivity and innovation

Management's ability to develop and tap into the skills of workers is a strong influence on organisational and workplace innovation. Workplaces with effective leaders and management capabilities are generally more efficient and more innovative, and are rewarded with greater financial returns.¹⁰⁸

Our modelling shows increased demand for Managers across all scenarios and we would want them to have the skills to foster innovation within organisations. Yet while many Australian firms perform well in operations management and the production of goods and services, there is evidence that fewer make the connection with developing their human capital to add value to their organisations.¹⁰⁹ As one submission noted:

Management and leadership practices are critical to the relationship between innovation and labour productivity ... Leadership influences the culture of the workplace, the way work is organised and subsequently productivity growth. A renewed focus on the improvements accruing from advanced people management practices is most welcome.

Australian Industry Group submission

Australian enterprises and industry stand to improve productivity if effective management practices are incorporated into their business operations.¹¹⁰

Leadership in the high-performing workplace

Research by the Society of Knowledge Economics based on 78 participating workplaces and 5,561 employee respondents in the service sector found that high-performing workplaces had profit margins almost three times higher than low-performing workplaces. Furthermore, for every \$1 of investment made, high-performing workplaces generated 12 cents more in revenue than low-performing workplaces. High-performing workplaces were also found to be more innovative, offer a better employee experience, and have higher levels of fairness.

Leaders in high-performing workplaces were found to:

- ✓ spend more time and effort managing their people than leaders in low-performing workplaces (29.3 per cent higher)
- ✓ have clear values and 'practice what they preach' (25.7 per cent higher)
- ✓ give employees opportunities to lead work assignments and activities (22.9 per cent higher)
- ✓ encourage employee development and learning (21.1 per cent higher)
- ✓ welcome criticism and feedback as learning opportunities (20.4 per cent higher)
- ✓ give more recognition and feedback to employees than leaders in low-performing workplaces (19 per cent higher)
- ✓ foster involvement and cooperation among employees (18 per cent higher)
- ✓ have a clear vision and goals for the future (17.9 per cent higher)
- ✓ be innovative and encourage employees to think about problems in new ways (16.5 per cent higher).

Source: Boedker, C, et al., 2011, *Leadership, culture and management practices of high performing workplaces in Australia: The high performing workplaces index*, Society of Knowledge Economics, Sydney.

In workplaces that are effectively using the skills of their workforce, leaders and managers support strategies to optimise skills utilisation and also, crucially, to identify the need for such strategies. This gives them a key role in improving skills use.¹¹¹

Higher skilled managers also lead to better management practices in workplaces. A research study on Australian management practices¹¹² and research conducted by the London School of Economics¹¹³ showed that 'the skills and education levels of managers and their workforce are key determinants of management practices'.¹¹⁴

The availability of skilled people, both in management and among the workforce in general, is another important difference between better managed firms and the rest. 84 per cent of managers in the highest scoring firms were educated to degree level or higher, as were a quarter of the non-management work force.

Among the lowest scoring firms, by contrast, only 53 per cent of managers and only 5 per cent of the wider workforce had degrees.¹¹⁵

It is the first tier of management who 'have the greatest influence on the way people behave and their attitude to their organisation'.¹¹⁶ Front-line managers are usually promoted from the ranks of employees and are unlikely to have formal management education, yet are now expected to 'carry out activities which were traditionally within the remit of [human resources] such as coaching, performance appraisal, involvement and communication, and discipline and grievances'.¹¹⁷

Front-line managers also carry out recruitment and selection duties in conjunction with human resource practitioners and implement and enact human resource policies in the workplace. Research conducted by the University of Bath found that the relationship between employees and front-line managers is a key determinant in levels of job satisfaction, commitment and loyalty to the organisation. Stronger relationships are associated with higher levels of performance on the job, which can 'boost the bottom line'.¹¹⁸

The human resource management function also plays an important role as the link between employees and the organisation as a whole (including front-line and upper-level management).

*A comprehensive human resource system provides managers with a framework and tools to achieve higher levels of staff performance and employee satisfaction on a sustainable basis.*¹¹⁹

Our consultations with stakeholders indicated actions that could be undertaken by firms and providers to address some of the gaps that persist in the leadership and management spheres:

- Identify skill sets in leadership and management in order to inculcate information on how to effectively manage an enterprise skills base.¹²⁰
- Encourage and support universities and VET providers to partner with business organisations to develop management skills and practices.¹²¹

Currently, there is very little robust data on management performance in enterprises. One of the biggest challenges Australia faces in identifying where managers may be able to improve their performance, is understanding the scale of the issue.

Improving leadership and management capability will be an essential part of Australia's performance in the Asian century. The recent Asian century white paper noted the importance of language and cultural skills, but also the development of new business models to effectively engage in Asia. This will require not only the specific skills required for engagement in Asia, but also the development of broader leadership and management capability so that organisational business models and design are fit for purpose.

Despite the importance of effective leadership and management, the last comprehensive review of Australia's leadership and management environment was the 1995 Karpin report, *Enterprising nation*. Although many of the challenges addressed in the report—globalisation, the need for improved productivity and the effects of technological improvements—remain relevant, there has been relatively little policy attention to this issue since 1995.

The Australian Government's response to the 28 Karpin recommendations has been limited. Although market forces have encouraged industry to implement many of the recommendations, in the absence of national focus and leadership many of these efforts have been fragmented.¹²²

We believe it is timely for another comprehensive review of leadership and management to take place, to ensure that Australia has the management capability to meet our potential. The review should include consideration of how best to upskill leaders and managers in Australian businesses to support effective skills utilisation. It should also consider what skills are required to fully capitalise on the opportunities in the Asian century, drawing from existing work by Asialink, and recommend how development of these skills can be embedded in our education and training system.

Recommendation 2.4

That the Australian Government commission a comprehensive review of leadership and management, including front-line management.

The Centre for Workplace Leadership

In recognition of the importance of high-calibre leadership and management, the Australian Government has established an independent Centre for Workplace Leadership to teach and develop good leadership and management practice, lead the public policy debate and democratise access to leadership training across all levels of organisations and in collaboration with industry.¹²³

We see an opportunity for the new centre to collaborate with existing networks in workforce development and human resource management to address gaps in developing leadership and management practices. A partnership approach will engender a national discussion and improved understanding of how productivity can be enhanced through effective management and leadership and the application of workforce development principles.

The centre will be required to develop and implement measures to connect with SMEs, and indeed, given the importance of SMEs to the Australian economy, we believe that assisting them should be a major focus of the centre's work. SMEs may not have the money or time to spend on expensive management training to build their capacity in this area, but with around 85 per cent of total small business employment taking place in labour-intensive services sectors,¹²⁴ the need is plain. The leadership and management capabilities of these organisations have important implications for how they will compete in the global economy.¹²⁵ The establishment of a broader workplace survey covering management, leadership and other workplace issues (similar to the Australian Workplace and Industrial Relations Survey, last conducted in 1995), would also be helpful in addressing the current data gap on employer–employee dynamics within Australian workplaces.¹²⁶

2.5 Employer ownership of skills

Increased employer ownership of skills is required to lift the training effort. Many employers invest significantly in training, and training and investment levels are higher when informal learning is taken into account.¹²⁷ However, more enterprises need to see skills development and utilisation as an investment rather than a cost.

Strategies for skills and workforce development need to highlight and recommend investment so that Industry seeks to better understand skills issues and value skills and workforce development as a business tool to get the most benefit and productivity gains from their businesses.

Skills Tasmania submission to AWWPA, 2012

In encouraging investment in skills and workforce development, it is important to recognise that employers are very diverse. This is true in terms of size, industry sector, market segment and product market strategies. But it is also true in relation to their motivations to train (or not) and how they make their business decisions.

The process of making decisions about training is complex and influenced by a wide variety of factors.¹²⁸ Training can be motivated by both internal and external push factors and pull factors (see Table 4). Push factors compel employers to provide training, whereas pull factors encourage employers to train.¹²⁹ This highlights the importance of aligning education and training offerings with employers' diverse interests and motivations.

Table 4 Employers' reasons for providing training

	Push factors	Pull factors
External	Occupational licences Equipment licences Safety standards	Incentive payments and grants Skills shortages
Internal	Contractual requirements Industrial agreements	Productivity improvements Quality assurance Introduction of new technology Workplace change Managing risk Employer of choice

Source: Cully, M, 2005, *Employer provided training: Findings from case studies —At a glance*, NCVER, Adelaide.

An employer's decisions about investment in training depend largely on its particular interests, values and commitments.¹³⁰ Training relevance and flexible delivery have more influence on decision making than who provides the training or whether it is accredited.¹³¹ This means that aligning tertiary education with employer interests is important, as well as meeting the needs of individual learners. Partnerships between enterprises and providers may be the most useful method of encouraging employer investment in training. Improving employers' perceptions of the value of training are important to increasing the level of investment.¹³²

Employer involvement, participation and investment is more likely in an industry-led training system, leading to skilling opportunities for new workers and the re-skilling and up-skilling of existing workers ... This is especially so where employers are able to determine the relevance and outcomes of training in everyday workplace situations.

Minerals Council of Australia submission to AWPA, 2012

Research shows that cost is only a relatively small factor (identified by 3.7 per cent of survey respondents) for those employers not using nationally recognised training. By far the biggest reason is whether the training is perceived as unsuitable or not relevant to the organisation (63.7 per cent), followed by a view that employees are already adequately trained (20.1 per cent).¹³³ Where employers were dissatisfied with nationally recognised training, it was most likely because they felt the training was of a poor quality or low standard (39.9 per cent) or that relevant skills were not taught (34.9 per cent).¹³⁴

International research shows that where employers' own training is recognised and integrated into the qualification structure, financial incentives have a great impact on employer involvement.¹³⁵ Stakeholders have suggested that employer demand for training could be increased by recognising employers as the 'key driver of effective, quality training'.¹³⁶

The Department of Education, Employment and Workplace Relations (DEEWR) encourages investment by enterprises in innovative workforce practices in partnership with schools, Job Services Australia (JSA) providers and other stakeholders. The objectives are to improve industry take-up of unemployed job seekers, create positive labour market opportunities for student job seekers, and support existing workers. This is underpinned by employer engagement strategies.

DEEWR would ... welcome the inclusion of an employer engagement component in the new National Workforce Development Strategy ... This would recognise the importance of enterprise level change and innovation in meeting Australia's future workforce and skills needs.

DEEWR submission to AWP, 2012

AWP can facilitate a process of streamlining and coordinating the work that is currently going on in the area of employer engagement, beginning with the capability review outlined in section 2.2. Our role could also be extended to include working with other agencies to assist in streamlining workforce and skills programs.

Industry co-contribution to training

Australia in recent years has witnessed an increasing focus on employer-led training through a number of federal programs that include co-contribution. Submissions in response to our discussion paper largely supported this aspect of a demand-led system, although the affordability for SMEs was raised as an issue.

Some stakeholders called for an expansion of the NWDF to provide a greater opportunity for upskilling those in the workforce with a non-school qualification.

The effectiveness of the Fund and an analysis of its funding allocations needs to be carefully monitored and the fund expanded given the extent of the lack of qualifications in the existing workforce.

Australian Industry Group submission to AWP, 2012

Such an expansion of the fund would need to be based on evidence that demand for funding allocations is in excess of supply. This is an issue that AWP will continue to monitor.

While the fund was supported in submissions, a number of stakeholders expressed concern that the co-contribution model that applies to small businesses is prohibitive to their participation.

The co-contribution model of the NWDF has restricted uptake in many sectors, particularly those comprising very small enterprises ... If a contribution must be a component of programs like the NWDF the cost to enterprises needs to be appreciably lower.

Food, Fibre and Timber Industries Training Council (WA) Inc. submission to AWP, 2012

Program data for the NWDF in 2011–12 shows that around 56 per cent of learner enrolments are from businesses with fewer than 100 employees. Demand from small businesses (fewer than 20 employees) is strongest, at around 30 per cent.¹³⁷ This data does not support a need to decrease the co-investment level from small businesses at this point, and suggests that the fund is playing an important role in supporting training in small businesses. We note, however, that no data is available on uptake by micro businesses (fewer than five employees).

We also received some feedback about the eligibility requirements of the fund, with one stakeholder suggesting that funding should be accessible for Certificate II qualifications for existing employers.

SSA argues that there is a need to have AQF level 2 qualifications supported in the NWDF to ensure the ongoing supply of skill to the national economy, to develop sustainable career pathways and to increase participation in the workforce.

Service Skills Australia submission to AWP, 2012

We recognise that there are particular industries where a Certificate II is a key entry point, such as parts of the service sector, meat industry, food industry and agriculture. These industries play an important role in providing some people with their first entry into the labour market, and a second chance for many others. The existing fund arrangements allow for a Certificate II to be offered to new workers. The guidelines state that the Minister may provide waivers to eligibility criteria, including waiver if an application includes a Certificate II for existing workers. A business case outlining the reasons for seeking the waiver is required as part of the application process. In view of the existing entitlement for individuals under COAG to a Certificate III qualification and the current arrangements for new workers under the fund, an applicant would need to produce a good business case.

2.6 Regional workforce development clusters

There are many examples of industry and regional policy initiatives that seek to address local workforce development challenges. In *Skills for prosperity*, we cited the scores of initiatives—at both national and state levels—directed at preparation for job placement and improved connections between employers and learners.¹³⁸ These initiatives encompass a wide range of activities, policies and programs, yet a common success factor in recent years has been recognition of the need to look beyond the development of the individual worker and consider local, organisational and strategic systems.¹³⁹ Preferred models of regional and industry-specific workforce development involve working in partnership, and acknowledging the importance of wider challenges such as transport, health, housing and education as well as the question of skills development.¹⁴⁰

For a national workforce development strategy to be effective and successful over the longer-term there must be strong and collaborative engagement at the state and regional levels. It is critical that industry and regional communities are at the heart of their skills and workforce development solutions.

Skills Queensland submission to AWP, 2012

Workforce development initiatives in industries or regions are often aimed at one of three goals:

- ✓ boosting workforce participation in areas that offer limited job opportunities or have undergone structural adjustment
- ✓ attracting and retaining workers in areas where there is strong employment growth, and/or
- ✓ developing high-technology clusters, often in metropolitan or outer urban areas or regional cities.¹⁴¹

Case study: IT cluster in Ballarat

IBM and the University of Ballarat's School of Science, Information Technology and Engineering have formed a partnership with support from the Victorian Government. One of the key offerings arising out of the partnership is the Bachelor of Information Technology (Professional Practice) undergraduate program, where students work with IBM during their four-year degree, receiving valuable industry experience.

This collaboration makes a significant contribution to the local economy. In a recent report, Ballarat was ranked as number one in Australia for IT services delivery. The report's author attributed Ballarat's success to 'the city's historical investment in information technology and its cooperative approach to government and industry'.

'In terms of rankings for government support and current and future investments, it (Ballarat) is considerably ahead of competing locations. The integration between industry, the university and local and state government sets a clear industry benchmark.'

University of Ballarat Technology Park (UBTP) Director Malcolm Vallance said, 'The reason why I think we have done so well is that we have a couple of universities in the city, so business investors are able to access skilled labour.'

The Mayor of Ballarat noted the importance of the IT industry for the city: 'There are over 1,000 people working at UBTP and the sector's output is A\$300 million. It is a significant part of the economy.'

Andrew Stevens, Managing Director, IBM Australia and New Zealand said, 'We are delighted to see that the strong history of collaboration between IBM Australia, the University of Ballarat as well as the local and Victorian state governments has resulted in such a clear industry benchmark for Australia. We continue to invest in local skills, employment and innovation to produce the best service and delivery outcomes for our clients.'

Source: Invest Victoria, www.invest.vic.gov.au/20120823-Victorian-city-Ballarat-ranked-number-one-in-Australia-for-IT-services-delivery, accessed 28 December 2012.

A challenge to effective regional workforce development in Australia is the multitude of funding sources in existence. This creates difficulties in developing a coordinated approach. There is also the risk of inefficiencies and doubling up of services. This raises the question:

Is there the capacity to use money already allocated for skills and other relevant programs (e.g. social, regional and industry/innovation development) more effectively to improve current approaches to workforce development?¹⁴²

The Australian Government has introduced programs that aim to increase collaboration and coordination of stakeholders at the local level, including increasing awareness of existing programs. Local Employment Coordinators were introduced in 20 priority areas in response to the global financial crisis, with funding extended to 2013. They work in collaboration with employers, community groups and all levels of government to help drive local solutions to local labour market needs. A total of \$45.2 million has been allocated over two years, including a \$20 million flexible funding pool, to continue activities that support these vulnerable areas. However, to date there has been no funding allocated to this program beyond mid-2013.¹⁴³

In addition, Regional Education, Skills and Jobs Coordinators are engaged across the 46 regional development areas that cover non-metropolitan Australia. Their role is to coordinate and connect education, skills and jobs activities. Regional Education, Skills and Jobs Plans have been developed to improve coordination and integration of existing programs and services. Each plan reflects community priorities and includes goals and local strategies to achieve the community's objectives, based on four key themes: early childhood education and care; school education; tertiary education and training; and jobs, skills and workforce development. The plans aim to coordinate services and programs available from DEEWR and other government and community programs.¹⁴⁴ These activities are funded to 2014.¹⁴⁵

Local Employment Coordinators and Regional Education, Skills and Job Coordinators are part of the broader Skills Connect National Network offering regional expertise through strategic partnerships between government and industry. Network members also include Industry Skills Councils, Education and Training Advisors and Enterprise Connect Business Advisors. Members aim to offer a holistic service to employers by assisting business owners and managers from all industry sectors with their workforce planning and development questions.

These initiatives are yet to be evaluated; however, AWPA sees merit in ensuring a more coordinated approach at the local level. It will be important to consider the outcomes of these programs. If they have been successful in fostering better coordination at the local level, consideration should be given to making a longer term, more sustainable commitment to these initiatives.

We see value in conducting a pilot in one or more jurisdictions in a natural labour market to study:

- all of the jobs, vacancies and sources of labour supply in that locality
- all of the funds that flow into the locality (directly or indirectly) for workforce development
- the potential to reconfigure the flow of funds so they are pooled and to explore whether they could be better packaged to improve approaches to skills development and use.¹⁴⁶

As noted in stakeholder submissions, career development advice could also be included.

Such strategies could include Commonwealth incentives for regions, and pilot programs for the pooling of resources between Commonwealth and industry and community stakeholders to achieve regional workforce development outcomes. These initiatives should be supported by appropriate career advice.

Western Australian Department of Training and Workforce Development submission to AWPA, 2012

Each region is unique and needs local, specific solutions. We believe that regions need to be empowered to introduce their own tailored solutions to local problems. Initiatives that are already being driven at the local level should be supported and provided with the flexibility needed to make the most effective use of resources. This could be achieved through Australian governments co-funding proposals that support local employment and workforce development at the local level.

Recommendation 2.5

That Australian governments co-fund proposals that support regional employment and workforce development partnerships to increase the efficiency of resource allocation at the local level.

A large, stylized graphic of a fan or a cluster of leaves, composed of several triangular segments radiating from a central point, rendered in a dark red color against a lighter red background.

3

Building labour force
participation

3 Building labour force participation

In this chapter AWP argues that it is imperative to increase Australia's labour force participation to enable our economy to grow and thrive, and we outline the compelling data that supports the case.

To meet industry needs we have recommended an annual expansion in qualification completions of at least 3 per cent per annum. This expansion will also make a major contribution to lifting labour force participation rates and meeting the projected demand for labour. Australian Bureau of Statistics (ABS) data show that persons aged 25–64 holding a qualification are nearly 20 per cent more likely to be in the labour force than those without qualifications. If this relationship continues to hold, the increase in the proportion of the population with qualifications projected in our main scenarios will support a lift in labour force participation close to 69 per cent.

Achieving the projected expansion in qualifications requires greater participation in tertiary education from less advantaged sectors of the population. If we can achieve this then in meeting the needs of industry we will also improve workforce outcomes for the less advantaged and social inclusion.

People who are unable to benefit from the relationships forged in the workplace often feel isolated and even estranged. This isolation so often associated with prolonged unemployment can then lead directly to a loss of social skills. Rejection from the labour market can also result in a loss of self-esteem, so that these people then feel unable, and are sometimes even reluctant, to participate fully in the life of their communities.¹⁴⁷

As their skill levels increase, existing workers with lower skills can move up, allowing others to get a foothold on the employment ladder.¹⁴⁸

However, the successful engagement in tertiary education and in work by the less advantaged requires more than simply expanding the availability of places in tertiary education. They will need a range of supplementary support in both education and entry to work.

For all groups who struggle to participate in the workforce, there are individual consequences for those who engage in less paid work. Such people pay the penalty in the long run with less or no retirement savings, making them more likely to be financially dependent as they age.¹⁴⁹ In our discussion paper we considered issues for participation across a variety of groups,¹⁵⁰ and expect that the strategies we put forward in this chapter will benefit those groups. With these issues in mind, we propose that efforts should be focused on widening participation for the following groups and argue that good returns can be expected for targeted measures to address the barriers they face:

- ✔ people with low skills, focusing on upskilling
- ✔ groups of men and women who can benefit from opportunities in non-traditional occupations
- ✔ older workers, focusing on retention in the workforce
- ✔ people experiencing disadvantage, focusing on helping them to access learning and support that will build pathways to sustainable work.

We acknowledge that many of the potential solutions to increasing labour force participation, such as better access to affordable child care and reform to income support, are not within the remit of AWPA. The state of the economy and job opportunities also influence participation rates. However, our modelling projects that increasing qualifications supports an increase in participation consistent with meeting the projected demand for labour. The primary focus of the discussion is on upskilling, and ensuring appropriate support for increasing the skills and qualifications of disadvantaged learners. To achieve this, we argue, will require holistic solutions that coordinate support across a number of human services.

3.1 Enhancing economic growth through improved labour force participation

In *Australian workforce futures* we recommended that COAG adopt a labour force participation goal of 69 per cent by 2025 to increase labour force engagement and promote social inclusion.¹⁵¹

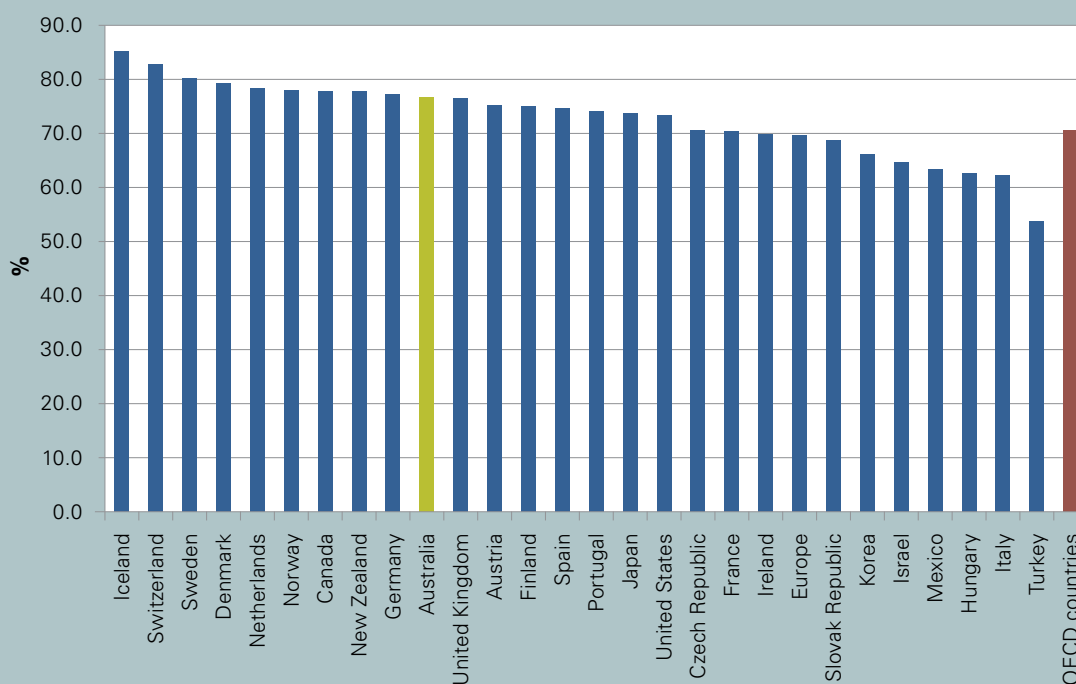
In *Skills for prosperity* we referred to increasing participation as the challenge of the decade and noted that the underutilisation of labour and low labour force participation are holding back growth.

Australia's participation rate in October 2012 stood at around one-half of a percentage point less than the average over the previous five years. The ageing of the population is a key factor. Population ageing is estimated to have reduced the participation rate by about one percentage point since the mid-2000s, although this has been more than balanced by the increasing rate of participation of women and the longer participation of older workers since the mid-2000s.¹⁵²

International comparisons

On the international stage, Australia's participation rate compares favourably to the OECD average, but we lag behind Canada, New Zealand and much of northern Europe.

Figure 4 OECD participation rates 2011, people aged 15–64



Source: OECD, February 2013, Online OECD employment data base, selected countries.

While Australia continues to be ranked 10th among OECD countries in terms of overall participation (the same as reported in *Australian Workforce futures*), we only rank 25th in terms of the participation rate of Australian woman aged 25 to 34 years (at 73.8 per cent). This is above the OECD average of 70.1 per cent, but is considerably lower than some countries with labour forces comparable to our own, including Canada (81.3 per cent) and the UK (77.8 per cent).

The labour force participation of men aged 25 to 64 years has changed little over the past decade, rising from 85.2 per cent in 2000 to 86.6 per cent in 2011, with Australia ranking 15th among OECD countries (up from 25th in 2008). The change in Australia's ranking since *Australian Workforce futures* is attributable primarily to the decline in male participation experienced by countries undergoing recession post-global financial crisis, including Ireland, Italy, Greece and the US. While the participation of Australian men aged 25 to 64 years is slightly above the OECD average of 86.3 per cent, we continue to have lower participation than countries such as New Zealand (89.8 per cent) and Germany (88.2 per cent).

In contrast, the participation rate of older Australians (55 to 64 years) has increased by nearly 15 percentage points since 2000, rising from 48.3 per cent (18th among OECD countries and below the OECD average) to 63.2 per cent in 2011 (12th among OECD countries and well above the OECD average).

The rise in workforce participation among older age groups is a notable trend across almost all developed economies. However, the increase in participation of 55- to 64-year-olds in Australia over the past decade is nearly double that of the OECD average, which rose by only 7.7 percentage points since 2000. Once again, New Zealand continues to have a significantly higher participation rate for this group, at 76.2 per cent (up from 59.7 per cent in 2000), while Switzerland, Japan, the US and Germany also report high rates of older worker participation.

These international comparisons highlight that there is room for improvement in lifting our participation if Australia is to keep pace in the global economy.

In our economic modelling, the projected increase in labour supply consistent with meeting the demand for labour in the three higher growth scenarios would require a participation rate of between 67 and 69 per cent by 2025 and migration at an average of between 187,000 and 235,000 per annum. If we do not reach our goal of 69 per cent, we will require a higher level of migration, or alternatively risk labour and skill shortages and a diminished level of GDP (in the Long Boom, for example).¹⁵³

Furthermore, while migrants play an important role in Australia's economy and communities, we believe that upskilling the domestic population to increase labour force participation needs to be the priority.

In a joint statement issued on 4 December 2012, the Australian Council of Social Service, the Business Council of Australia and the Australian Council of Trade Unions noted that in some industries and regions employers are already struggling to find enough people to fill critical job vacancies, while at the same time there are many Australians unable to find work or who would like to work more hours. They argue that to build prosperity and share it widely, it is vital that we bring into the workforce those people who have been left out or are being churned between work and unemployment.¹⁵⁴

AWPA strongly agrees with this statement and we continue to support the goal of a workforce participation rate of 69 per cent. We also believe that the Australian Government should adopt this aspirational goal.

This recommended increase in participation is required by—and can be expected to be sustained by—the projected increase in the demand for labour.

Recommendation 3.1

That the Australian Government adopt an aspirational goal of 69 per cent labour force participation by 2025 to meet the projected demand for labour, noting that this will be supported by raising skill levels within the workforce and community.

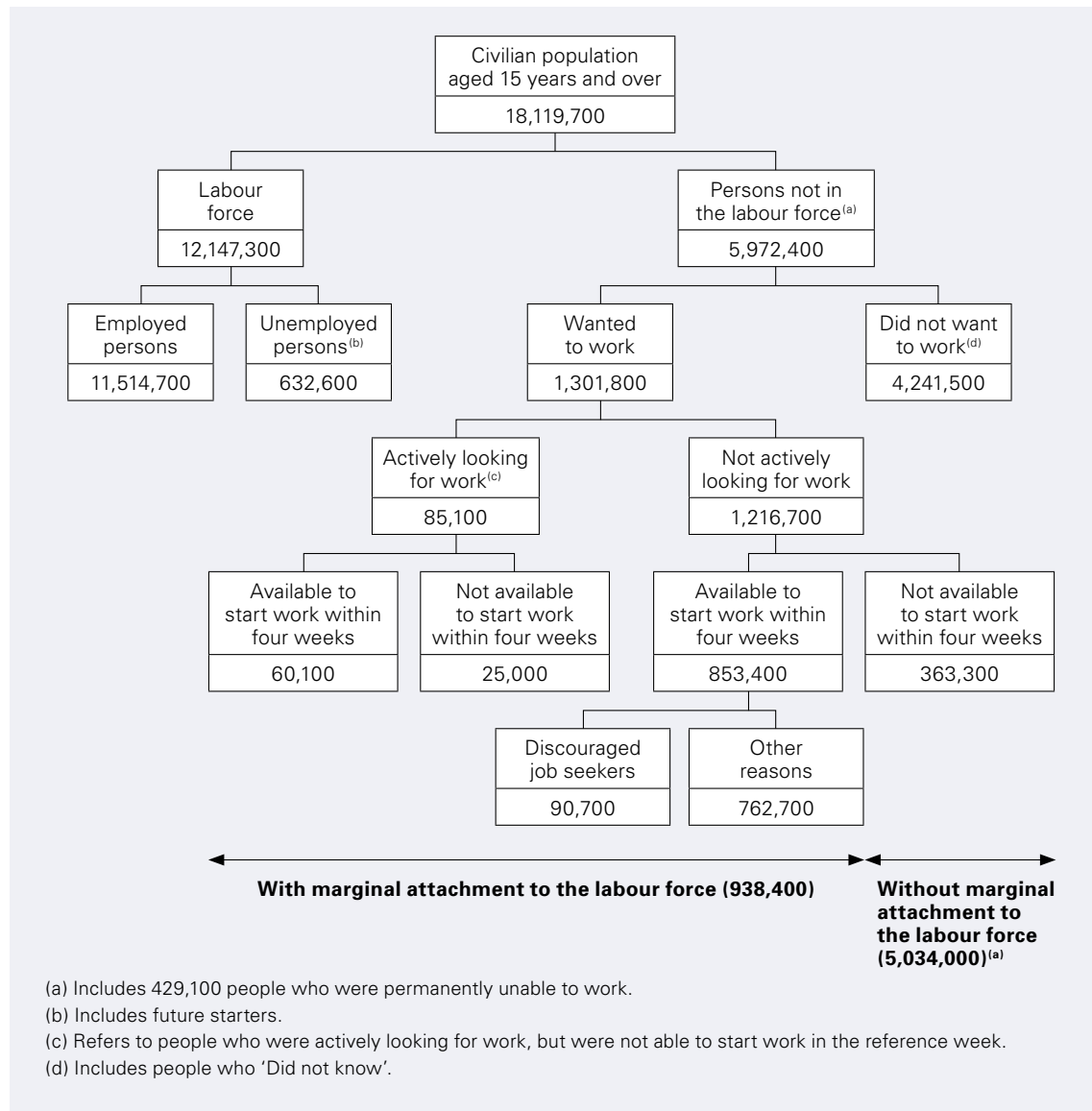
Since both the employed and the unemployed are regarded as participating in the labour force, raising participation entails targeting those who are not in the labour force. In today's figures, this means adding 10 per cent of approximately six million people or around 600,000 people.

It is staggering that as at September 2011 ... in addition to the 630 000 who were unemployed, there were more than 900 000 available to start work within four weeks who are not counted in the labour force. Many of these are studying or caring for children but can still participate should there be a job suitable for them.

Australian Chamber of Commerce and Industry submission to AWPA, 2012

Many people have a marginal attachment to the labour force (see Figure 5) and might participate if the barriers to their participation could be addressed.

Figure 5 Persons not in the labour force



Source: ABS, *Persons not in the labour force, Australia*, September 2011, cat. no. 6220.0, ABS, Canberra, p. 3.

Of those not in the labour force, 1.3 million want to work. They are not a homogeneous group and include:

- approximately 215,000 women who are not in the labour force because of caring responsibilities for family members.¹⁵⁵ They want to work but are not actively looking for work. Preferring to look after children and the cost of child care are cited as the main reasons¹⁵⁶
- more than 56,000 males who are marginally attached to the labour force and who cite short-term or long-term health condition or disability as their main reason for not actively looking for work¹⁵⁷
- around 91,000 people who are discouraged job seekers and are not actively looking for work, 56 per cent of whom are aged 55 years or over. Being 'considered too old by employers' is a significant reason for this group not to seek to enter or re-enter the labour force.¹⁵⁸

Another important aspect of participation is retaining those who are currently in the labour force. This involves two groups in particular: older workers and women seeking to return to existing jobs after maternity leave who may need real options for part-time work. For example, industry can assist the participation of women returners by providing more flexible, family-friendly working hours and arrangements such as staggered start and finishing times, compressed work hours (for example, working five days in four) or shared job roles (for example, between parents).¹⁵⁹ Similar arrangements may also be of benefit to other primary carers.

3.2 Upskilling people with low skills

Of the 2.9 million Australians who do not have a post-school qualification, 153,000 are currently unemployed and 1.1 million are not in the labour force.¹⁶⁰ This demonstrates the importance of educational attainment for employment outcomes.

The highest school level reached has a significant impact on labour force status. People who have completed Year 10 or lower and have no post-school qualifications have the poorest labour market outcomes of all school leavers, with only 61.6 per cent participating in the labour force in May 2012.

However, achieving a post-school qualification makes a marked difference in labour market outcomes for people who have completed Year 10 or lower. Table 5 also demonstrates that the highest school level reached has a much lower impact on participation when a non-school qualification has also been achieved.

Table 5 Labour force participation of persons aged 15–64 with and without non-school qualifications, Australia, 2012

Non-school qualifications	In labour force (%)			
	Year 10	Year 11	Year 12	Total
With non-school qualification	84.1	86.3	87.2	86.5
Without non-school qualification	61.6	69.8	76.1	68.9

Source: Unpublished data from ABS, *Education and work, Australia, 2012*, cat. no. 6227.0, ABS, Canberra.

Those who have left school at Year 8 or 9 are particularly vulnerable to low participation. In 2003, the participation rate for those who left school at Year 9 was 51 per cent and for those who left school at Year 8 it was 41 per cent.¹⁶¹ Older migrants could be in such a group. By contrast, people with a degree or higher qualification have the highest rates of labour force participation.

While there is a strong correlation between qualifications and labour force participation for both men and women, there are differences between the genders. Men and women with a degree or higher qualification are the most likely cohorts to participate in the labour force. The participation of women with a degree or higher qualification is only slightly lower than the participation of men in the same educational cohort.¹⁶²

For women who hold a post-school qualification at a level lower than a degree, participation rates are around 10 per cent lower than for those with degrees. Participation of women with no post-school qualifications has been improving at a similar rate to that of women in other educational cohorts. For men, having a post-school qualification has similar outcomes to having a degree, but for men with lower skills, the impact is more significant.¹⁶³

The package of recommendations in this chapter is expected to significantly benefit those with low skill levels who are vulnerable to structural shifts in the economy and downturns. Improving LLN will also affect workforce participation and contribute to the realisation of targets to increase qualification levels. The issue of improving LLN is addressed in detail in Chapter 4.

3.3 Participation of men and women

Australia's workforce is highly gender segregated. In our discussion paper, we looked at the decline in male workforce participation over the past 40 years and noted that less than three-quarters of men are now participating in the labour force (71.9 per cent).¹⁶⁴ While the fall in male participation has been particularly severe for mature-aged men, there has also been a considerable decline in participation of prime-aged men (aged 35–54 years). In 1966, 96.2 per cent of 35- to 54-year-old males were in work. By 2003, employment for this cohort had dropped to 87.4 per cent. This figure is still around 87 per cent, with almost 400,000 men aged 35–54 not in employment.¹⁶⁵ Arguably the decline in employment participation by this group is particularly significant in terms of the actual numbers of men involved, and because of the long-term impact to their future work potential and their social relations.

We also noted in the discussion paper that despite the growth in female participation in the workforce since the 1970s, there remains a large gap between male participation and female participation (at 58.7 per cent). The paper considered the impact of the loss of traditionally 'masculine' low-skilled jobs associated with production and the rise in participation of women with no post-school qualifications, related to the growth of jobs in the female-dominated services of retail, hospitality and community care.¹⁶⁶

*The post-industrial economy is indifferent to brawn. A service and information economy rewards precisely the opposite qualities—the ones that can't be easily replaced by a machine.*¹⁶⁷

Structural adjustment is a key factor in change for both men and women.¹⁶⁸ The issue of structural adjustment is addressed in Chapter 1.

Gender segregation within industries has a marked impact on the patterns of participation of both men and women. Women account for almost 80 per cent of the workforce in Health Care and Social Assistance and men comprise the vast majority of workers in Construction (88 per cent), Mining (86 per cent), and Electricity, Gas, Water and Waste Services (79 per cent).¹⁶⁹

For both men and women, increased participation in non-traditional occupations in growth industries can offer promising opportunities.

Encouraging people into non-traditional occupations

Our modelling shows the strongest employment growth in industries that have historically had a predominantly female workforce. Other industries such as Mining have a preponderance of male workers. This suggests it is important to ensure that jobs are less gender-segregated than they are at present. While some of the factors influencing the decline in male participation are demographic, policies to assist men who wish to take up careers in so-called 'pink collar' areas

can be expected to make a substantial contribution to male employment rates over the coming years. In the United States, there is evidence of strong employment growth for men in some traditionally female occupations, reflecting changing roles for men in society, and especially in the home.¹⁷⁰ At the same time, however, men may experience 'role strain' in occupations that have traditionally been regarded as 'women's work'.¹⁷¹

The Australian Human Rights Commission is currently working to identify mechanisms and strategies for improving women's representation and leadership in the male-dominated industries of Mining, Utilities and Construction.¹⁷²

There are also industry-led initiatives underway to increase the representation of women in non-traditional roles. The Australian Women in Resources Alliance, a national initiative managed by the Australian Mines and Metals Association, seeks to facilitate women's participation in the workforce for the resource, allied and construction sectors with support from the Australian Government.¹⁷³ The National Association of Women in Operations was established with the objective of increasing the number of talented women in operations roles in the manufacturing industry, now and in the pipeline.¹⁷⁴

Initiatives to support industry in increasing the participation of men and women in occupations they may not have entered traditionally can help to achieve the objectives of increasing participation in areas of expected future employment growth and addressing skills shortages. This benefits individuals by widening their choices of employment and employers by providing a more flexible and broader pool of potential workers. We believe that a co-funding model to support industry initiatives in breaking down gender segregation in Australian industries would have a positive impact, particularly where there are skills shortages. We therefore recommend that the Australian Government support industry-led initiatives in this area. Support should be available where there is more than 70 per cent of either gender working in a particular industry.

Subject to positive results from an evaluation of the program's impact over a proposed three-year funding period, funding for such initiatives should be extended for a further three years so that it continues to act as a catalyst to break down gender segmentation.

Recommendation 3.2

That the Australian Government provide co-contribution funding over three years for industry-led initiatives to support employment for men and women in non-traditional occupations in skills shortage areas.

Other gender factors in participation

Men with disability

The number of men on the Disability Support Pension (DSP) rose substantially in the early 1990s, associated with the recession and policy changes surrounding eligibility requirements.¹⁷⁵ By 2010, nearly half a million men (417,900) reported that they were not in the labour force due to their own long-term health condition or disability (377,700) or short-term illness or injury (40,200). Nearly three-quarters of them (73 per cent) were aged 45 years or older.¹⁷⁶ DSP recipients currently number 818,850, of whom 446,600 are male (54.5 per cent).¹⁷⁷

This is a group who could benefit substantially from the additional supports we recommend for disadvantaged job seekers in section 3.5.

In addition, we note that since 1 July 2012, all DSP recipients have been able to work up to 30 hours a week without their payment being suspended or cancelled, subject to an income test.¹⁷⁸ As mentioned earlier, the income support system is not within AWPAs remit. However, we do observe that the introduction of continuing eligibility for the DSP, for example through a registration scheme, could help more male DSP recipients and, more broadly, all people with disability into work. They could then have confidence that if their health deteriorated so that they became unable to work, or to work as many hours, they would not have to requalify for the DSP but would be able to move back onto it quickly and seamlessly.

Women with young children

Barriers to women returning to work after having children are complex and interrelated. Lifting the workforce participation of this group will require a coordinated response across governments and portfolios.

This group could also benefit from the measures we propose in relation to disadvantaged job seekers in section 3.5.

However, we note and support a number of broader initiatives that are seeking to remove barriers to their access to and return to work, including:

- ✓ the Jobs, Education and Training Child Care Fee Assistance program under the 2012–13 Budget, which provides an extra \$225.6 million over four years in child care assistance to help unemployed parents, particularly single parents, to enter the workforce¹⁷⁹
- ✓ promotion of awareness of the flexible work arrangements that can be requested by employees under the Fair Work Act. A good example of what can be done to inform parents is provided by the Parental Toolkit developed by the Minerals Council of Australia¹⁸⁰
- ✓ the provision of onsite child care such as that offered by CSL Limited in Melbourne¹⁸¹
- ✓ strategies to boost the confidence of women returners who may have been out of the workforce for some time. The model of 'returnships',¹⁸² where organisations create opportunities for short-term paid positions designed for professionals who have been out of the workforce for several years, has been benefiting both individuals and organisations in the United States and the United Kingdom.¹⁸³

3.4 Removing barriers for older workers

Across the scenarios, the biggest certainty for Australia is population ageing. This underscores the importance of raising the labour force participation of older Australians to help redress the impacts of the retirement of an ageing workforce on tax receipts and the increase in health costs associated with a larger proportion of older people.¹⁸⁴

Since the publication of the first intergenerational report highlighting this issue a decade ago, industry peak bodies and associations have developed a good understanding of the implications. There is less information about the level of understanding at the enterprise level. Nevertheless, the loss of corporate knowledge with the retirement of older people can be a serious risk for organisations.

This issue has a gender dimension. Older women are likely to continue to participate in the workforce because their superannuation situation may be more precarious than that of men. For example, in 2011 the median superannuation holding for women was \$18,489 compared to \$31,252 for men.¹⁸⁵ As already noted, men are more likely to be on the DSP than women—although women are more likely to be carers (women constituted two-thirds of all carers in 2009).¹⁸⁶ Older workers of both genders need flexibility in work arrangements, including options for working part-time to deal with their broader caring responsibilities.

In 2011, Australia ranked 12th among OECD countries for labour force participation of people aged 55–64, with a rate of 63.2 per cent (up from 61.1 per cent in 2009). Iceland was the highest performer at 84.1 per cent, and New Zealand was second with 76.2 per cent.¹⁸⁷ As eligibility for the age pension rises to age 67 (by mid-2023), alternatives to remaining in the workforce will be reduced.¹⁸⁸

Higher qualifications are associated with increased labour market participation after the age of 64, as shown in Table 6.

Table 6 Labour force participation rate, by age and post-school qualification

Age range	No post-school qualification	VET qualification	Higher education qualification	Total
65 and over	9%	17%	26%	13%
40–64	67%	83%	87%	77%
15–39	65%	87%	88%	76%
Total	54%	76%	83%	66%

Source: ABS, 2011 Census of Population and Housing. 'Level of education inadequately described', 'level of education not stated', and 'labour force status not stated' excluded.

Those older workers who are lower skilled are vulnerable to unemployment. At August 2012, 43.1 per cent of female job seekers and 41 per cent of male long-term job seekers were aged over 40.¹⁸⁹ However, the Australian Human Rights Commission has found evidence of age-based barriers to the recruitment of older people, making the plight of unemployed older people particularly stark.¹⁹⁰ Some older workers are not eligible for assistance from JSA due to partner income, aged pension status or self-funded retirement.¹⁹¹ It is important that they have access to new forms of career development advice throughout life (see the discussion on career development advice in Chapter 5).

We note proposals from the Australian Human Rights Commission addressing barriers to workforce participation for older people in relation to workers' compensation, income protection, licensing requirements and superannuation age limits,¹⁹² and we support removal of the remaining barriers to participation for older people. Clearly the commission has an important role in continuing to monitor these issues.

Australia needs to come up with innovative ways to showcase the benefits of employing, training or retraining our maturing workforce.

My Mentor Pty Ltd submission to AWPA, 2012

Initiatives such as the Australian Government's Experience+ program have been designed to address the needs of older workers seeking to gain employment. Experience+ provides professional career advice and resumé appraisal for mature-aged workers (45 and over) and a job seeker assistance program including IT skills and job-specific training. It also supports a Corporate Champions program to assist employers with good practice in the employment and retention of mature-aged workers and a Jobs Bonus program which provides \$10 million over four years for employers offering ongoing employment opportunities for mature-aged workers.¹⁹³

AWPA also welcomes the provision of an additional \$35.0 million over four years to the NWDF to improve the skills of workers aged 50 years and over consistent with their workforce development needs.¹⁹⁴

There is an imperative to turn around attitudes to older workers and provide supports to remove the barriers to their accessing and retaining employment. Programs such as Experience+ are a step in the right direction. However, they are relatively small when compared to the scale of the challenge and the potential benefits of increasing labour force participation of older Australians. These programs are new and it is important that their success is evaluated. We recommend that the Australian Government monitor the success of these initiatives and consider the potential for significant upscaling over time.

Recommendation 3.3

That the Australian Government consider significantly upscaling successful approaches to help older workers (45+) to re-enter the workforce, such as Experience+.

3

3.5 People experiencing disadvantage

Disadvantaged learners in VET

Disadvantage is as diverse as people's life circumstances. The National VET Equity Advisory Council notes that:

People who typically experience disadvantage in VET may have low LLN skills; they may have a disability or be experiencing mental health issues; they may live in remote communities or communities with concentrations of people with low socio-economic backgrounds; they may have low incomes and access to few services; they may be offenders in juvenile justice centres or correctional facilities; they may be women in low paid jobs with family responsibilities; they may be Indigenous Australians or new arrivals and refugees.¹⁹⁵

The council goes on to make a case for change in VET to achieve better access, participation and outcomes for disadvantaged learners.

When we unpack the data and consider how groups of learners who experience disadvantage fare, we find:

- ✔ under-representation of some groups of disadvantaged learners in the VET student population compared with their Australian population share
- ✔ over-representation in certain types of programs (for example, lower qualification levels)
- ✔ poorer completion rates than other learners
- ✔ poorer outcomes than other learners.

We can see that reform is already in progress in higher education and schools, with their focus on achieving outcomes for those from low socio-economic backgrounds, clear targets and accountabilities, and money to drive these reforms. In VET such progress is not yet apparent and VET remains the weak link in the chain of education reforms, creating barriers to pathways for learners.¹⁹⁶

For those who experience one or a number of disadvantages in accessing and participating in VET and gaining sustainable employment, it is important to recognise their more complex needs by providing the resources for long-term wraparound support. Apart from LLN issues, lower skilled people may have additional barriers to participating in learning and work such as health, transport, homelessness and mental health issues.

There is no shortage of examples of holistic wraparound approaches, such as the Learner Support Services program in South Australia, which is based on personalised case management and collaboration between service providers.¹⁹⁷ However, initiatives such as this require systematic investment to achieve long-term outcomes. As the National VET Equity Advisory Council points out, in higher education significant steps have been made in this regard under the Higher Education Participation and Partnerships Program which supports the Australian Government's ambition that 20 per cent of domestic undergraduate students will be from low socioeconomic backgrounds by 2020.

The program provides funding to assist approved universities to undertake activities and implement strategies that improve access to undergraduate courses for people from low socioeconomic backgrounds, as well as improving the retention and completion rates of those students.¹⁹⁸ As the program only commenced in 2010, it is too early to see data about the impact on completions.

However, interim data on commencements and participation seems to indicate that the program is already achieving positive outcomes—for example, in 2011 commencing students from low socioeconomic backgrounds increased by 3.3 per cent compared to the same period in 2010.

In *Skills for prosperity* we highlighted the need for funding, especially in regional centres and in areas of entrenched social disadvantage, for increased support to improve learning and employment outcomes for highly disadvantaged clients. However, reduced budgets and new funding models for VET are proving to be particularly concerning for less advantaged students.

New South Wales and Victoria, for example, have both reduced their contributions to concessions:

- From January 2013, NSW student concession fees will increase from \$53 to \$100 per course.¹⁹⁹
- In Victoria concession fees are no longer at the low flat rate for the year as in the past but set at 20 per cent of the fee per unit of competency. For longer and more expensive courses the concession fee paid could increase considerably; concession rates are not available for a diploma or advanced diploma courses, where income-contingent loans provided under VET FEE-HELP is available.²⁰⁰

The adult and community education (ACE) sector can also play a significant role in assisting disadvantaged learners to re-engage with learning. The National VET Equity Advisory Council noted that the sector:

offers largely unacknowledged access to foundation skills and provides pathways into further learning, community participation and work.

The Council believes this sector is an undervalued community asset which, with an increased profile and coherent policy and funding approaches, could further support the VET system's performance in relation to improving access, participation and outcomes for people with low skills. In the Council's view, the time has come to: further acknowledge the role of ACE in building social inclusion; place it in the context of the current COAG agenda; clarify its policy, funding and regulatory frameworks; and formalise recognition of its pathways into further learning.²⁰¹



In South Australia the ACE program was reviewed in 2010 and has been refocused so that it works more collaboratively with the VET sector to improve learner pathways. The reforms include investment in extensive professional development and support for the sector. However, the underlying policy of the reformed program acknowledges the importance of retaining the unique qualities of the ACE sector that are successful in engaging hard-to-reach learners.²⁰²

Australia needs to ensure that sufficient investment occurs so that those without post-school qualifications, who are most likely to be disadvantaged in the labour market, have the opportunity to improve their skills. We therefore recommend that the Australian Government provide additional investment to increase wraparound services and training delivery strategies for disadvantaged learners and job seekers. The evidence from current programs suggests that these services can pay for themselves through improvements in course completion rates and job outcomes. Furthermore, unless these wraparound services are made available, a significant proportion of Australians will continue to be excluded from learning or work.

Recommendation 3.4

That the Australian Government provide additional funding to cover the expansion of training delivery strategies and wraparound services to support the less advantaged to participate in training and employment.

3

Disadvantaged job seekers

We have argued the case for investment in wraparound, holistic services for disadvantaged learners to increase their workforce participation by building pathways through learning to work. The complex needs of the people being assisted must be recognised and catered for in the design of these services, and they must be provided over an extended time as the recipients build confidence, job readiness and skills.

Among younger people, those who are 'not in employment, education or training' (NEET) are of particular concern. They represent a particularly vulnerable group, at risk of long-term detachment from the labour market.²⁰³ In terms of numbers, averaged over the 12-month period to December 2012 there were 60,000 young people (15–19 years) unemployed and not in full-time education. Averaged over the same 12-month period, a further 73,600 were not in the labour force and not in full-time education. These two groups accounted for 9 per cent of the 15- to 19- year-old-population. While this figure has fluctuated over the last 10 years, the current rate is consistent with levels 10 years ago (8.9 per cent).²⁰⁴ Some groups are over-represented in NEET: Indigenous people (twice as likely), people from areas with the lowest quintile of socioeconomic disadvantage (50 per cent more likely), and early school leavers who had not completed any further study (three times more likely).

Many people who lack basic skills, especially adults, learn better through their experience and the mentoring they receive while they are engaged in work. However, workplace mentoring and work experience are, by definition, denied to people who are unemployed. The ideal situation for many job seekers is a combination of employment and training. Yet many employers are unwilling to employ people who have a long history out of employment and who have not achieved basic employability skills. For these job seekers some basic education and training before they start working is inevitable.²⁰⁵ Sustained employment outcomes are more likely to be achieved when local employers are involved in the design of the program, and especially when there is a promise of a job on successful completion of the initial training.²⁰⁶



Although capacity for service innovation and customer responsiveness was improved when JSA was set up, organisations involved in providing services to disadvantaged job seekers have reported that:

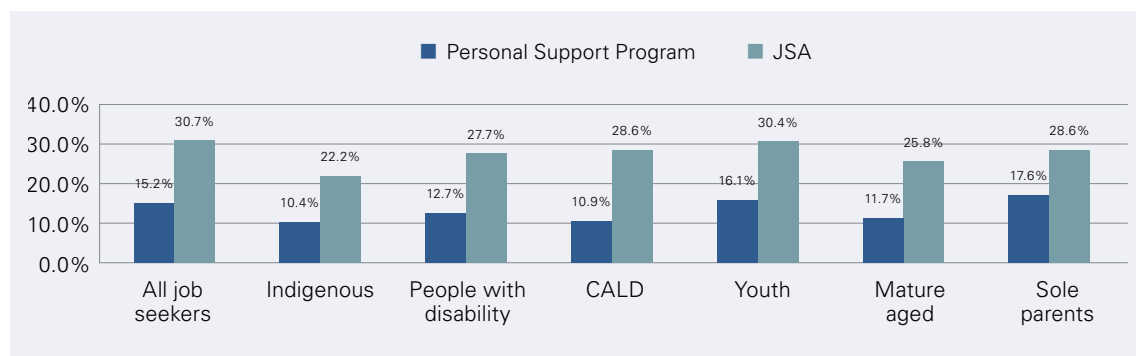
There is still too much focus on short term employment outcomes and too little on long term intensive work with jobseekers and employers to ensure that jobs are sustained ... incentives embedded in the fee structure and performance management system of JSA still appear to drive providers towards a standardised model of service. The system does not fully engage and respond to the needs of its end consumers—jobseekers and employers.²⁰⁷

Similar information has come from Jobs Australia and the National Employment Services Association. In their joint statement, the Australian Council of Social Service, Business Council of Australia and Australian Council of Trade Unions argue:

The employment services system is not consistently providing the kind of pre-employment preparation or post-recruitment back up needed to support successful placements ... Employment service providers need better resources and incentives to work intensively with unemployed people, employers and other services (including training organisations) to overcome entrenched barriers to employment.²⁰⁸

Recent figures show that 30.7 per cent of job seekers participating in JSA stream 4 (the most disadvantaged job seekers) in the previous 12 months were employed three months after exiting the service. This compares to 48.7 per cent of job seekers in streams 1–4 reported as employed after three months following assistance.²⁰⁹ This result demonstrates the impact of multiple disadvantage. Nevertheless, results for JSA stream 4 clients show a significant improvement on results for the previous Personal Support Program (see Figure 6), despite the fact that the early years of JSA coincided with the global financial crisis. Around 28,000 job seekers who were on the Personal Support Program waiting list have been assisted to find work and break the cycle of economic and social exclusion. There are no waiting lists under JSA.

Figure 6 Employment outcome rates for stream 4—Personal Support Program versus Job Services Australia



CALD = culturally and linguistically diverse

Source: Based on DEEWR, 2012, *Labour market assistance outcomes—June 2012*, DEEWR, Canberra.

Under JSA, more resources are allocated to the most disadvantaged job seekers in the higher level streams. The JSA system also allows providers to be more innovative in the way they manage a job seeker's barriers than the Personal Support Program. The Employment Pathway Fund provides flexibility to help job seekers with non-vocational barriers such as emergency accommodation for a person who is homeless. Overall satisfaction with JSA is high for stream 3 and stream 4 job seekers, with 78 per cent of stream 3 and 77 per cent of stream 4 satisfied or very satisfied with JSA services.²¹⁰

A key area to be addressed is the better alignment of incentives and key performance indicators between job services providers and training providers to:

- ✓ recognise the time it takes to build job readiness among disadvantaged cohorts
- ✓ link training directly to job outcomes, through strong employer engagement linked with training designed to engage and retain disadvantaged job seekers²¹¹
- ✓ provide long-term support to enable job seekers to retain and progress in employment.

A public consultation process to help the government review existing services and determine the delivery of employment services beyond July 2015 was launched in late 2012. Key themes of the consultation process include working in partnership with employers and stronger partnerships with other services.

Post-placement support is funded for a period of six months, and outcome payments are currently available for 13-week and 26-week outcomes. However, the 2012 final report of the Advisory Panel on Employment Services Administration and Accountability found that '26 weeks is too short a timeframe to know if an employment outcome is sustainable'.²¹² AWPAs support recommendation 5.1 of the report—'That the definition of sustainable employment outcomes be extended to 52 weeks'²¹³—while recognising that additional funding will be required to support this measure, which should also incorporate career advancement interventions post-placement.

The Senate Education, Employment and Workplace Relations References Committee inquiry on the administration and purchasing of Disability Employment Services in Australia found that 'the current lack of quality incentives in the performance framework is resulting in some job seekers being placed in positions that do not align with their ambitions or interests'. The committee argued for longer term outcomes 'as a way to promote quality'.²¹⁴ While the committee was referring specifically to Disability Employment Services, other disadvantaged job seekers have a similar need to become established in sustainable employment and this requires support over a longer timeframe.

Recommendation 3.5

That the Australian Government, in the review of employment services beyond 2015, revise the contract to achieve the following:

- ✓ **better alignment of incentives for Job Services Australia to work with registered training organisations to provide training for disadvantaged job seekers that is more flexible, fit for purpose and more closely linked to job outcomes**
- ✓ **additional funding for a revised schedule of payments to provide incentives for the provision of coaching and other support services for the most disadvantaged job seekers through the first 52 weeks of a job placement including directed career advancement interventions post-placement.**

A large, stylized leaf graphic composed of several triangular segments radiating from a central point, rendered in a dark red color against a lighter red background.

4

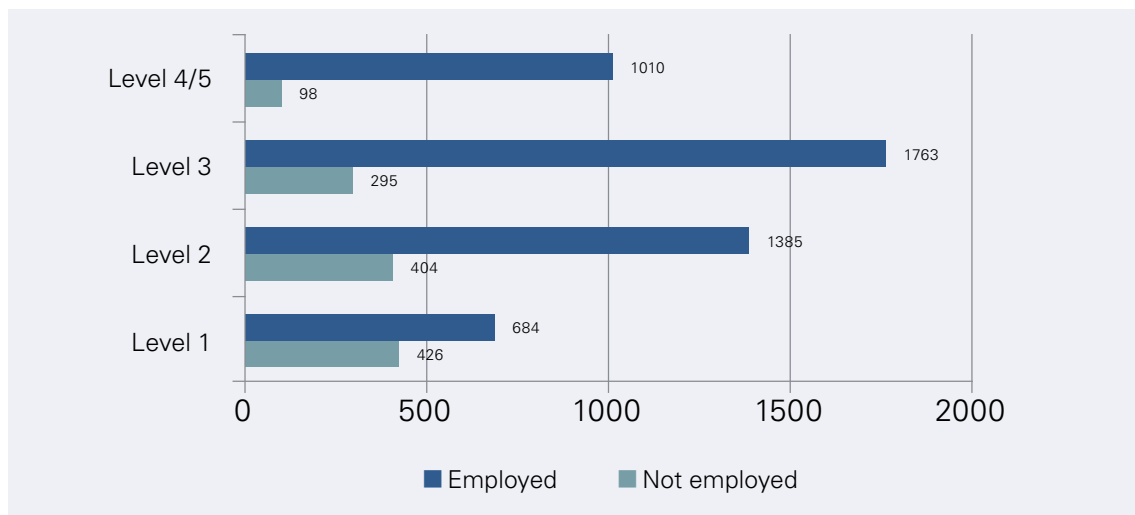
Equipping Australians with
better language, literacy and
numeracy skills

4 Equipping Australians with better language, literacy and numeracy skills

Our modelling shows increased industry demand for higher level skills, but around 50 per cent of Australians have been assessed as having literacy and/or numeracy scores below the minimum standard needed to manage the complex demands of life and work.²¹⁵

People with literacy and numeracy needs find it difficult, if not impossible, to obtain higher level qualifications and are far more likely to not be employed, that is to be unemployed or not in the labour force. The relationship with employment is stark. Figure 7 shows the number of people aged 25–59 by their assessed level of numeracy in an international study of literacy and life skills. For those at the highest level of numeracy 90 per cent are employed. For those at the lowest level a little over 60 per cent are employed.

Figure 7 Persons employed and not employed by numeracy level, persons aged 25–59, Australia, 2006 ('000s)



Note: 'Not employed' includes persons who are unemployed and persons not in the labour force. The data is from the Adult Literacy and Life Skills Survey in which tests were administered to persons aged 15–74 and included prose and document literacy and numeracy. Level III is regarded by the survey developers as 'the minimum required for individuals to meet the complex demands of everyday life and work in the emerging knowledge-based economy'. The results were fairly similar across the areas tested with slightly lower scores on numeracy.

Source: ABS, 2006 (reissue), *Adult Literacy and Life Skills Survey, summary results, Australia*, cat. no. 4228.0, ABS, Canberra.

This is not a marginal issue. It is a huge challenge for mainstream Australia and it is constraining individual opportunity and economic development. Building LLN skills will be critical to increasing labour force participation and transitioning to a more productive, higher skilled economy.

People require LLN support for differing reasons. Key cohorts include older workers looking to update or refresh their skills, people from culturally and linguistically diverse backgrounds, and people who left secondary school early and are looking to upskill.

Without a holistic strategy to address LLN skills, Australia is at risk of neglecting vulnerable cohorts and being unable to achieve the skills deepening that the economy needs. Australia's approach must build on existing, successful initiatives and promote increased collaboration between the VET sector, ACE providers and Australian governments. In this chapter AWPAs advocates:

- strengthening the implementation of the National Foundation Skills Strategy for Adults
- increasing Australia's capacity to monitor adult LLN skill levels
- improving access to information on the services available for both job seekers and existing workers
- facilitating effective delivery of LLN training in the VET sector, including ACE providers.

4.1 Where are we now?

The 2006 Adult Literacy and Life Skills Survey (ALLS) found that:

- approximately 7.0 million adult Australians (46 per cent) had literacy scores below level III
- approximately 7.9 million adult Australians (53 per cent) had numeracy scores below level III.²¹⁶

Level III on the five-point ALLS scale is defined as the minimum level required to function fully in society and work. People at level I and level II may have basic literacy and numeracy skills but will struggle to apply them to, or not have skills adequate for, more complex and varied situations.²¹⁷

As outlined in Chapter 1, our modelling signals that Australia will require a significant growth in qualifications, particularly higher level qualifications. Without a marked improvement in LLN in Australia this will be unachievable.

In *Australian workforce futures* we also identified LLN as a key issue underpinning labour participation and productivity. The data in Figure 7 confirms the very strong relationship between literacy and having a job. It can also affect the level of productivity of those in jobs.

Inadequate levels of LLN are seen as a major barrier, not only to skills development but general productivity.

Food, Fibre and Timber Industries Training Council (WA) Inc. submission to AWPAs, 2012

The impact of low LLN skills on the Australian economy cannot be underestimated and industry is seriously concerned.

Manufacturing Skills Australia submission to AWPAs, 2012

In *Australian workforce futures* we recommended that the Australian Government:

- develop and implement a national adult LLN strategy to drive significant improvement
- significantly upscale successful approaches such as the Workplace English Language and Literacy Program (WELL) for existing workers, and the Language, Literacy and Numeracy Program for job seekers.²¹⁸

Since then the Australian Government has:

- ✓ provided additional funding for both programs in the 2010–11 Budget as part of the Foundation Skills Package²¹⁹
- ✓ funded an additional \$20 million over four years for an extra 13,000 WELL training places in the 2011–12 Budget, as part of the Building Australia's Future Workforce package²²⁰
- ✓ participated in the development of the National Foundation Skills Strategy for Adults
- ✓ introduced the LLN Practitioner Scholarships Program to help address skill shortages in the adult LLN workforce.²²¹

Despite these initiatives, during our consultations with stakeholders and in submissions, many raised inadequate LLN skills as a key challenge for Australian enterprises. Some submissions also specifically cited numeracy as an area requiring further attention.²²²

Skills development is needed in numeracy skills. They are the poor cousin of LLN.

Manufacturing Skills Australia submission to AWPA, 2012

The school system plays a vital role in teaching LLN to young people and ensuring that students are able to participate fully in society and progress to further study or employment.

However, according to the results of the 2011 Trends in International Mathematics and Science Study (TIMSS) and the Progress in International Reading Literacy Study (PIRLS), Australia's progress in both areas has flatlined over the past few decades.²²³ The TIMSS measured the performance of Year 4 and Year 8 students from 50 countries in mathematics and science. Australia ranked 18th in maths and 12th in science for the Year 4 cohort and 12th in maths and 13th in science for the Year 8 cohort. The PIRLS measured the performance of Year 4 students in 45 countries in reading. Australia ranked 27th, with approximately 25 per cent of Australian students not meeting the minimum acceptable standard of proficiency.²²⁴

These results cannot be considered in isolation. There are many complex and interrelated factors that can impact on school students' performance in the test including the construction of the test and whether the students have been taught a comparable level of knowledge and skills.²²⁵

However, according to the results of the OECD's 2009 Program for International Student Assessment Survey, Australia has a greater range of scores than the OECD average, and the performance of Australian students from the lowest socioeconomic background is significantly below the OECD average. This can indicate a lag of up to three years of schooling. It places an unacceptable proportion of students at risk of not achieving the LLN levels they need to underpin skills development for future employment.²²⁶

These statistics highlight the scale of the challenge. As a significant proportion of people currently at school will join the workforce by 2025, the results highlight that there is room for improvement if Australia is to meet the needs of the emerging knowledge economy.

Without an urgent effort to improve LLN in Australia, we will be unable to achieve the skills deepening the Australian economy requires. As noted above, our modelling indicates that the future workforce will require significant increases in qualifications at the Certificate III level and above. In 2011, just over 56 per cent of people in the labour force had a Certificate III to postgraduate qualification.²²⁷ To match the anticipated demand in the Long Boom scenario, the proportion would need to increase to 73 per cent—an increase of 17 percentage points to 2025.

The National Foundation Skills Strategy for Adults, launched on 28 September 2012, has an aspirational target that ‘by 2022, two thirds of working age Australians will have literacy and numeracy skills at level III or above’. The benchmark for the target will be established once the results for the survey that has replaced the ALLS are released as part of the Program for International Assessment of Adult Competencies Survey (PIAAC) in 2013.²²⁸ Preliminary results of PIAAC show that:

Approximately 7.3 million (44%) Australians aged 15 to 74 years had literacy skills at Levels 1 or 2, a further 6.4 million (39%) at Level 3 and 2.7 million (17%) at Level 4/5. For the numeracy scale, approximately 8.9 million (55%) Australians were assessed at Level 1 or 2, 5.3 million (32%) at Level 3 and 2.1 million (13%) at Level 4/5.²²⁹

The next PIAAC survey is to be undertaken in 2021.

If Australian governments are to genuinely pursue this target, evaluation on a more regular basis is required to track progress. While the TIMSS and PIRLS provide a strong indication of the performance of school-aged Australians, we do not have a good understanding of how Australia is performing at a broader, adult level.

The long gap between testing means that there is limited information to assess whether LLN skills development programs and initiatives are having a positive impact. This situation provides an imperfect evidence base to inform government policy and makes us ill-prepared to respond effectively. As such, it is clear that the international survey results gained through the ALLS and PIAAC should be complemented by a timely, additional source of measurement.

NCVER has undertaken research to assess whether the performance levels of the ALLS can be mapped against the Australian Core Skills Framework (ACSF).²³⁰ The project demonstrated that the two frameworks can be aligned.

The work also suggests that there may be varying levels of complexity within each ACSF level and so there is the potential to recognise sub-levels. Differentiating performances would lead to finer and more accurate data collection against performance measures.²³¹

The implications of this work are profound. The alignment between the ACSF and ALLS frameworks indicates that a national sample survey for the assessment of literacy and numeracy levels of the adult population, based on the ACSF levels, could be developed. In the absence of more frequent international sampling, this would provide a tool to regularly monitor the supply of LLN skills in Australia. It would enable more effective tracking of progress against the Foundation Skills Strategy target.²³² Once established, the national sampling assessment could be undertaken at regular intervals to build an evidence base to inform future policy decisions.

Additional monitoring of Australia’s progress needs to be accompanied by regular reporting against the target, at Commonwealth and jurisdictional levels. This data will give a comprehensive picture of LLN as part of Australia’s skills development needs and enable more targeted policy responses to be developed.

Currently, VET teachers assess student progress against the ACSF using their professional judgment to assign a learner an ACSF level. There is no mechanism for quantitative data to be collected. Despite the fact that the VET sector captures a large amount of data on LLN student outcomes, the absence of a nationally consistent method to compare the data limits its applicability. At the RTO level, reporting could be strengthened by creating an item bank of standardised LLN test questions based on the ACSF that is made available to all VET teachers.

The National Foundation Skills Strategy for Adults will be reviewed biannually. Those reviews present an opportunity for progress to be assessed in conjunction with the strategy’s implementation. Australian governments should use it as a vehicle to establish a more

formalised and regular reporting system. Without a concentrated effort to increase the volume of evidence available about LLN, Australian governments limit their ability to respond effectively and it is likely that low LLN skills will continue to be a systemic issue.

Recommendation 4.1

That the Australian Government fund and develop a national sample survey for the assessment of literacy and numeracy levels of the adult population based on Australian Core Skills Framework levels, with a view to introducing a five-yearly assessment (commencing in 2015) to provide a mechanism to more regularly monitor and report on progress towards the National Foundation Skills Strategy for Adults 2022 target.

4.2 Raising awareness and commitment to action

It is widely acknowledged that there can be a social stigma associated with LLN skills development for adults.²³³ *Australian workforce futures* described LLN as a 'hidden problem' because many people learn to manage and hide their learning needs in this area.²³⁴

Increasing the public's understanding that a significant proportion of Australians could benefit from improving their LLN skills would help reduce the stigma and empower people to feel comfortable seeking assistance. It would also provide an opportunity to promote LLN initiatives (government and non-government) across Australia. The National Foundation Skills Strategy has an agreed priority area to 'raise awareness and commitment to action'. However, no funding or specific initiatives are linked to its implementation.²³⁵

In 2012, the Tasmanian Government launched 26TEN, a public awareness campaign for the Tasmanian Adult Literacy Network. The campaign's strategy brings together business, community and government to raise awareness about literacy, extends the range of programs and services available, and includes a television campaign and print advertising.²³⁶

AWPA endorses this approach because it is not solely aimed at the individual. Instead it frames LLN training positively and encourages a wide range of stakeholders to consider LLN skills development in a variety of contexts.

The development of a multifaceted and engaging national public awareness campaign, similar to the 26TEN initiative, would provide an opportunity to promote LLN initiatives and programs occurring in Australia. Increasing the profile of the issue would help start a national conversation about the importance of LLN skills development for both the individual and society as a whole.

Without an increased and renewed focus on the issue, existing attitudes to LLN development will remain ingrained. This will perpetuate the current situation and will not result in a good return on the additional investment and effort dedicated to LLN skills development since *Australian workforce futures*. However, the success of the awareness campaign would also be dependent on having access to information on LLN support, and having ready access to training and other forms of assistance.

Recommendation 4.2

That the Australian Government fund and develop a national public awareness campaign to promote the development of LLN skills as a mainstream issue and showcase the assistance available.

4.3 Enabling individuals to access LLN assistance and training

The Australian national strategy for VET for 2004 to 2010, *Shaping our future*, recognised that LLN has to be 'here, there and everywhere' to ensure broad literacy provision 'so that all adults can fully participate in the labour force; use literacy skills at work; participate in adult education and training and, use literacy at home and in the community'.²³⁷

The different characteristics of those needing LLN training mean that a range of engagement strategies are required to target those in need. The strategies must be fit for purpose for those in work, early school leavers, the unemployed and those outside the labour force.

The Foundation Skills Strategy provides an opportunity for all levels of government to rethink and develop innovative and collaborative strategies to raise Australia's LLN skill levels.²³⁸ As LLN engagement strategies tend to be located in sectors (schools, VET, government, adult education and employment services) they often operate in isolation, which can lead to poor coordination and even duplication of some services. This makes it difficult to navigate the information available and risks deterring people from seeking assistance.

A holistic and effective national response to the challenge of LLN skills development should be underpinned by strong links between the various programs and initiatives. Access to assistance should be available in a consistent way across the country, regardless of the location or socioeconomic status of the individual.

Mechanisms to create pathways across the sectors and better coordinate support services are needed to simplify the process of seeking information. Improved linkages between training and learning support also reflect the fact that LLN skills are 'developed over time and demonstrated on a continuum from basic to advanced skill levels'.²³⁹ This means that many learners will first engage with LLN training through short and informal courses before progressing to formal training or an accredited course.

At the national level there is no single gateway for people to access information about LLN support. The Australian Government's national referral service for language and literacy is the Reading Writing Hotline. The hotline was funded under the Adult Literacy National Project in 1994 and was staffed by part-time LLN teachers.²⁴⁰

On 1 January 2009, its funding source was rolled into state- and territory-based funding through the National Agreement for Skills and Workforce Development. Since then, the hotline has been funded through short-term grants with static annual funding of less than \$0.5 million per year. Due to increasing operating costs, its funding has declined in real terms. The hotline is now administered by the Australian Government and managed by TAFE NSW. It is staffed by customer service officers, not LLN teachers.²⁴¹

A 2012 evaluation concluded that the hotline is effective in providing impartial advice and information to individuals, provider agencies, employers and teachers. It noted that it is a 'unique and critically important service for individuals who lack the skills, confidence and capability to access information about LLN training from elsewhere' and that the service has a high level of brand awareness among the general public. An evaluation study indicates that demand for the hotline is stronger in regional areas.²⁴²

The evaluation noted that the current funding model for the hotline does not facilitate medium-term or long-term improvements and compromises its ability to deliver the service effectively.²⁴³ The model has limited capacity to provide a comprehensive national referral service. A single access information gateway for people to find information about LLN support is required. Reliance on a telephone service alone is unsatisfactory and does not reflect the critical role the internet plays in linking people with information. The evaluation recommended an extension of the hotline's aims and future activity.

The creation of a national information service underpinned by an interactive website would better link Australians to the range of LLN assistance available. This would replace the current hotline. However, due to its broad brand recognition the hotline nomenclature should be retained. A national service and website would also provide a platform to showcase LLN education and teaching resources to support adults seeking assistance who do not intend to enter a formal training program. Further, it would provide more holistic coverage as there would be scope to specifically target numeracy and other key foundation skills, for example digital literacy, which is not covered by the hotline.

Recommendation 4.3

That the Australian Government fund and develop a new, comprehensive national LLN information service underpinned by an interactive website to better link Australians with the range of LLN assistance available.

Service provision targeted to the unemployed and those not in the labour force

As already noted, there is a strong link between adult LLN levels and employment. Unpublished ALLS data shows that among Australians aged 25 to 59 years with numeracy skills at level I and level II, 38 per cent and 23 per cent were not employed, respectively. This rate drops to just under 9 per cent for those with LLN skills at level III. The data indicates that 60 per cent of all people not employed (aged 15 to 64 years) had prose literacy below level III. This equates to 288,000 people.²⁴⁴ Our scenarios indicate that this effect will intensify as Australia moves towards a more highly skilled economy.

The AMES submission on the *Future focus* discussion paper emphasised the need to ensure the shift to higher skills does not leave the low skilled and unskilled behind.

An additional challenge for migrants and refugees, particularly those with low levels of English and literacy, is the requirement for an ever increasing level of qualification for even the most basic, entry level jobs; jobs that are in decline but still needed for those waiting to get a foothold on the employment ladder.

AMES submission to AWP, 2012

To achieve this, strategies are required to specifically address the needs of people in the culturally and linguistically diverse cohort who will often require additional English language support (beyond initial settlement English training) to assist them to actively engage in employment and training programs.²⁴⁵

The initial settlement support is provided in the Adult Migrant English Program. It provides settlement-focused English language training to eligible humanitarian entrants and migrants. Under the program, those assessed as not having functional English are provided with 510 hours of training using a national curriculum approved by the Australia Vocational Training Framework. The training is delivered via RTOs. In 2010–11 it provided for 55,000 clients in 250 locations around Australia.²⁴⁶ The program's budget is over \$220 million for 2012–13.

Through the Language, Literacy and Numeracy Program, the Australian Government provides LLN training to job seekers to enable them to participate more effectively in further training or in the labour force.²⁴⁷ The program targets disadvantaged jobseekers, including those from culturally and linguistically diverse backgrounds needing language-only training. It also caters for those requiring continuing LLN training. The training is provided with the expectation that it will lead to greater gains for the individual and society in the longer term.²⁴⁸

The 2011–12 Language, Literacy and Numeracy Program providers' annual reports found that the program was not always able to meet local demands. Further, the reports also found that the outcomes of JSA were not aligned to the program. This resulted in clients being referred to other LLN training which met JSA outcomes, but they were withdrawn from the program to start employment prior to the completion of the training.²⁴⁹ The program's budget for 2012–13 is over \$100 million.²⁵⁰

In general, experience suggests that formal learning is essential, but it must encourage learners to engage with the content.

ACE providers are often more able to respond to the diversity of local communities' needs by providing a non-threatening environment and pedagogies that better cater to high-need learners such as the longer term unemployed and disadvantaged, yet they account for a relatively small volume of accredited LLN training delivery. This is because ACE providers offer a variety of informal learning opportunities and recognise that learning pathways will differ for high-need cohorts.

While most VET LLN skills delivery is integrated with vocational learning, the sector also delivers a substantial amount of LLN skills training below Australian Qualifications Framework (AQF) level 1 through standalone courses. Many state-accredited VET certificates include pre-AQF level courses that teach acquisitional skills and entry preparation. Generally, these courses focus on learning to read and write before using these skills to undertake further learning. Examples of pre-AQF courses include 'Preliminary spoken and written English' and 'Adult literacy and numeracy'.²⁵¹

In Chapter 3 we considered measures that are currently in place to help disadvantaged job seekers, and recommended substantially increased funding and wraparound services to support upskilling for those who have lower skills. Low LLN skills can be an important aspect of disadvantage, and the increased funding we recommend will improve services for unemployed people with low LLN skills. The public awareness campaign and national information service we recommend will also help to raise awareness of sources of information and help for those who are not in the labour force but whose low LLN skills may be among the factors that are hindering their participation.

Service provision targeted to existing workers

While the challenge of improving our base of LLN skills is often more acute for those not employed and not in the labour force, in terms of raw numbers there are far more people already in work assessed as having LLN below level III. The ALLS data indicates that 40 per cent of all employed people (equivalent to 4.2 million) were assessed as having prose literacy below level III.²⁵²

Our modelling results highlight the imperative to upskill. This means that LLN training targeted to the needs of those in the workplace is vital.

The Australian Industry Group's National Workforce Literacy Project found that 75 per cent of employers reported that their business was affected by low levels of LLN.²⁵³

The project reported that only 8 per cent of participants said that they had sufficient capacity to assist the improvement of LLN levels in their workforce. The project also identified a 'need to involve managers in the process of LLN training, [including] working with human resources managers to promote LLN training and identify staff requiring help' and suggested 'LLN awareness workshops for supervisors'.²⁵⁴

The LLN levels of the existing workforce continue to be a challenge for the transport and logistics industry generally.

Transport and Logistics Industry Skills Council submission to AWP, 2012

In the workplace, employees are often unwilling to admit any LLN shortcomings to their employer. This can directly hinder productivity and risks workplace health and safety.²⁵⁵ It may also limit an individual's ability to effectively perform their role, or progress to higher duties. Research demonstrates that there is a strong link between LLN skill levels and income levels.²⁵⁶

In general, previously disengaged learners appear to prefer to learn via VET training packages—which are designed to be job-specific—because the content seems more relevant to the skills they need to fully perform their prospective job.

There is overwhelming evidence that learning in context works.

Australian Council of Trade Unions submission to AWP, 2012

WELL is the Australian Government's main program for providing LLN training in the workplace. The program supports employees whose level of LLN skills impacts on their capacity to perform workplace tasks and/or work-related training. 'It supports the integration of LLN skills including information and communication technology with vocational education, tailored to the specific needs of the employer and employee.'²⁵⁷

From 2007 to 2011 WELL supported 1,030 training projects across 740 worksites.²⁵⁸ The 2012–13 budget for WELL is almost \$30 million and will provide for 20,000 workers.²⁵⁹ The program is co-funded, with employers expected to make a contribution of 25 per cent in the first year and 50 per cent in subsequent years to the cost of WELL training.²⁶⁰

A 2012 evaluation of the program showed that WELL is liked by participating employers. Of those employers who had participated in WELL, 78 per cent rated it as effective or highly effective.²⁶¹

[The] WELL program is effective but needs improvement and to be expanded.

Australian Industry Group submission to AWP, 2012

Yet more than 80 per cent of the employers surveyed for the evaluation were unaware of the program.

WELL has underspent its budget in the last five years by 9 per cent (\$6.9 million). However, both the Northern Territory and Victoria greatly exceeded their budgets.²⁶²

WELL Brokers are a key distribution channel for WELL and are considered a successful business development model.²⁶³ The Department of Industry, Innovation, Science, Research and Tertiary Education contracts the Industry Skills Council to perform the WELL Broker function. Currently, there are 10 WELL Brokers. The Australian Industry Group's Building Employer Commitment to Workplace Literacy Programs is developing and trialling a return on investment tool in some WELL projects which is likely to raise the program's profile.²⁶⁴

Having a trusted intermediary in the workplace can help address barriers to employment such as low LLN by keeping training separate from employment outcomes. It also reduces anxiety that accessing training may adversely affect an employee's job.²⁶⁵ In the context of WELL, the introduction of a trusted intermediary to advocate LLN training would be a mechanism to further drive demand.

Internationally, the role of an intermediary in LLN training has been formalised through the creation of 'learning representatives' in the United Kingdom, New Zealand, Ireland, Denmark and Finland.²⁶⁶ In broad terms, a learning representative is someone who acts as a peer to support people who struggle as learners, and promote and support learning in the workplace.²⁶⁷



In New Zealand and the United Kingdom, the role of the learning representative includes a focus on increasing LLN awareness and providing opportunities to participate in LLN skills training. The role has also been recognised in ongoing skills policies of both countries.²⁶⁸ The biggest impact of the learning representatives in the United Kingdom has been an increase in the number of people taking up training in basic LLN skills.²⁶⁹ Similarly, the New Zealand program is recognised for its success in encouraging disengaged workers to participate in LLN training.

The initiative [Union Learning Program] was particularly successful in reducing the stigma employees experience in requesting basic skills training, with the process kept at arm's length from company involvement ... the role of union learning representatives allowed employees to talk in confidence with their work colleagues and discuss what sort of training they needed ... As a result, a number of employees voluntarily sat national tests in literacy and numeracy and completed IT courses. The company reported that productivity increased by 20% and rates of accidents and sickness were reduced.

Australian Council of Trade Unions submission to AWWPA, 2012

In general, the introduction of learning representatives overseas has been considered an effective strategy to build a culture of learning within enterprises. An evaluation of the New Zealand program found that there has been a 'significant progression taking place among learning with an average of 2.5 learning opportunities being taken up and 76 per cent of learners completing initial qualifications now learning at a higher level'.²⁷⁰

This situation needs to be replicated in the Australian context. The anticipated demand for skills outlined in our modelling will not be met unless enterprises support their workers to undertake training. While many acknowledge that training is a key element of workforce development, this does not always result in training opportunities being actively encouraged or facilitated. By focusing on training generally, not just LLN skills development, learning representatives can help create a culture where training is actively promoted within the enterprise.

The Foundation Skills Strategy includes an agreed national action to introduce a similar role into Australian enterprises. Australian governments will work with industry and unions to explore opportunities to establish a support network of 'Workplace Champions' who would act as 'ambassadors and promoters of foundation skills training and would help to connect employers and employees with information on foundation skills'.²⁷¹

In the light of the success of comparable international programs in raising awareness of LLN issues, and increasing participation in LLN and higher level training, we strongly endorse the introduction of Workplace Champions and recommend that funding should be provided to achieve this.

Recommendation 4.4

That the Australian Government fund a Workplace Champions Program to help foster a culture of lifelong learning and promote training in the workplace.



4.4 Facilitating the delivery of effective LLN training in the VET sector

Currently, Australia is not resourced to meet the anticipated demand for LLN training. The adult literacy workforce is experiencing a shortage of qualified practitioners and faces significant losses in the next five to 10 years due to retirement.²⁷² The LLN Practitioner Scholarships Program has been a successful approach to encourage people to undertake studies towards adult LLN qualifications. The program was established to support around 50 scholarships each year. Due to strong interest, in 2009–10 an additional 90 scholarships were offered.²⁷³ As at May 2012, 262 scholarships had been awarded.²⁷⁴

An evaluation of the program is planned for 2013–14. However, its success in attracting people to undertake LLN practitioner qualifications and the ongoing issue of workforce shortages indicate that there is merit in continuing the program beyond 2014 and increasing the number of scholarships offered. This would help alleviate some of the workforce planning issues predicted by the sector.

Recommendation 4.5

That the Australian Government upscale the Language, Literacy and Numeracy Practitioner Scholarships Program and fund it beyond 2014 to address current and anticipated skills shortages in the LLN practitioner workforce.

The majority of LLN training is delivered in the VET sector. Within this context, TAFE and other providers receiving public subsidies teach the greatest number of learners. NCVER statistics show 'mixed delivery' courses in VET account for 10 per cent of all students and LLN is an important component of this. In addition, there are students enrolled in other areas of study not directly related to LLN who receive learning support. For example, a trade student may receive LLN support while they are completing their qualification but not be counted in the LLN statistics. The large contribution of the VET sector to LLN training means that improvements to Australia's LLN levels can be achieved by supporting the VET sector to deliver high-quality training outcomes.

Integrating LLN into VET courses and training package–based qualifications is fundamental to ensuring that program delivery is effective.²⁷⁵ This approach involves simultaneously developing LLN and vocational competencies by ensuring that LLN are not taught as discrete skills.²⁷⁶ Both LLN skills and employability skills have been embedded in all training packages for some time. More recently, Commonwealth Government funding has been directed to the Industry Skills Councils to help them develop strategies to ensure the Foundation Skills Training Package is taken up by their respective industries. This includes mapping key qualifications in industry training packages to the ACSF in order to make integrated LLN skills more explicit and visible within VET.

Integration of LLN skills and knowledge is considered a key feature of high-quality VET courses; however, in practice there is evidence that this is not occurring consistently across Australia.²⁷⁷

High quality VET delivery by its very nature will likely improve LLN skills of participants.

Adult Learning Australia submission to AWWPA, 2012

In *Skills for prosperity* we identified the need for appropriate support to retain LLN learners in VET and recommended that better training resources and information be created to support the VET sector to effectively deliver LLN training.²⁷⁸

Submissions in response to our *Future focus* discussion paper raised concerns about the VET workforce's understanding of LLN assessment and pedagogy. More needs to be done to ensure that all of the VET workforce has a baseline awareness and understanding of LLN issues, so they have the ability to identify students experiencing problems with LLN and adjust their practice, as appropriate. Ideally, learners requiring additional LLN support still need to be assisted by LLN specialists to ensure their needs are adequately addressed.

Evidence suggests that there are low levels of knowledge of effective LLN assessment practices among the VET training workforce.

Australian Council for Educational Research submission to AWP, 2012

The Foundation Skills Strategy has as a national priority area 'building the capacity of the training workforces to address foundation skills'. Actions listed for this priority area include agreeing on a standard framework for measuring LLN and providing funding for professional development courses to grow the skills of specialist LLN practitioners.²⁷⁹

A number of Australian Government initiatives support this priority area, including the development of a new Foundation Skills Training Package by Innovation and Business Skills Australia (IBSA). The training package will contain qualifications at AQF Certificate I and II levels that can be integrated with existing vocationally oriented units to provide industry-relevant training.

In addition, IBSA is developing a new skill set that will give vocational practitioners the skills and knowledge to address their learners' LLN needs in the context of VET. The units will build the capacity of the workforce by increasing its understanding of the 'balance between the LLN demands of the training program and the LLN skills of the learners'. IBSA has also indicated that the LLN elective in the Certificate IV in Training and Assessment will become mandatory from 2014 and the LLN elective will become a core unit in the Diploma of VET.²⁸⁰

In the context of ACE, South Australia exemplifies best practice in this area. After the review of the South Australian ACE program in 2010, and the introduction of reforms associated with the National Partnership Agreement on Skills Reform, the ACE program was 'refocused to make the development of both non-accredited and accredited foundation skills in learners a priority'.²⁸¹ As part of this process, the program has been reformed from purely engagement activity to delivering VET pathway programs. The reform has been in place for around six months and has already had a significant impact. More than 100 listed ACE providers are now meeting quality assurance and accreditation service requirements and over 12,000 enrolments in both accredited and non-accredited training are forecast to be achieved during 2012–13. In line with the Foundation Skills Strategy, the South Australian ACE program defines foundation skills as both LLN and employability skills.

Enabling the VET sector to deliver high-quality training with truly integrated LLN will require a comprehensive approach, beyond implementation of the IBSA and Foundation Skills Strategy initiatives. As integrated LLN is an essential element of high-quality VET, the issue should be addressed at a broad level and in the context of continued professional development for the VET workforce.

In Chapter 6 we outline a proposal for a new national program and overseeing body to support teaching, learning and assessment in VET. To support the VET workforce (both VET practitioners and LLN practitioners), professional development in LLN pedagogy should be considered a priority area. As part of its work plan, the national body could disseminate best practice and foster a community of practice. This would be particularly beneficial for smaller providers that may not have access to LLN expertise and resources.

There are already good, innovative examples of LLN pedagogy occurring in the VET sector. It is widely accepted that there is a strong correlation between low VET course completion rates and LLN capabilities. As such, many RTOs have recognised that better addressing learners' LLN skills development needs is a key element to delivering high-quality learning outcomes.

We know that people are generally not strong in assessing their own LLN skill levels.²⁸² This has tangible effects. For example, in the context of VET, a learner may enrol in a course for which they do not have the requisite LLN skills. They may then struggle to complete the course, or elect not to finish the qualification. At the industry level, better targeted LLN support is a strategy to increase efficiency in the sector.

A number of organisations are piloting online LLN diagnostic tools to assess learners' LLN levels. The Australian Council for Educational Research has developed the Core Skills Profile for Adults (CSPA). The CSPA is a set of five online assessments matched to the ACSF (reading, numeracy, writing, abstract reasoning and mechanical reporting) and written to general Australian contexts. It can be used as a placement or exit assessment, which enables learner progress to be measured and provides evidence as to whether learner support interventions have been effective.²⁸³

The CSPA builds on the Vocational Indicator, which is a standardised test to identify a candidate's level of capacity in foundation skills, including literacy and numeracy but not across the full coverage of the ACSF. Since its release in 2010, approximately 30,000 people have been assessed using the Vocational Indicator.²⁸⁴ Similarly, the South Western Institute of TAFE has introduced the RU Ready? program, which is based on the United Kingdom's Basic and Key Skills Builder but has been adapted to the Australian context by the Metropolitan South Institute of TAFE in Queensland. It allows VET teachers to identify skills gaps at the outset and offer targeted learning support.

RU Ready? involves an initial assessment using multiple-choice questions that adapt to the learner's education level throughout the test. The LLN tests evaluate the student against the ACSF. A diagnostic test is then run based on the learner's ACSF level. The diagnostic test identifies specific areas of development need. The software has the ability to suggest which workbooks the student should study to help improve their knowledge. The booklets are contextualised to the area of study the student is interested in, for example retail, electrical or plumbing. The diagnostic test can be re-run after support interventions to determine if there has been improvement in the learner's knowledge.

The South Western Sydney Institute of TAFE has completed approximately 1,500 assessments since it introduced the program in June 2012. Feedback from students has been positive and VET teachers are also becoming more involved.

A national online assessment tool that enables people to self-assess their LLN skills could be used in a broad range of contexts. It would provide people with the opportunity to identify skills development needs, empowering them to seek assistance (formal or informal). While the tool would inevitably focus on LLN, other key competencies such as digital literacy could also be addressed. The online assessment could be showcased on the national LLN information service's website (recommendation 4.3) and has the potential to be linked to other government programs and services, outside of the VET sector.

The implications of introducing an assessment tool of this type cannot be undervalued. By linking LLN skills development to a broad range of contexts, the public's understanding of the issue is likely to be enhanced. It will also build people's capacity to self-assess, empowering them to take control of their own LLN skills development needs. This would be a large shift in the way LLN skills development is currently considered and managed in Australia. However, given that past initiatives and programs have failed to have a significant impact, it is clear that a new approach that is beyond the programmatic responses currently available is needed to drive real change.

Recommendation 4.6

That the Australian Government undertake a national pilot of an online foundation skills assessment following an evaluation of online LLN assessment models such as the Core Skills Profile for Adults and the RU Ready? program.



5

Enabling individuals and the tertiary system to respond flexibly and creatively to change

5 Enabling individuals and the tertiary system to respond flexibly and creatively to change

We have already argued the importance of Australians having the capacity to embrace the future of work and to participate effectively in the global economy, particularly in the Asia-Pacific region. People who are adaptable and have higher levels of skills are more likely to innovate—identifying, modifying and implementing new ideas and thus contributing to higher levels of productivity.²⁸⁵ They will also be better equipped to contribute to Australia's response to the challenges of environmental sustainability.

In this chapter we first consider services and policies that support individuals to be adaptive and manage transitions, through career development advice and training entitlement policies. We then consider how the tertiary system can position itself to be forward-looking, with the capacity to respond quickly to meet changing industry and individual needs.

The key messages are:

- ✔ the coordination of career information and advice needs to be strengthened and improved
- ✔ entitlement schemes must allow for retraining to ensure individuals can respond to changes in the labour market
- ✔ work-integrated learning should be fostered and opportunities for cadetships expanded
- ✔ ongoing reforms to training packages need to support individual capacity to adapt to the changing nature of work
- ✔ ways of making VET in Schools more effective need review
- ✔ continuing consideration needs to be given to the nature of apprenticeships and traineeships and ways in which they are supported
- ✔ while there are many examples of the integration of VET and higher education, attention is needed on differences in funding systems, Commonwealth and state responsibilities, the overlap in provision, various forms of pathways and the effect on disadvantaged students
- ✔ the creative and effective use of information and communications technologies (ICT) in teaching and learning is critical.

5.1 Enabling individual transitions

The increased flexibility and mobility envisaged in the future world of work will influence the way people consider employment opportunities and manage their careers. For those looking to enter the workforce for the first time or those seeking to rejoin it after some time out of employment—for example, women with school-aged children returning to work—being adaptable in the face of shifts in the economy and in employment opportunities is crucial. Good foundations in language, literacy and numeracy and support for science, technology, engineering and maths (STEM) are crucial underpinnings to support adaptability and movement within and between industries and occupations. The importance of this issue was discussed extensively in our discussion paper.

In this section, we argue that Australian governments need to:

- align and strengthen career development services to encourage greater industry involvement and ensure high-quality services, including the creation and promotion of a national brand for career development advice
- review their entitlement systems to ensure any restrictions to publicly subsidised qualifications do not undermine the capacity of individuals to adapt to the changes in the labour market.

Career development advice

The need for lifelong career advice services

Already, the notion of 'a job for life' is largely a thing of the past. More than half of Australians stay in their jobs for fewer than five years.²⁸⁶ Expectations of workers are changing and many, particularly in younger generations, increasingly identify with careers rather than jobs.

As both the higher education and VET sectors move towards demand-based funding, student choice is paramount. To make informed choices prospective students need access to accurate advice about employment options and pathways into different careers. This includes matching their skills, interests and abilities with areas of opportunity. More effective provision of advice should also help reduce attrition rates. Only two of Australia's 39 universities currently have attrition rates below 10 per cent for first-year domestic students,²⁸⁷ while VET qualification completions are estimated to average 28.4 per cent.²⁸⁸

Although there are a range of reasons students do not complete, the issue needs to be addressed to ensure students use their national training entitlement effectively, especially where jurisdictions have introduced limitations on the number of publicly subsidised qualifications a student may undertake. This is especially the case if it impacts on disadvantaged learners.

Quality information and advice is also necessary to mitigate the risks for disadvantaged learners in the context of the shift to demand driven, or entitlement based funding systems in VET.

National VET Equity Advisory Council submission to AWPA, 2012

Currently, career development advice services tend to be focused on secondary schools.²⁸⁹ However, a recent report found that there were differing levels of satisfaction in secondary schools among young people, parents, teachers and career practitioners, with a quarter of research participants identifying unmet career development needs. It also found there was 'scope to improve career development in all schools, and particularly in Government schools, small schools, and schools in regional, rural, remote and low SES areas'.²⁹⁰

AWPA acknowledges the importance of supporting young Australians to transition to work and to make sound choices about further study. However, young people are not the only group that needs career services.

Successful transitions from school to work and between jobs are underpinned by access to high-quality labour market information. People of all ages and all cohorts need quality career development advice throughout their lives to make informed choices and proactively manage their careers. While there are examples of good services, the options for adults are limited and provision tends to be sector-specific.²⁹¹

Current transition support systems are inadequate and this is impacting on the capacity of the economy to have the right skills in the right place at the right time.

Career Industry Council of Australia submission to AWPA, 2012

A lifelong perspective on career development that is underpinned by career self-management skills is widely accepted in OECD countries as an essential requirement for labour market flexibility and lifelong learning.²⁹²

Case study: Limestone Coast Career Development Centre

The Limestone Coast Career Development Centre developed the model which is now being used by other centres in South Australia. The centre offers services to individuals of all ages from the Limestone Coast region to develop the skills to confidently take control of their careers. Services include:

- ✓ assistance to think about ambitions, interests, qualifications and abilities and to decide on a career path based on skills, values and interests
- ✓ assistance with resumés, applications and cover letters and interview techniques and tips
- ✓ assistance in finding information about relevant local services, programs and organisations and local industries and available opportunities
- ✓ assistance in researching the hidden job market.

Around 65 per cent of participants find employment due to the support they obtain to manage their careers. Others take part in training, apprenticeships or volunteer work.

Source: Limestone Coast Career Development Centre, www.cdc.org.au/about.html, accessed 13 February 2013.

Gaps and duplication

The Australian Government's main career development advice information portal, the *myfuture* website, is accessible to all. However, it has limited age-appropriate information for older workers, which restricts its effectiveness.²⁹³ There are a number of other websites (*SkillsInfo*, *Labour Market Information Portal* and *Job Outlook*) that provide age-appropriate information on career pathways and up-to-date labour market information to assist people who want to change occupation or industry. These websites do not have the tools to build career self-management capabilities that are provided on *myfuture*. As the Australia Government's primary career development service, *myfuture* should be enhanced to have a broader focus so it supports the principle of a lifelong approach to career development.

There is also some duplication in the information provided, particularly to young Australians. The DEEWR website, *Job Guide* and state and territory websites have a considerable amount of overlap with the information provided on *myfuture*. There is a sound case for consolidating much of the information on the various websites (federal and state and territory), not necessarily in the form of a standalone website, but in the form of better coordination and linkages between them.

Members of the public simply cannot work through which service might serve them best and a cohesive integrated approach is needed.

Career Industry Council of Australia submission to AWPA, 2012

Career development advice also requires strong connections to industry.²⁹⁴ During AWPA's consultations, many stakeholders noted the important role industry can play in providing career development advice underpinned by up-to-date labour market information, and a 'real life' perspective.²⁹⁵ This is particularly important in aligning student interests with industry needs.



Career services should undertake much closer liaison with industry.

Master Builders Australia submission to AWP, 2012

There are good examples of industries engaging in career development as a way to showcase employment opportunities. For example, since 2008, more than 350 ICT organisations have participated in the National ICT Careers Week. The initiative involves a wide range of activities and events such as ICT study and study information sessions for career practitioners, visits to university facilities and schools, and ICT conferences.²⁹⁶

The Australian Chamber of Commerce and Industry recommended a more structured approach to the gathering and distribution of information through a central system or 'clearinghouse model' coordinated through industry associations, where information on careers and networks to industry can be deposited in a timely and convenient way.²⁹⁷ AWP agrees with this suggestion and recommends that the enhancement of *myfuture* include a clearinghouse approach to enable a single point of access that links through to real-time industry information.

A clearly identified access point to the information and resources would facilitate accessibility. This should have a national profile in recognition of the mobility of labour and that the demand for labour, including for specific skills, varies across Australia.

Industry Training Australia submission to AWP, 2012

Case study: Boeing Defence Australia

Boeing Defence Australia plays an active role in providing career development services to high school and university students. It works in partnership with the Queensland Government through the Aerospace Gateway Schools Project to create pathways for high school students to enter the aerospace industry.

The project involves selected Queensland secondary schools (government and non-government) engaging with aerospace industry partners, local aerospace entities, training institutions and universities to create pathways for students into Queensland's aerospace industry.

Since its inception the project has expanded from six to 23 Aerospace Gateway schools all offering the Queensland Studies Authority subject 'Aerospace Studies', and involves eight industry partners.

The project has achieved a number of outcomes, including:

- ✓ the establishment of Australia's only high school with a dedicated aerospace/aviation focus in all subjects
- ✓ the development of a new practical, project-based senior Aeroskills Studies workshop subject aimed at supporting careers in aircraft maintenance engineering
- ✓ a highly structured work experience program offered to 30 students each year by the aerospace industry partners in a range of careers including human resources and administration, systems engineering, aircraft technical trades, IT, finance, supply management, airport development drafting and planning, and quality control
- ✓ direct entry arrangements to various universities and to Aviation Australia for students of the Aerospace Gateway schools
- ✓ ongoing curriculum support and mentoring by the industry for the Aerospace Gateway schools.

Boeing also works with selected Australian universities to enhance undergraduate curricula, support continuing education of Boeing employees, recruit candidates for employment and collaborate on research that benefits the company's long-term business needs.

Source: Boeing Defence Australia, *Education*, <http://www.boeing.com.au/Boeing-In-Australia/Education/>, accessed 18 September 2012.

Standards, data and evaluation

Ideally, career development advice needs to be independent, professional and of a high quality, and it should be delivered by qualified and well-informed career practitioners, not linked to any particular educational institution.²⁹⁸ Anecdotal evidence suggests that some career development advice seeks to fulfil other objectives, such as increased enrolments in a particular course, or is more aligned to the employer's needs. In Victoria, Local Learning and Employment Networks have used a strategy to ensure career development advice focuses on the needs of the individual. The initiative was modelled on successful approaches from several OECD countries and emphasises 'cooperation between different providers and agencies rather than competition and division'.²⁹⁹ Similar initiatives are not available in all of the other jurisdictions.

Australia does not have mandatory quality frameworks or mandatory service delivery standards. This has resulted in variability in the quality and breadth of services available across the country. Some teachers have reported a lack of confidence in providing quality career development advice to students. They have also reported a lack of awareness about the *Australian blueprint for career development*, the government-endorsed framework for designing, implementing and evaluating career development programs.³⁰⁰

Often quality of career transition services available for unskilled and low skilled workers is poor, or non-existent, compared to services for professional workers. Similarly, career services for older Australians are inadequately marketed and under resourced, and services for individuals with a disability are often delivered by staff without any career development qualifications.

Career Industry Council of Australia submission to AWPA, 2012

The lack of agreed standards for career development advice means that there is a lack of comparable data to evaluate the range of current government services and determine which deliver the greatest benefits to clients and are cost-effective.³⁰¹ Enhanced data collection would also drive quality improvements by providing more evidence to inform future design and planning of delivery of career advice.³⁰²

In response to an emerging need to improve access to, and the provision of, career development advice, DEEWR is developing a national career development strategy. The strategy aims to facilitate a more strategic approach to career development. AWPA supports this work, especially those elements which aim to:

- ✔ improve the evidence base through the introduction of a national career development research agenda, conducted in conjunction with key stakeholders and with agreed priorities
- ✔ enhance the *myfuture* website to make it more user-friendly and relevant to all age cohorts
- ✔ create a national leadership body or taskforce for career development with representation from key stakeholders.³⁰³

Coordination and a single brand

We support local responsiveness and a place-based approach linked to the needs of local industries and enterprises.³⁰⁴ To achieve this, better alignment and strengthening of services is required.

There is scope to harmonise services under a single brand.

Australian Industry Group submission to AWP, 2012

Better operational integration will help the coordination of effort across national departments and authorities as well as federally with States and Territories and avoid duplication.

Australian Chamber of Commerce and Industry submission to AWP, 2012

Exemplars of national all-ages career services (New Zealand, Scotland, Wales and England) all have brand awareness of services that the public understands.³⁰⁵ The creation of a national brand for career development advice and its promotion could reduce gaps in access resulting from a general lack of awareness or confusion about the services people are entitled to. The focus would be on raising awareness through a recognisable brand, rather than the creation of a single national service.

Recommendation 5.1

That Australian governments align and strengthen career development advice services to ensure high-quality services. Strategies should include:

- ✓ improving the coordination of career development and advisory services in Australia to facilitate lifelong career development advice and opportunities for all Australians
- ✓ exploring ways to more actively involve industry in career development advice to ensure labour market information is current and supports people to match their skills, interests and abilities with areas of opportunity in the labour market.
- ✓ establishing a national brand to unify and better market career development services.

Ensuring adaptability and meeting industry needs in an entitlement system

AWP supports student entitlement/demand-led approaches in both VET and higher education³⁰⁶ provided quality is assured. However, there is also a need to adequately cater for industry requirements and to guard against an over- or undersupply of individuals qualified for particular occupations.

While this section focuses on the introduction of entitlement systems for VET, we also highlight our support for higher education student demand-led funding and our concern that large expansion must not come at the expense of quality. AWP is committed to providing ongoing research and advice on the implications of the demand-led system in higher education and especially its impact on achieving quality outcomes for both individuals and industry.³⁰⁷

In *Skills for prosperity*, we recommended that vocational qualifications up to and including Certificate III and all foundation courses be fully publicly subsidised. We also recommended that entitlements to public funding should apply irrespective of whether the enrolment is for a learner's first or subsequent qualification. We suggested the use of provisions to exclude, cap or introduce incentives for certain courses of study in alignment with the specialised occupations on the SpOL developed by AWP. This was to enable jurisdictions to balance individual interests with industry need and demand where intervention was deemed necessary.

In practice entitlement is being introduced quite differently across the jurisdictions and with a measure of complexity. For instance South Australia under its Skills for All policy does not apply the concept of 'firstness' (i.e. entitlement to public subsidy for only the first qualification) though it limits qualifications at lower levels for students not registered with Centrelink. All students are entitled to an unlimited number of priority courses irrespective of previous qualifications and those seeking work or on Centrelink payments who have a Certificate I or II can access unlimited courses at any level.

Victoria applies the 'firstness' principle for those 20 years and over, though students of any age whose highest qualification is the Victorian Certificate of Education or the Victorian Certificate of Applied Learning can access subsidised training at Certificate II level and above. Anyone can access subsidised training in a trade apprenticeship at any level regardless of previous qualifications and subsidised training is available for foundation courses at any level regardless of previous qualifications.

AWPA acknowledges that these approaches and those of other jurisdictions already in place or proposed aim to balance individual and industry need and to manage government budgets. However, industry demand is not static, and we caution against the application of a 'firstness' approach that may prevent people from retraining in crucial areas. As discussed in Chapter 1, opportunities for particular skills may dry up due to structural adjustments in the economy, or a person in casual employment may need to develop different skills to take up a new and more secure career. In addition, for casual and contract workers, and individuals on low incomes who may be in jobs with little opportunity for progression or improved pay, it may be difficult or even impossible to afford a qualification for a new industry or occupation. Restrictions to the funding of individual learners may stifle the adaptive capacity needed for the future world of work.

To this end, we propose that jurisdictions review their approaches to entitlement to ensure people are supported to undertake a further qualification in areas in need of skilled workers or to develop foundation skills, regardless of whether they have already 'used' their entitlement.

For example, an individual who already has a Certificate III in Fitness should be supported in undertaking a Certificate III in Aged Care, as the latter is identified as a specialised occupation in demand.

While this will mean additional costs for governments, given the link between qualifications and employment participation, AWP. expects the costs to be offset by the returns to governments of increasing participation in work and the benefits of meeting industry need.

Recommendation 5.2

That Australian governments review their entitlement systems to ensure any restrictions to publicly subsidised qualifications do not undermine the capacity of individuals to adapt to the changes in the labour market.

5.2 A responsive tertiary system

In the previous section we argued that individuals need to have the skills and adaptive capacity to embrace the opportunities offered by changing forms and nature of work and life transitions. The other side of the coin is a tertiary system that is forward-looking, with the capability to respond quickly to meet changing industry and individual needs.

In this section we consider:

- ✓ how the higher education sector and the VET sector deliver adaptive skills so that students transition smoothly into workplaces
- ✓ the integration between VET and higher education and creation of pathways for learners
- ✓ the influence of technology on the delivery of education and training.

Delivering adaptive skills in the higher education sector

Ensuring Australia's workforce has the flexibility and adaptability required is an important challenge in the years to 2025. In our discussion paper, we emphasised the need for 'graduate-ready employers' and 'employer-ready graduates'. This was a strong theme in our consultations.

More discussion is needed of how to meet ongoing industry requests for 'a greater emphasis in education and vocational training on core skills for work including management and interpersonal skills'.

Business Council of Australia submission to AWPA, 2012

For some time now, MSA has been receiving feedback from its stakeholders that novice workers are 'not job ready'. At the same time, the opportunities for students transitioning from study to work to participate in meaningful and relevant work experience have decreased. School-sponsored work experience is often not related to the student's occupational aspirations or skill set, or does not provide the student with a realistic introduction to the world of work or to a trade area.

Manufacturing Skills Australia submission to AWPA, 2012

More young people than ever before are entering the workforce with a qualification. Yet there are signs Australia has lost many of the bridges to work that once enabled graduates to gain a foothold in the job market and gain relevant, practical experience. The result is not so much a skills shortage as an *experience shortage*, with employers hesitant to take on graduates who are not work ready. It is important that opportunities for industry engagement are maximised through improved partnerships between VET, higher education and industry.

Increasingly higher education institutions are recognising the need to ensure graduates are adequately prepared for the workforce. Institutions are offering a more extensive and innovative range of courses and updating their curriculum models to better meet the needs of employers and to challenge and inspire students. The Melbourne Model, for example, was a major curriculum reform which represented a total rethinking of the University of Melbourne's curriculum. The model is based on a general undergraduate degree, followed by a professional or research masters degree and the option of a PhD program. While working within the Australian context, it mirrored international models which aim to keep career options for undergraduates more open and enable greater consideration for further study.

With the introduction of student demand-led funding, the Australian Government highlighted the need for tertiary institutions to expand course offerings, better respond to the needs of students and employers and improve pathways from VET to higher education.³⁰⁸ Increasingly universities are offering innovative and specialist degrees and courses delivered in conjunction with VET to link directly to the needs of industry.

Victoria University, for example, has announced two new types of degrees to start in 2014—a small number of ‘Career Start’ bachelor degrees and a larger number of specialist professional bachelor degrees aimed at supporting more specific career pathways.³⁰⁹ The ‘Career Start’ bachelor degrees are intended to increase participation in higher education and will be designed for students who may have previously aimed to enrol in VET and are less well prepared for conventional higher education. Additional learning support will be provided to support these students to become successful learners.

The Canberra Institute of Technology and the Australian National University (ANU) jointly offer the Engineering (ANU Associate Degree), which is a two-year program designed to give students a strong practical and theoretical base and pathway to the Bachelor of Engineering at the ANU.³¹⁰

Work-integrated learning

In workplace surveys, employers routinely rank work experience as among the most important attributes they need in staff.³¹¹ Workplaces need employees with job skills such as communication, teamwork and problem-solving; ‘they need new employees to be ready to learn and to be ready to work’.³¹² Increasingly, however, there is a growing concern that a lack of interaction between employers and educational institutions may result in workplaces that are not ‘graduate ready’.

This challenge [improving communication and coordination] emerges from data that indicate that improved communication and coordination are essential in enhancing a cooperative relationship between universities and employers and across disciplines and faculties. Stakeholders identified the need for closer collaboration between universities and employers in order to provide work-related learning experiences for students ... There were comments indicating that, for universities, a closer relationship with employers would mean a curriculum that better reflects work practices ... Some employers described communicating with universities as a complex task, with difficulties in locating appropriate faculty staff.³¹³

Participation in work-integrated learning, whether as part of a formal curriculum or through co-curricular means, has been shown to support the career development needs of the individual.³¹⁴ Gaining experience of a real-world working environment enables students and graduates to develop an awareness of workplace cultures and expectations, gain practical skills, build networks and develop ‘soft skills’ in communication, teamwork and leadership.³¹⁵

The benefits for employers are equally apparent. Workplaces get an injection of new talent and new ideas and employers develop links with education institutions and other providers. This gives industry the opportunity to contribute to curricula and pedagogy. Firms may also benefit by establishing networks of experienced potential recruits, from student feedback on workplace practices, and through opportunities for existing staff to gain supervisory and mentoring experience.

The VET sector has always had strong links with industry, but this is now increasingly a feature of higher education as well. Evidence shows that engagement with work-integrated learning is ‘increasingly becoming a feature of higher education courses across all fields of study’.³¹⁶

Office for Learning and Teaching

The Australian Government Office for Learning and Teaching is funding a project to enhance work-integrated learning outcomes. This project is led by Griffith University in partnership with four other universities across Queensland, New South Wales and Victoria. The objectives are to identify the key challenges faced by work-integrated learning leaders in both universities and enterprises and to establish a framework and criteria to assess effective work-integrated learning leadership practices and the policies that support practice. It is anticipated that this will provide a foundation for building capability and for increased dialogue between the key players.

Source: Office for Learning and Teaching, *Leading WIL: Distributed leadership approach to enhance work integrated learning outcomes*,

<http://www.olt.gov.au/project-leading-wil-distributed-leadership-approach-enhance-work-integrated-learning-outcomes-2011>, accessed 3 October 2012.

We regard the focus on work-integrated learning as a positive development. In our view, more can be done to foster partnerships with industry and formalise accredited work-integrated learning opportunities in university degrees. This would encourage greater collaboration and increased industry ownership of skills development.

However, some stakeholders contended that 'the barriers are often at the industry end of the equation', due to a lack of resources within organisations to support internships, work experience and paid cadetships.³¹⁷

We strongly support the idea of building greater profession/industry engagement into University courses and the suggestion of incentives in the workplace to encourage industry to get involved with University students. We believe that this would assist in providing some of the experience that is reported to be lacking when a student graduates.

National Association of Graduate Careers Advisory Services submission to AWP, 2012

In the next section we consider how some of these barriers can be overcome.

Increasing opportunities for work-integrated learning and professional cadetships

A professional cadetship is an arrangement under which an employer agrees to contribute to, or subsidise the cost of, an employee's education. Conversely, an internship is understood as a program of (typically unpaid) on-the-job training that gives students real-world experience and the relevant knowledge and skills they need to enter a particular field. Internships can also be known as 'work experience' or 'industry placements', but are generally used by students to help determine if they have an interest in a particular occupation, to gain credit towards their studies, or to create networks of potential contacts after graduation.³¹⁸ Internships for medical students are examples of such work placements.

The decline in industry supported traineeships/cadetships for tertiary students is also impacting on the job-readiness of graduates.

Manufacturing Skills Australia submission to AWP, 2012

As a 2013 Fair Work Ombudsman report indicates, unpaid internships can be an uncertain area in terms of employment law and rights.³¹⁹ Internships need to be structured and clarified to ensure they are beneficial to all parties. Formal work-integrated learning conducted under the auspices of a university/tertiary institution should minimise the potential for exploitation of unpaid workers participating in these programs.

Work-integrated learning provides opportunities for current students to gain job-related skills while studying for a qualification. However, it may not necessarily bridge the gap for new graduates seeking to make the transition to work, particularly if they are competing with applicants with a few years of work experience or where employers are seeking staff with highly specialised skills. With more Australians undertaking qualifications and structural adjustment leading to a decline in entry-level jobs, there are fewer opportunities for advancement through internal career paths.³²⁰

For unemployed people aged 15 to 24 years, a key difficulty in finding work is 'insufficient work experience' (10 per cent),³²¹ and since the global financial crisis university graduates have found it more difficult to secure full-time work.³²² The 2011 Graduate Careers Australia survey indicates that 76.3 per cent of new graduates found full-time employment within four months of finishing their degree, with 14.9 per cent working part-time and on a casual basis and 8.7 per cent not working and seeking full-time employment. This compares with a high of 85.1 per cent of new graduates employed full-time in 2008, with only 5.2 per cent not working.³²³

Opportunities exist for novice workers in some industries and occupations, but this is not true across the board. If Australia is to bridge the 'experience gap', opportunities for novice workers and new entrants need to be made more widely available across all industries.

International approaches—The Canadian co-op model

The Canadian Co-operative Education Program, which was initiated 20 years ago by the University of Waterloo, is now widespread throughout Canadian universities and is well accepted by employers. Across Canada approximately 73,000 students participating in the scheme undertake a work placement for between 10 weeks and four months with an employer. More than 4,000 employers participate in the program. Students are paid at wages equivalent to the rate paid to a graduate. The work placement is relevant to the course of study the student is undertaking.

At least four provinces in Canada provide tax credits or wage subsidies to employers to take students on placement under the program. For example, the Ontario government gives employers a \$3,000 tax credit for each student placed. Students and industry both gain from the scheme. Students gain income and relevant experience across a range of workplaces to improve their job readiness and industry receives skilled workers with fresh ideas to undertake work or special projects.

Education programs offering industry placements are also operating in universities in the United States. Data from the US National Commission for Cooperative Education indicates that more than 60 per cent of co-op students who undertake 18 months of placement during the course of their studies are offered permanent jobs from their co-op employers. Around 95 per cent of co-op students in the United States find jobs immediately upon graduation.

Sources: University of Waterloo, <http://uwaterloo.ca/co-operative-education/about-co-operative-education>, accessed 30 December 2012; National Commission for Cooperative Education, <http://www.ceiainc.org>.

Stakeholders have pointed out that there are 'inevitable funding implications' for employers, given that work placement programs can be both 'expensive and time consuming to run'.³²⁴ While costs associated with such programs can be discipline-specific even in unpaid internships and work-integrated learning programs, 'a potential risk for the future, was the professional disciplines or industry partners who are now seeking financial recompense for supervising students'. A report by the Work-Integrated Learning Community of Practice in Queensland found that fees and subsidies currently apply to Queensland Health Department placements, and teaching and engineering disciplines.³²⁵

Research conducted for the Australian Learning and Teaching Council found that:

Employers reported frustration at the lack of understanding on the part of the university in relation to time costs involved in providing placements for students, and the basic understanding that employers are always time poor. Other employers consulted indicated that possibly even more than the financial cost and the impact on the bottom line, the time element is the major inhibitor to increased involvement in work integrated learning placement programs.³²⁶

Without effort to mitigate some of these costs and obstacles, there is less incentive for employers to take an active role in this area. Given the cost barriers, governments, industry and providers may need to investigate models and funding options to encourage employers to offer work-integrated learning and programs, particularly in the case of SMEs.

Submissions from stakeholders on the discussion paper showed a broad base of support for a scheme to improve work transitions for graduates. Recommendations included that 'appropriate competency standards are adopted as part of a structured national internship program [and] that the Commonwealth supports the broader application of appropriate models of industry engaged learning'.³²⁷

AWPA therefore proposes that governments, industry bodies and VET and higher education providers work together to develop a model for a professional cadetships program and strategies for increasing opportunities for work-integrated learning. The starting point for this work should be the insights that have emerged from current and previous research.

The program to be developed could include government incentives for professional cadetships in both higher education occupations (focusing on specialised occupations) and specified higher level VET qualifications. Government incentives could also help offset the costs of training if workers move on before the enterprise has recouped its investment.

Incentives could be paid at the point of hiring but also (in equal measure) at particular milestones of the employee's development. This would ensure that training is delivered and facilitated effectively, and that workers are retained for a sufficiently long period to gain work experience and make them competitive in the job market.

Recommendation 5.3

That the Australian Government work with VET and higher education stakeholders and peak industry bodies to support transitions from higher level VET and higher education to employment by expanding work-integrated learning and by establishing a co-funded professional cadetships program for identified specialised higher education occupations and higher level VET qualifications.

Delivering adaptive skills in the VET sector

In this section we consider a number of aspects of the VET sector and how they can be enhanced to assist individuals in developing the adaptive skills they will need for the future.

In particular we consider:

- the evolution of training packages and current thinking about broader capabilities as well as vocational skills
- the need to clarify the purpose of and policy environment for VET in Schools (VETiS)
- the need to pursue long-identified reforms for apprenticeships and traineeships.

Training package reforms

In our discussion paper we acknowledged the evolution of training packages over time as reforms have been implemented to increase their flexibility and support learners to gain the adaptive skills and knowledge required for the future world of work.³²⁸ For instance, flexible packaging rules have been incorporated in training packages since 2010 and enable a wide choice of elective units. But we also asked what further reforms should be made to training packages so they are responsive and future focused.

The Standing Council on Tertiary Education, Skills and Employment recently endorsed new standards for training packages developed by the National Skills Standards Council (NSSC). The new standards, which apply to the design and development of training packages by Industry Skills Councils, continue the reforms initiated in 2009 with the *VET products for the 21st century* report. The development of the standards was driven by demands from users of training packages that they be made simpler, clearer, easier to access and use, and more flexible to meet the needs of industry and individuals.³²⁹ The NSSC's bulletin about the new standards indicates that:

the purpose of the Standards ... is to ensure that Training Packages are of high quality and meet the workforce development needs of industry, enterprises and individuals.³³⁰

The standards and the accompanying templates for the structure of training package components state that it is mandatory to include language, literacy, numeracy and employment skills that are essential to performance. In addition, there is now a specific link between the foundation skills outlined (as well as all other elements of each unit of competency) and the specification of assessment requirements for those skills, including performance evidence, knowledge evidence and assessment conditions.³³¹ Previously, users of training packages expressed concerns that foundation skills were integrated into training packages to the point of invisibility.³³² Under the current structure it appears that the foundation and employment skills and the evidence that must be demonstrated by a competent learner are much clearer.

These reforms are important because they respond to client feedback and they aim to address the demand for more generic capabilities. As discussed below, the reforms are also relevant to the issues raised by entrepreneurial learning thinkers in the United Kingdom.

Training packages—capability and competence

Some commentators argue that further reform is needed to competency-based training and that vocational qualifications are narrowing to prepare graduates for specific roles and jobs rather than occupations or careers.³³³ A discussion paper prepared as part of a three-year research program funded by the NCVER, argues that it might be more useful to structure education and labour market pathways on different points of reference called 'vocational streams' (linked occupations operating in broad fields of practice with each occupation leading to a number of jobs).

Individuals would need capabilities that allow them to move vertically and horizontally in vocational streams rather than knowledge and skills for a specific job. In this approach, capabilities are differentiated from employability or generic skills because the knowledge and skills required for people to develop as autonomous, innovative and creative workers are not general. They differ across the vocational streams, although there may be some commonalities. The authors suggest that vocational streams would be constructed jointly by educational institutions, occupational bodies and Industry Skills Councils.



The NCVER discussion paper indicates the research will continue to explore and test the concepts flagged in the initial stages.³³⁴ We anticipate that this will inform the debate about how the VET system positions itself for the future.

In the meantime, the new training package standards and streamlined design will be rolled out. We believe that this provides an opportunity for the NSSC and Industry Skills Councils to further consider how adaptive skills can be supported through training package design and development.

We also acknowledge that reform of training packages is not the only factor in supporting innovation and responsiveness, as delivery is determined by RTOs based on factors such as market demand and the RTO's capacity, flexibility and expertise.

Recommendation 5.4

That the National Skills Standards Council and Industry Skills Councils further develop the reforms in *VET products for the 21st century* to investigate how training packages can most effectively build individuals' adaptive capacity for the changing context and nature of work.

Learning for uncertain futures: Is a new paradigm required?

Some international thinkers, such as the Gazelle Group,³³⁵ are posing more radical questions than those explored in the training package reform process and in current Australian research. They are asking if the real drivers of success in work have moved beyond technical skills and suggesting that this would require a complete transformation of the post-compulsory education system to make it fit for purpose in tomorrow's world.³³⁶ They predict that the effectiveness of individuals and workgroups will rely on 'entrepreneurial learning' that equips people with personal qualities of enterprise, networking and creativity coupled with up-to-date technical competence going beyond skills-based qualifications.

In the knowledge economy, value is derived from exchanges of human intelligence and creativity rather than from physical activities and resources, but the Gazelle Group contends this is not recognised or fostered in an education system that is firmly rooted in a segmented industrial model of learning designed for work using technical knowledge in a defined job. Deep technical knowledge and applied competence will remain necessary but will not be sufficient to assure working contexts.

These thinkers argue that what will be required in the future is:

A combination of deep technical expertise in a chosen field, together with the wider capabilities of creativity, team-working, enterprise and other personal qualities, [which] is captured by the idea of *T-shaped people*: '... the future of business demands a new breed of knowledge worker: the T-shaped person who combines broad understanding of business processes (the top, horizontal part of the T) with deep practical execution in a specific functional area (the bottom, vertical part of the T)'.³³⁷

So assuming revised training packages can specify the deep technical expertise learners need to acquire, how do we ensure that workers in the future also acquire personal qualities and capabilities such as creativity, enterprise and team working? The Gazelle Group suggests that this depends on structuring the learning experience so that it emphasises problem-based,

team-based and work-based learning. To achieve this requires sophisticated learning design and delivery management skills. An approach such as this would require more than what is specified in the minimum teaching qualification for the Australian VET sector (the Certificate IV in Training and Education) and more than just the redesign of training packages.

We propose that consideration of how teaching and learning is equipping learners for the future be included in the role of a new national body tasked with driving excellence in teaching and learning. VET currently has national organisations that regulate it (ASQA, the Australian Skills Quality Authority), that set standards for it (NSSC), and that collect data and conduct research about it (NCVER). But there is no national body concerned with quality improvement, innovation and professional development in teaching, delivery and assessment. The United Kingdom has the Learning and Skills Improvement Service that runs the Excellence Gateway, which is a tool for disseminating best practice in VET teaching and learning. It is also setting up a national guild for further education professional development and the regulator—the Office for Standards in Education, Children’s Services and Skills—also has a role in quality improvement.

In Chapter 6 we argue that a national body should be established for VET, similar to the Office for Learning and Teaching that exists for Australian higher education. This body would support innovation and professional development in teaching and learning strategies in the VET sector with an emphasis on developing adaptive capacities for learners and positioning the capabilities of the sector to deliver what is needed for the future world of work. This would complement the work being done to enhance training packages.

VET in Schools

An important role, but there are questions

VETiS programs can play an important role in helping young people make the leap from learning to earning, and as such they are an important element of the VET system’s development of individuals’ adaptive capacity.

In *Skills for prosperity*, we noted the multiple purposes of VETiS programs and their role in broadening pathways and increasing retention. This occurs firstly by engaging an increasingly diverse student cohort, and secondly, by keeping senior secondary students in education who may otherwise have left school or had poor results in non-vocational subjects. Youth unemployment is an international concern and as noted in Chapter 3, young people not in employment, education or training represent a significant group requiring attention. VETiS programs play a valuable role in providing pathway opportunities for young people, with the potential to gain valued credentials and pathways to further learning and the world of work.

However, outcomes from VETiS can be variable when these programs are not followed up by further study (in the form of higher level qualifications and/or apprenticeships) or by working part-time to build job skills and explore possible career directions. The vast majority of VETiS enrolments are in entry-level VET (Certificates I and II),³³⁸ which increasingly need to be followed by further education and training to achieve good employment outcomes. The value of VETiS may also be compromised by the limited range of VET qualifications available, with a high proportion of VETiS programs concentrated in particular industries. In 2010, the majority of VETiS students were in tourism and hospitality, business, and ICT courses, with most of the school-based apprenticeships in retail services.³³⁹ The Queensland Skills and Training Taskforce found that the increasing investment in VETiS qualifications is not aligned to labour market needs.³⁴⁰



When students terminate their study at the Certificate I or II level or undertake programs with low levels of workplace learning, VETiS is less effective in enabling youth transitions.³⁴¹ This may be exacerbated to the extent that secondary school students are receiving more advice and information on university pathways than on vocational or occupational pathways.³⁴²

More broadly, there is also the issue of consistency in implementation and delivery of VETiS programs within and across jurisdictions. In some instances VETiS programs are delivered as vocational subjects, in others as vocational qualifications, in some cases up to diploma level. In particular, stakeholders have pointed to the variability that exists in the amount of work placement and industry-specific learning in VETiS programs. Some include structured on-the-job training, while others are confined to simulated environments in school settings. This variability undermines industry confidence that the vocational qualifications obtained at school equip students for the workforce, due to insufficient workplace experience.

The VET in Schools program provides an option for some students but is too often focussed on knowledge components without any significant 'experience' to complete the competency achievement required ... VET in Schools needs to be seen as providing pathways to jobs.

SkillsDMC submission to AWP, 2012

These concerns were borne out during our consultation process, in which stakeholders raised questions about the extent of workplace learning included in VETiS programs, as well as variability in quality, standards, delivery and the qualifications and experience of VETiS teachers where courses are school-delivered and assessed.

Until we link VET in schools to large amounts of industry placement, VET in schools will not translate to better employment outcomes.

Anonymous submission to AWP, 2012

A further question is the effectiveness of links between VETiS and tertiary entrance rankings and pathways to higher level qualifications and employment. While the integration of vocational units within senior certificate subjects has 'progressed to the extent that many VET subjects are assessed with grades (in addition to competency assessment) and count towards university entrance scores',³⁴³ this is not true of all, or even most, VETiS programs. This inconsistency may pose hurdles for young people transitioning from school to further education and/or work. Conversely, one study underway questions the impact that the adaptation of VET by the senior certificate structure may have on industry validity and connection to occupations.³⁴⁴

Consultation on our discussion paper also showed broad agreement with the statement that 'a more widespread review of VET in Schools ... is worthy of examination'.³⁴⁵ The 2011 review of apprenticeships recommended that government 'formally regulate the quality of VET in Schools within the VET system to enhance consistency and quality of training across all jurisdictions and to recognise the potential of VET in Schools as a pathway into an apprenticeship or traineeship'.³⁴⁶

Policy clarity is required

In our view the threshold question to be asked about VETiS is: What does Australia want out of VET in Schools programs? This question is less a matter of regulation than one of policy, as different states and territories have implemented VETiS in different ways, and to different degrees. There are also different views and perceptions on the fundamental role of VETiS, and whether there is value in continuing to deliver programs in schools which do not require industry placements and on-the-job training, or which are not linked to occupational pathways.

There is a need to re-evaluate VET in Schools to ensure that it leads to a substantial destination and does not deliver students into low-skilled, casualised and unsustainable employment. A consistent pathways approach is needed to bolster the capacity of vocational programs in schools to provide effective transition for young people.³⁴⁷

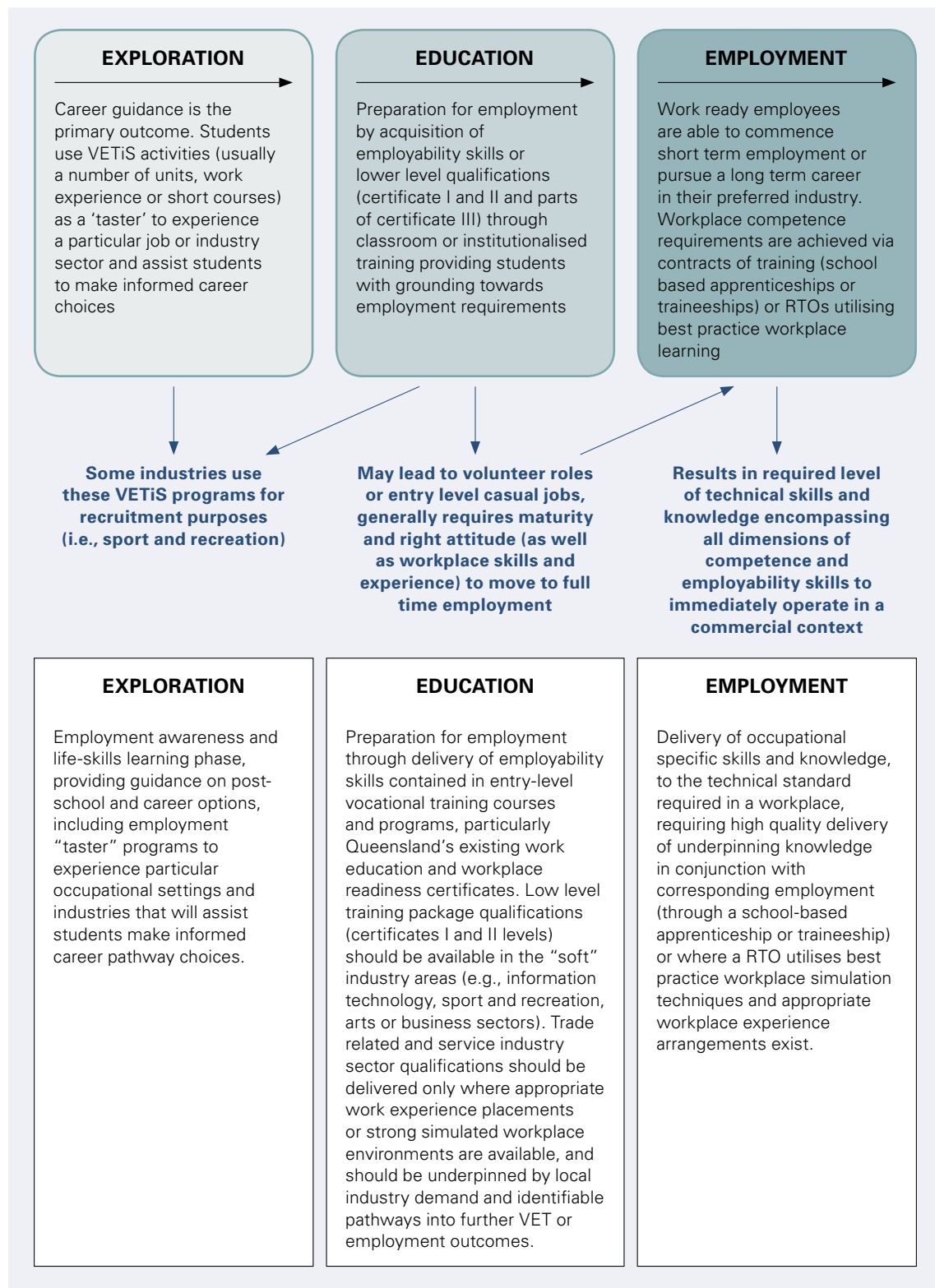
VETiS is being examined cross-jurisdictionally as part of a three-year program of research funded by the NCVET. The authors contend that what is emerging from a comparative examination of VETiS is that program variables, such as work-based training and exposure to industry, the involvement of industry in delivery and design, qualification levels offered and undertaken and the depth and intensity of the program, have significant impacts on the relationship between VETiS and occupational outcomes. However, they conclude that generally VETiS should not be viewed as a direct employment pathway as most qualifications are offered at the entry or foundational level (Certificate I and II).

The next stage of the research will identify models of delivery effectively used to provide VETiS programs at Certificate III level and above and models providing clear pathways to occupations and/or further study. The study will take place in four jurisdictions: New South Wales, Queensland, Victoria and South Australia and will explore policy similarities and differences as they facilitate or constrain high-quality VETiS provision. The case study research will be informed by a number of 'quality indicators' including the status of vocational programs in senior secondary certificate and tertiary entrance rankings, links with the labour market and occupations, alignment with further education and higher level VET, and delivery context such as funding arrangements, quality of VETiS staff, school culture, access issues and career guidance.³⁴⁸

The Queensland Skills and Training Taskforce addressed the issue of purpose in its final report on VET. It drew on work undertaken for the former National Quality Council by Gillis et al. as set out in Figure 8. The report recommends that although VETiS plays an important role in supporting transitions through what it calls 'exploration' and 'education' categories, the government's VET budget should only fund VET programs that are focused on employment outcomes and aligned to the skills needs of industry.



Figure 8 Queensland Skills and Training Taskforce's recommended framework for VET in Schools programs



Source: Gillis, S, Bateman, A and Dyson, C, 2011, *VET in Schools: Strengthening delivery and assessment outcomes*, report prepared for the National Quality Council.

AWPA believes there is merit in affirming the benefit of employability skills and exposure to various industries and occupations for school students, but that VET qualifications should be employment focused and include adequate workplace learning and assessment.

The national curriculum for National Trade Cadetships,³⁴⁹ currently under development initially for Years 9 and 10, may provide a clearer focus and opportunity for school students to be exposed to the 'exploration' and 'education' aspects of VETiS. VET qualifications delivered to school students could then be more clearly distinguished as being about provision of specific occupational skills.

AWPA supports the call for clarification of the policy and funding framework for VETiS to ensure it is achieving positive outcomes for young people. Fundamentally, we also support a review of policy concerning VETiS delivery across jurisdictions, including implementation of the requirement for effective work placements for all VET qualifications so that ultimately industry has confidence in the quality of the qualifications delivered.

Once the policy is clear, the appropriate regulation needs to be applied to ensure that VET qualifications delivered in schools are of high quality and meet industry standards. The national regulator, ASQA, needs to be appropriately resourced to undertake this important task or industry confidence in VETiS outcomes will continue to slide.

With the support of industry and jurisdictions, AWPA will, if asked, conduct a review of the VETiS policy, funding, delivery (including quality) and regulatory frameworks in place across the country. The work would draw on previous reviews conducted by jurisdictions and require their collaboration. Topics covered could include:

- clarifying the policy and funding framework for VETiS
- how to address obstacles for young people making the transition from VETiS to work and further education
- work placements.

Apprenticeships and traineeships

Ensuring the quality, consistency, flexibility and adaptability of apprenticeships and traineeships is a key challenge for the future. The model is steeped in tradition, which gives it strength but can make reform difficult. In our discussion paper, we asked whether, given the rapid changes to technology, to industry needs and to the expectations of employers and apprentices, Australia will still be using the same apprenticeship model in 2025. And, continuing the theme of this chapter, how can apprenticeships enable people to develop the adaptive skills needed as workplaces change, demand for higher level qualifications grows and occupations become more complex?

The term Australian Apprenticeships used by the Australian Government incorporates both apprenticeships and traineeships. This is not the case in all states and territories. In the following discussion we use the terms apprenticeship and traineeship purposefully to distinguish the variation between the two pathways in terms of qualification level, duration and career focus. Apprenticeships, often referred to as trade apprenticeships, generally refer to the traditional or regulated trades such as those leading to careers as electricians or plumbers.

A properly structured learning experience that integrates work and learning in employment remains the most effective way to produce skilled trade workers.

Australian Manufacturing Workers' Union submission to AWPA, 2012

Traineeships provide structured training and workplace learning in non-trade occupations. They can play an important role in providing pathways for people experiencing disadvantage, including early school leavers, Indigenous Australians, people in rural and remote communities, and people with low levels of academic achievement.³⁵⁰ They also make a significant contribution to workforce development in growth industries like Health Services, Community Services and Aged Care. Australian Apprenticeships, whether trade apprenticeships or traineeships, are characterised by a contract of employment and involve paid work and structured training that can be on-the-job, off-the-job or a combination of both.

Confusing and duplicated regulation and administration

Despite strong support for Australian Apprenticeships, the system has been the subject of many reviews over recent times and stakeholder concerns persist about aspects such as duplicated and complex funding, administrative and support systems as well as the level of wastage that occurs through high rates of non-completion.

In 2011, an expert panel on apprenticeship reform looked at reducing costs for industry, improving completion rates and promoting the benefits of getting formal skills qualifications. We broadly support the recommendations of the expert panel and advocate a strong focus on their implementation.

In response to the panel's recommendations for reform, the Australian Government announced that it would work with the states and territories to streamline and harmonise laws and regulations for Australian Apprenticeships to ensure that those who move between jurisdictions can have their training recognised.³⁵¹ The recently agreed National Partnership Agreement on Skills Reform endorses principles of harmonisation across national boundaries.³⁵² Action on this front would certainly address one key problem that was noted as an ongoing concern in the submissions to our discussion paper.³⁵³

On a positive note, the final report of the Queensland Skills and Training Taskforce recommended significant legislative amendments to remove duplication, streamline processes and 'harmonise Queensland legislation with similar legislation in other jurisdictions to give effect to a national apprenticeship system'.³⁵⁴

The Queensland Government's response to the final report indicates that it supports the recommendation and that it will harmonise Queensland apprenticeship and traineeship provisions with those of other states and territories and finalise any legislative changes from 2014.³⁵⁵

It is encouraging to see progress being made in this area given persistent views that the system is confusing and bureaucratic because of the overlap between levels of government and inconsistency across jurisdictions. In *Skills for prosperity* we argued for a harmonised national system of apprenticeship and traineeship legislation based on a single legislative instrument, to achieve consistency and clarity for users.³⁵⁶ However, any efforts to harmonise legislative provisions across the country will require resolve to address the hard issues that underpin the complexity. This includes clarifying the rationale for which level of government funds which aspects of apprenticeships (including incentives and support services), and resolving jurisdictional differences on the declaration and regulation of apprenticeships. While the problems are quite clear, the road to achieve resolution is much less clear, as successive reviews have indicated there are diverse and divergent stakeholder views about the way forward. Sustained effort will be required to find common ground.

Reducing wastage—focusing on the market

In the discussion paper, we raised wastage in the Australian Apprenticeship system as a concern and highlighted the need to address non-completion of apprenticeships and traineeships. Many stakeholders echoed these concerns during our consultations. Submissions also pointed to a need to boost commencements, as well as completions, if industry is to have access to the skills it requires to support a growing and dynamic economy.

There needs to be an urgent assessment undertaken on barriers to commencement. Although there is some merit in the focus on non-completions the policy responses relating to advisers and mentoring have been appropriate and are supported, the focus now needs to shift to commencements and how we encourage more employers to take on apprentices.

Australian Chamber of Commerce and Industry submission to AWWPA, 2012

Many of our most experienced workers are at the point of retirement, and training data indicates that fewer young people are choosing to undertake or complete a trade ... There needs to be a revitalised approach to attracting new entrants into the trades.

Australian Manufacturing Workers' Union submission to AWWPA, 2012

Between 2010 and 2011 commencements increased by 1.4 per cent overall. However, trade commencements were down by 5.9 per cent with non-trade commencements up by 4.5 per cent.³⁵⁷ A study commissioned by the NSW Board of Vocational Education and Training focused on the demand side of the market, engaging with apprentices and employers to identify ways to improve recruitment and increase retention and completion rates. The study identified the need to take a more tailored approach, providing differentiated services to support apprentices and employers through to completion and increasing retention rates by reducing the focus on raw numbers of recruits and shifting attention to improving the quality of recruitment. We believe there is value in considering the outcomes of this market research approach, which identified the changing social and economic context for apprenticeships and segmented the market based on the expectations and values of employers and apprentices.³⁵⁸

There are several examples of new approaches being trialled to make apprenticeships more attractive and more responsive to industry needs.

Responsive Trade Training Initiative

Western Australia piloted its Responsive Trade Training Initiative in 2011 to test alternative delivery strategies to the traditional apprenticeship. The goal was to develop a more flexible and resilient apprenticeship and trainee system that was more responsive to the needs of industry. The pilot is based on an 'advanced pre-apprenticeship' delivery model that involves upfront training in an institutional learning environment before entering into a training contract arrangement with an employer. The pilot was run in a number of areas including carpentry and joinery, commercial cookery and electrotechnology/telecommunications.

The Advanced Pre-apprenticeship Training Delivery Pilot Program in Hospitality (Kitchen Operations) includes six months of institutional training, industry 'host employer' work experience and mentoring.

Source: Government of Western Australia Department of Training and Workforce Development, 2011, *Skilling WA—A workforce development plan for Western Australia—Progress report for the period January–June 2011*, <http://www.futurenow.org.au/neNewsletterArchiveMessage.php?id=130>, accessed 2 January 2013.

EnergiseOz

E-Oz is currently piloting a progression management system for 1,000 electrical apprentices. It has been developed with industry partnership and focuses on recognising and rewarding the individual skills and knowledge of apprentices as they progress through the apprenticeship stages. Training and pay progression will reflect demonstrated workplace competence. The key features of the pilot are flexibility in off-the-job training delivery, collection of on-the-job experience and a mentor to help the employer, apprentice and RTO.

Source: <http://www.futurenow.org.au/neNewsletterArchiveMessage.php?id=130>, accessed 2 January 2013.

National Apprenticeship Program

The National Apprenticeship Program was developed by a not-for-profit group training organisation to address the shortage of skilled workers in the minerals and energy sectors. The program's Advanced Entry Adult Apprenticeship scheme is a competency-based, customised alternative to talented people with extensive trade skills and experience, but not a formal qualification, to complete trade training, potentially within 18 months. Most candidates are aged 25–45 years.

Source: <http://nationalapprenticeships.com.au/index.php?page=about-us>, accessed 2 January 2013.

Improving services to employers and to apprentices and trainees

In *Skills for prosperity*, in addition to national regulation of the apprenticeship system, we argued for coordination of one-stop shop service delivery, such as pastoral care and advice, to be provided at the jurisdictional level. We advocated that the outcomes should be focused on learner and employer engagements, successful work placements and improved completions.³⁵⁹

We note that, in line with the recommendation in the final report of the Queensland Skills and Training Taskforce, the Queensland Government has agreed to pursue negotiations with the Commonwealth for the transfer of Australian Apprenticeship Services.³⁶⁰ This represents a positive step towards collaboration between levels of government to rationalise responsibilities for service delivery in this space. We reiterate our call for jurisdiction-based one-stop shops providing coordinated services, but advocate the need for the services to be designed within nationally agreed program parameters to ensure consistency and certainty for employers and individuals no matter which jurisdiction they are located in. This will mitigate the risk of further confusion in an area already identified as complex and working less than effectively.

Redefining apprenticeships and traineeships?

International experience also provides insights into a possible approach to refining the current apprenticeships model. In 2012, the United Kingdom commissioned an independent review of apprenticeships to address the question of how apprenticeships can meet the needs of a changing economy. The review concluded that the definition of an apprenticeship has been stretched too far and there is a risk of losing sight of the core features of what makes apprenticeships work. It emphasised that the apprenticeship model of training does not encompass all workplace training. The review argued that apprenticeships require 'a new job role, a role that is new to the individual and requires them to learn a substantial amount before they can do that job effectively'.³⁶¹

Importantly, it also argued that an apprenticeship or traineeship should not be limited by the scope of the job. In a dynamic economy people need to apply their skills to new jobs and sectors, so an apprenticeship or traineeship needs to be broad enough to equip people with genuinely transferable skills.

It may be appropriate to re-examine how the apprenticeship and traineeship models should be defined in the Australian context. The concept of a contract of training between an employer and a worker who is learning skills for a job that is new to them may be blurring in a system which, in its efforts to maximise pathways into learning and work, includes existing worker traineeships, programs supporting entry into work, vocational placements and school-based apprenticeships.

We have canvassed these issues previously.³⁶² However, in view of the imperative for adaptive and higher level skills which will drive demand for higher level qualifications as we head towards 2025, we encourage continued forward-looking and informed debate on this issue. This debate needs to include all stakeholders and focus on identifying the optimum shape of an Australian apprenticeship and traineeship model that will be attractive to prospective new entrants and best serve the needs of the future economy.

VET and higher education—integration in progress

This section considers progress on integration between the VET and higher education sectors and how this is creating pathways for learners to achieve higher level qualifications. As we have discussed earlier, demand for higher level skills will increase. The interface between the VET and higher education sectors needs to facilitate this by supporting and maximising the opportunities provided to individuals who want to achieve higher level qualifications.

AWPA argues that more needs to be done to:

- ✔ put the right funding policies in place
- ✔ systematise efforts made to date by individual providers that are working to create pathways between VET and higher education
- ✔ clarify the purpose and outcomes of VET and higher education offerings, where both sectors are offering the same level of qualifications
- ✔ streamline and simplify Commonwealth and state responsibilities for the tertiary sector.

Funding arrangements—helping or hindering pathways?

In *Skills for prosperity* we recognised the considerable progress made in better integrating the VET and higher education sectors. This is an important policy objective as it provides pathways to further learning. To build on these efforts, we recommended that:

- ✔ a new income-contingent loan scheme be available to support students studying at Certificate IV level and above
- ✔ access to Commonwealth-funded higher education places be extended to VET providers offering specialist degrees with a vocational emphasis, where they meet quality criteria.

We argued that these measures would assist students to choose courses and providers for their suitability rather than cost or loan accessibility and create a more level playing field between VET and higher education.



Since *Skills for prosperity* was published in May 2011, further progress has been made towards building a more integrated tertiary sector. For example, most jurisdictions now offer, or intend to offer, income-contingent loans for VET diplomas and advanced diplomas and trialling for Certificate IV has been agreed through the National Partnership Agreement on Skills Reform.³⁶³

TAFE Directors Australia announced in November 2012 that it will launch an Australia-wide technical and further education scholarships philanthropy foundation in 2013. Its purpose is 'to make every effort to support TAFE students under the proposed COAG-approved national entitlement to training'.³⁶⁴

Unfortunately, less progress has been made in giving VET providers awarding specialist degrees access to Commonwealth-supported higher education places, as we have previously advocated, and courses such as Box Hill Institute of TAFE's Bachelor of Applied Business in Music Industry and Sydney Institute of TAFE's Bachelor of 3D Art and Animation still do not have this access. In both cases substantial fees apply—\$12,800 per year for the Box Hill degree (though their website indicates that FEE HELP may apply) and \$1,800 per subject for the Sydney Institute of TAFE example.³⁶⁵ On the other hand Commonwealth-supported places for degree programs are available in some RTOs in selected disciplines such as nursing and early childhood education (Holmesglen Institute of TAFE)³⁶⁶ and early childhood education (North Melbourne Institute of TAFE).³⁶⁷

Articulation and pathways

One of the key barriers to better articulation between VET and higher education is credit transfer and recognition of prior learning.

In 2010 there were 25,400 commencing domestic higher education students whose previous highest educational participation was a completed VET course. 19,800 of these students (78%) were not offered any credit for their VET study.³⁶⁸

It should be noted that learners use pathways between VET and higher education both ways. In 2010, 32,800 (7.1 per cent) commencing domestic full-time equivalent students in the VET sector had a bachelor degree prior to commencing their VET studies.³⁶⁹ This suggests the importance of creating flexible pathways that enable learners to move seamlessly back and forth between VET and higher education, depending on the skills they are seeking.

The difference in language, measures and descriptive terminology used by the VET and higher education sectors has been identified as a considerable impediment to closer collaboration. Credit points are used in higher education to manage degrees and student progress. By contrast, VET uses student contact hours as the base measurement for funding purposes and uses completion of units to determine student progress. To address this issue many dual-sector universities adopt a conversion factor between student contact hours and equivalent full-time student load.³⁷⁰

Institutional arrangements for articulation and credit transfer to create pathways between VET and higher education vary significantly and are highly dependent on collaborative arrangements between individual institutions:

Southbank Institute of Technology and Griffith University have jointly planned award structures to provide almost seamless pathways from VET qualifications into related higher education awards. There are several other institutional arrangements, such as block credit, specified credit and case-by-case credit assessment regimes.³⁷¹

There is a growing trend for university and TAFE providers to offer joint and integrated programs, but the structure and funding of these varies considerably. For example, Charles Sturt University and the Northern Sydney Institute of TAFE offer an integrated program leading to an Advanced Diploma of Hospitality and Bachelor of Hotel Management.³⁷² The two qualifications can be completed in three years by full-time study.

In contrast Swinburne University (a dual-sector university/TAFE) offers a 'UniLink' degree program in engineering. It offers the Diploma of Engineering as a Commonwealth-supported place for eligible domestic students, and those who successfully complete all units of study in the Diploma of Engineering (UniLink) are guaranteed second-year entry into one of Swinburne's engineering degrees.

At a higher level of integration, the Queensland Government recently officially approved the merger between Central Queensland University and Central Queensland TAFE, setting the stage for the creation of Queensland's first dual-sector university and the provision of more integrated tertiary education in the high-growth Central Queensland region. Links such as these offer people living in the regions greater opportunity to gain higher education degrees.³⁷³

As we have already noted, the required expansion in higher level qualifications will require additional delivery capacity. Tertiary education providers have expanded their enrolments significantly over the past two decades and the use of new, especially web-based, technologies offer many possibilities to provide additional capacity. There are also opportunities to expand access to education and training through partnerships which include sharing of facilities, equipment and infrastructure. For instance in rural areas, universities like Charles Sturt and Deakin have used TAFE facilities to help deliver degrees. Partnerships such as these could be expanded and, together with support for appropriate VET providers to offer more of their own higher education qualifications, as argued above, would help to cost-effectively support the required growth.

Case study: University of Ballarat

The University of Ballarat is a regional multi-sector university. It offers secondary schooling, TAFE, higher education and research opportunities. The university caters for around 25,000 domestic and international students across six campuses.

In December 2011 the Australian Government awarded the University of Ballarat a \$24.8 million grant for its Victorian Regional Dual-Sector University Partnership project. The university will partner with six Victorian TAFEs across the regions to teach industry-relevant degrees.

The university will recognise work experience, diplomas and advanced diplomas as pre-requisites for entry into the final years of degrees to be delivered at TAFE-based higher education centres, creating a new pathway into higher education.

Through the project five new applied degree programs will be introduced, significantly increasing the choice of programs available in the regional areas. Teaching will be delivered through both face-to-face and web-based methodologies with a focus on practical skills that address local workforce needs.

Source: DEEWR, <http://ministers.deewr.gov.au/evans/university-ballarat-students-benefit-248-million-gillard-government-grant>, accessed 31 October 2012.

The unique student identifier is being rolled out from 1 January 2014 for all new and continuing VET students. It is envisioned that the data gathered will assist in credit transfers and recognition of prior learning. The unique student identifier will eventually also be rolled out to the higher education sector, which will greatly assist in the development of knowledge of the extent and effectiveness of pathways.³⁷⁴

Other promising methods of increasing the effectiveness of pathways include grading for the VET programs that are part of pathways to higher education. For example, the University of Adelaide has an Associate Degree in Electronic Engineering developed in collaboration with TAFE, which will be delivered by TAFE. Students who perform well will be awarded significant credit towards the Bachelor of Electronic Engineering.

The implementation arrangements for the new AQF endorsed by the (then) Ministerial Council of Tertiary Education and Employment require that from 1 January 2015 all enrolments must be in AQF-compliant qualifications. The AQF incorporates a qualifications pathways policy which aims to maximise the credit that students can gain for learning already undertaken and covers all education and training sectors that issue AQF qualifications. All organisations issuing qualifications will be required to have clear, accessible and transparent policies and processes to provide qualifications pathways and credit arrangements for students. It is anticipated that this will drive more systematic credit and articulation arrangements across the sectors. For example, the new training package standards specifically require training packages in the new design model to list the credit arrangements existing between training package qualifications and higher education qualifications. The companion volume to the training package is also required to include pathways advice, in line with requirements of the AQF pathways policy.

Nevertheless, there is scope for further evaluation of pathways effectiveness and consideration of other ways in which articulation arrangements can be systematised and funding anomalies resolved.

NCVER is currently undertaking an analysis of effective pathways from VET to higher education which is due to be released in December 2013. Its purpose is to provide information on the effectiveness of VET – higher education pathways based on evidence on the participation, retention and graduation rates of students admitted to university on the basis of a VET award. This analysis will redress the current lack of knowledge about long-term educational outcomes and how providers could increase effective pathways.³⁷⁵

The Office for Learning and Teaching has also funded a research project anticipated for completion shortly, examining existing pathways and articulation models that enhance the participation of under-represented groups in higher education.³⁷⁶

The interface and overlap between VET and higher education

In spite of the good examples of integration and pathways between VET and higher education outlined above, the reality is that the interface between the two sectors remains murky and confusing for learners due to inconsistent funding policies, individualised arrangements between institutions, and lack of clarity about the differences between and purpose of higher level qualifications that are offered in both sectors.

Currently 10 TAFEs in five states offer full-fee associate and bachelor degrees. The majority of this provision is not publicly funded and is still in its early stages. Due to its newness, little evidence exists about the effects of VET-delivered higher education on student progression to higher study or its effects on the relationships between universities and industry.³⁷⁷

In their research on higher education in TAFE, Wheelahan et al. sought the perspectives of various stakeholders on the provision of higher education in VET. On the question of why VET should offer higher education qualifications, there was general consensus among respondents that it was to meet industry's needs in a more flexible way and to meet the needs of students who were not well supported at, or did not have access to, universities.³⁷⁸

More needs to be done in the tertiary education space to determine:

- ✓ who chooses which higher level qualifications and why, and whether the outcomes meet their expectations
- ✓ whether learners feel that they have sufficient information to make informed choices
- ✓ the extent to which funding drives choices, from both the student and institutional perspective
- ✓ whether higher education qualifications awarded by VET providers are indeed achieving more flexibility as well as pathways and opportunities for disadvantaged learners, given their high fees³⁷⁹
- ✓ whether VET higher education delivery is expanding opportunities for those in rural and regional areas of Australia without access to universities.

While a number of research projects have been undertaken or are underway, we believe there is benefit in a review that creates a whole picture of the interface and overlap of delivery between VET and higher education. If requested, AWPAs could lead a review in 2013 with a focus on:

- ✓ the interface between VET and higher education (with a focus on the role of higher level VET qualifications vis-à-vis higher education qualifications)
- ✓ the delivery of higher education qualifications in VET institutions.

Realising the possibilities—the creative and effective use of ICT in teaching and learning

Ensuring the tertiary system is positioned to harness rapidly evolving technologies which have the potential to ‘transform the ways in which teachers, students and their families communicate, collaborate and access educational resources across traditional boundaries’ is critical.³⁸⁰ Our work and workplaces are being transformed continuously by technological innovation, and access to the internet and smart phone technology is expanding apace. This provides immense potential for innovation in both institution-based and workplace learning. The expansion of massive open online courses (MOOCs) also means we are in a global market for skill development with the potential to dramatically change teaching, learning and pathways to employment for many demographic cohorts in both developed and developing countries. The tertiary sector therefore needs to embed new technologies into learning design and course delivery and reflect international best practice. ICT also offers huge potential for innovative pedagogy, with many possibilities for applying customised and creative learning strategies such as game-based learning, but this means ensuring tertiary sector employees have the necessary skills and resources to engage with and apply new technologies effectively, and with confidence. We discuss this latter aspect in Chapter 6.

In the VET sector the National VET e-Learning Strategy is providing leadership in this area. Several trials are being funded integrating numerous new technologies into training packages including virtual classrooms, smartphone applications, tablet computing, touchscreen interfacing and social networking software.

In higher education, the influence of emerging technology is demonstrated by the recent trend towards Open Education Resources and MOOCs. The Australian Government has made funding available to assist the tertiary sector to adapt to new technologies through initiatives including the National VET e-Learning Strategy, Digital Education Revolution and the NBN-enabled Education and Skills Services Program.

For example, with support from the NBN-enabled Education and Skills Services Program, the University of New South Wales is leading a project to develop the BEST (Biomedical Education, Skills and Training) Network. The network aims to combine the expertise, resources and educational technologies of several universities and peak industry bodies to build a network of virtual classrooms delivering biomedical training. Innovative technology trialled in the project includes online interactive laboratory and clinic simulators, diagnostic case books and a collective medical image bank.³⁸¹

Maintaining the momentum and ongoing learning required to keep up with the march of technology continues to be a challenge for all in education and training. Tertiary sector leaders need to embrace e-learning as a forefront issue and support ongoing research, experimentation and learning in this area.

A recurring theme—Commonwealth and state and territory roles in the VET sector

Throughout the strategy and in previous reports we have touched on a recurring theme: the need for rationalisation of responsibilities across the Commonwealth and the states and territories to achieve optimum use of resources, most effective service delivery and best outcomes for industry and learners.

The issue was also addressed in a substantive way in the 2008 review of higher education, which proposed that primary responsibility for regulation and funding of tertiary education be located at the national level. The review went on to delineate proposed roles for the Commonwealth and the states and territories in both VET and higher education.³⁸²

Previously we have also proposed differentiation of roles.³⁸³ In *Skills for prosperity*, we recommended that Australian governments agree to clearer delineation and separation of functional roles, premised on:

- the Australian Government driving coherence of national strategy, policy, regulation and standards
- state and territory governments delivering services; reducing duplication and maximising service impact; providing seamless support for learners and enterprises; streamlining for consistency; and increasing comprehensibility and ease of access.

It is clear from the submissions on our discussion paper that the issue continues to inhibit the development of an efficient and effective tertiary system, with the most tension evident within the VET sector and at the interface between VET and higher education. We have outlined a number of examples in this chapter in relation to career development advice and services, apprenticeships and traineeships and the overlap in delivery between VET and higher education.

Earlier in the strategy AWPA committed to leading a cross-agency collaboration between relevant agencies to streamline and coordinate the full range of existing and upcoming workforce and skills programs. We will also, if requested, conduct reviews of VET in Schools, and the interface and overlap of delivery between VET and higher education. These actions may touch on the issue of respective roles of the Commonwealth and the states and territories.



6

**Strengthening quality in
the tertiary sector**

6 Strengthening quality in the tertiary sector

Growth without quality will not achieve the objectives that are seen as vital for Australia's future.

We need high-quality delivery of education, in both the VET and higher education sectors, that has the confidence of Australian employers, individuals and the community as a whole. Quality was a key theme of *Skills for prosperity* that now requires further consideration.

Much of the discussion in this chapter focuses on the VET side of the tertiary education sector, where, in our view, investment does not match what is required to lift quality. We point to a disparity between higher education and VET in terms of investment in quality and advocate a review of the funding model for VET, similar to the review which was conducted in higher education. We also argue the need for investment to implement robust quality assurance in VET through effective regulation, and to drive quality improvements in the core business of teaching and learning capability in VET, modelled on the higher education approach.

6.1 Investing in quality

Both higher education and VET are large, diverse and highly complex sectors, which makes the delivery of consistent, high-quality education, training and assessment a fundamental concern for government, industry and individual students. Further, as both sectors experience rapid growth, associated with the introduction of demand-based funding, it is essential that high-quality delivery be maintained.

While the Australian higher education sector has not entirely avoided public criticism for incidences of poor provision, the sector has a long history of working to improve quality and recently the Australian Government has been active in ensuring a focus on quality in the sector. Since the late 1970s, universities have been required to monitor their own performance and today they continue to maintain quality through regular formal self-assessment; external academic, industry and peer course reviews; and evaluation of student feedback.

Since the implementation of many of the recommendations of the Bradley Review, the Australian Government has placed an increased focus on quality through the Advancing Quality in Higher Education package. Included in this commitment are building robust quality assurance through the establishment of a national regulator, the Tertiary Education Quality and Standards Agency; introducing mission-based compacts between the government and universities; providing performance-based funding; promoting excellence in learning and teaching; and increasing transparency by establishing the *MyUniversity* website and a University Experience Survey and strengthening the Australian Graduate Survey.³⁸⁴

A higher education standards panel is currently reviewing the higher education standards and will develop new standards to underpin quality in higher education. Key themes to be addressed in the review include the overall structure and scope of the standards; identifying the elements to be encompassed by research standards; and increasing the emphasis on learning outcomes.³⁸⁵

In *Skills for prosperity* we identified the need for a comprehensive package of reforms in the VET sector's quality practices, especially in teaching and assessment. Many of the reforms agreed by COAG under the new National Partnership Agreement on Skills Reform take forward recommendations made in *Skills for prosperity*, or represent steps towards their implementation. For example, the agreement requires jurisdictions to improve the quality of teaching and training and to develop and pilot independent validation of training provider assessments. These reforms, along with the establishment of the ASQA, will assist in raising the quality standards of VET. However, our research and consultations indicate ongoing and persistent quality concerns such as qualifications delivered in very short timeframes, and perceptions of inadequate funding and inadequate support for disadvantaged learners. In addition, there continues to be a gap in the promotion of excellence in teaching and assessment capability.

What is necessary and sufficient funding to deliver quality education and training?

There is a downward trend in funding per student contact hour in VET that we believe needs further investigation in relation to quality. Between 2006 and 2010, government real recurrent expenditure on VET increased by 10 per cent,³⁸⁶ but expenditure per student annual hour decreased by 14 per cent during the same period.³⁸⁷

In Chapter 7 we note that total payments from the Commonwealth to the states and territories for skills and workforce development have decreased significantly with the conclusion of the National Partnership Agreement on Productivity Places Program. We also note that it appears all jurisdictions with the exception of South Australia and the Northern Territory have reduced VET budgets for 2012–13.

The danger in coming years, if the Commonwealth, states and territories continue to tighten their budgets, is that there may be ongoing use of the somewhat blunt instrument of reducing funding per student contact hour to meet growth targets rather than more positive and creative approaches to achieving sustainability and growth. For while increased efficiency is to be applauded and encouraged, the extent of the reduction in expenditure per student annual hour on VET raises questions about the ongoing quality of VET teaching and delivery, especially when compared to the per student hour rate trends in the school and higher education sectors (see Table 7).

Table 7 Commonwealth and state government recurrent expenditure, funding per full-time equivalent student (schools and higher education) and per annual hour (VET) indexed to 1999 (1999=100)

Year	Primary government schools ^a	Secondary government schools ^a	Vocational education and training ^b	Higher education ^c
1999	100	100	100	100
2000	108	103	94	99
2001	113	105	89	92
2002	113	108	92	89
2003	117	113	94	89
2004	124	117	94	93
2005	124	118	91	101
2006	127	116	89	102
2007	128	116	86	102
2008	129	115	82	103
2009	128	115	80	99
2010	130	122	75	108
2011	131	120	75	103

In this table, indexed figures are based on schools, higher education and VET data which has been estimated using the ABS Chain Price Deflator for GDP at 2010–11 prices. More weight can be given to differences in the growth rates than to comparisons at a point in time.

(a) Source: Schools Average Government School Recurrent Costs data. Note that in DEEWR publications for schools the final data for a given year is the financial year data for the previous year. Includes state and territory expenses.

(b) Source: VET Government Recurrent Expenditure per annual hour sourced from Productivity Commission, *Report on government services*, Table 5A.19. Includes state, territory and Commonwealth government expenditure.

(c) Source: Based on published and unpublished higher education data from the Department of Industry, Innovation, Science, Research and Tertiary Education. Operating Grant and Commonwealth Grant Scheme funding only. Excludes student contributions, HELP expenses, research funding, other Commonwealth higher education funding and state and territory government funding. From 2008 to 2011 universities were funded for target places plus over-enrolment above the target funding of up to 5 per cent in 2008–2009 and 10 per cent in 2010–2011. A number of universities enrolled above the over-enrolment limit, particularly in 2009, 2010 and 2011, and received only the student contribution for those places. For 2008 and 2009, funding for over-enrolments was paid in the following year. From 2010, over-enrolments were paid in the actual year. CGS funding for 2010 includes funding for 2009 and 2010 over-enrolments.

We note there has been significant recent publicity about cuts to the public VET provider, TAFE, in several jurisdictions. At the same time we note that shifting to a demand-based funding system has not always been easy for TAFE, whose systems infrastructure and organisational arrangements were established for a more certain world. But TAFE institutes remain the bedrock of the national VET system, offering vital programs in industry areas and geographical locations that many other providers find challenging. While many individual institutes have coped well with these new challenges, AWPA supports those authorities that have recognised TAFE's distinctive role and position in the national VET system and have funded it appropriately. There are great risks if the balance tips beyond efficiency to cuts in quality and services for the diverse student cohort and geographical localities often provided by TAFE.

Certainly the picture for higher education is more positive, though it also experienced a decrease in funding per student annual hour from 2006 onwards.³⁸⁸



In 2010, the Australian Government commissioned a review of higher education base funding. As part of the review, the panel was asked to determine the level of base funding required for Australian universities to deliver courses competitively. While the government has not accepted all the review's recommendations, the report provides a mechanism and data for examining the adequacy of current funding levels.³⁸⁹ In the schools sector, the 2011 *Review of funding for schooling* (the Gonski Report) provided a rigorous analysis of the ways Australian government schools are funded, including the application of funding to support disadvantaged students.³⁹⁰ From a national perspective, this level of research into VET sector funding is missing.

In light of persistent decreases in funding per VET student annual hour, AWPAs recommends that a review be undertaken for the VET sector to determine an appropriate level of funding for delivery of VET to ensure quality standards are met. The review would need to take into account that base funding encompasses contributions from governments, employers and individuals and that a funding model should be flexible enough to accommodate the significant variations that can occur across different modes of delivery as well as the additional support required for disadvantaged students.

We note the NSW Government has announced that it will commission the Independent Pricing and Regulatory Tribunal to provide advice on VET price and fee arrangements prior to the implementation of the reforms to the NSW VET system. The amount of fees and subsidies will be published in 2013.³⁹¹ The Victorian Government has also previously commissioned work on this topic.³⁹²

Recommendation 6.1

That the Australian Government commission a review of funding in the VET sector to determine an appropriate price for the delivery of high-quality VET.

6.2 Robust quality assurance

The quality and consistency of VET qualifications is one of the most significant issues facing the sector. It is a serious problem if industry and individuals cannot have confidence that a nationally recognised qualification issued by one provider is of the same standard as one issued by another.

In previous reports such as *Skills for prosperity* we made a number of recommendations as part of a proposed package of reforms for more effective regulation and the building of excellence in teaching, learning and assessment.³⁹³

This included recommendations for more effective regulation by ensuring adequate resourcing of the National VET Regulator and additional quality criteria being applied for providers seeking to deliver publicly subsidised places. Some of these measures are in the process of being implemented. ASQA is now operational and additional quality criteria are applied in some jurisdictions, for example in South Australia and Victoria, with others such as New South Wales and Queensland signalling their intention to follow suit. It could be argued that these initiatives need further time to gain traction and deliver results and that their impact needs to be evaluated before further interventions are contemplated. Yet recent publicity seems to indicate that quality issues are perhaps even more serious and endemic than first contemplated.

Our view is that it is imperative to proceed with a more comprehensive package of reforms to complement and support those already underway and to address some of the most serious risks in the system.

The review of the standards for the regulation of VET

The Standing Council on Tertiary Education, Skills and Employment has asked the NSSC to undertake a review of the standards for the regulation of VET focusing on issues of quality³⁹⁴ and we welcome the opportunities offered by the review. During consultations, stakeholders identified that the main issue requiring significant change is ensuring quality training and assessment. We support the principles outlined in the NSSC issues paper that will be used to guide the review.³⁹⁵

In the following sections we outline the two key measures that we believe would significantly contribute to a more robust quality assurance system and argue that they should be considered by the NSSC during its review of the VET standards:

- ✓ externally set and administered assessments in high-risk qualifications
- ✓ higher level requirements for RTO applicants seeking to deliver identified high-risk qualifications.

It may be argued that these measures represent an increase in regulatory burden. However, we believe that they are fit-for-purpose regulatory interventions, set at the right level to achieve the desired objectives of high-quality learning outcomes. They will enable the regulator to focus on the high risks in the system with a lower level of regulatory intervention where it is less needed. The payoff will be industry, learner and community confidence in the outcomes delivered by the VET sector.

We support the other measures flagged in the NSSC issues paper and reiterate recommendations we made in *Skills for prosperity*.

A system of externally set and administered assessments

In *Skills for prosperity* we recommended implementation of a system of external verification or validation of assessment, using a sampling approach. While we welcome the different forms of independent verification being trialled in the states and territories through the National Partnership Agreement on Skills Reform,³⁹⁶ we are concerned there appears to be a long timeframe for completion of the trials and evaluation of the outcomes. In addition, although the agreement states that this piloting will inform the development of national model it does not provide a mechanism or timeline for its development and rollout.

In our view the current approach and timeframes are inadequate. The piloting, evaluation and rollout need to be accelerated. However, while validation and verification will help a shift to focus on outputs, even when fully implemented validation and verification will still be based on a sampling methodology. More is needed.

A more structured solution to the ongoing concerns about quality and consistency might be to require VET students, initially in high-risk VET qualifications, to complete a final mandatory assessment that is externally set and administered. We define high-risk qualifications as those identified by ASQA, jurisdictional or occupational regulators, or other authoritative bodies such as the Productivity Commission, as subject to ongoing quality concerns. Recent examples of such qualifications are the Certificate IV in Training and Assessment³⁹⁷ and Certificates III in Aged Care, Child Care and Disability.³⁹⁸ High-risk qualifications are also those required for occupations which have inherent public safety risks, such as those required to be a licensed electrician.

A final assessment that is fully independent of the delivery RTO might go some way to restoring confidence in the quality of VET qualifications and provide a guaranteed consistency of outcomes.

One example of such an assessment is the capstone assessment which has traditionally been used, especially in the trades, to verify at the end of a course of study that a student has indeed mastered the key elements of the vocation by testing their overall knowledge, understanding and skill in the field of study. The EE-Oz Industry Skills Council has already implemented capstone-style testing for units of competency related to safety in its Electrotechnology Training Package. While these assessments are only focused on safety elements and do not cover all units, their success has prompted EE-Oz to investigate extending capstone testing to cover more units. The evidence from the electrotechnology safety capstone is that students take the assessments very seriously and it has improved confidence in student outcomes among both industry and licensing authorities.³⁹⁹

EE-Oz electrotechnology capstone

The electrotechnology capstone tests are focused on electrical safety issues. The tests were developed in response to a need identified by Australia's Electrical Regulatory Authorities Council for assurance that people applying for electrician licences have demonstrated knowledge of the 66 essential performance capabilities. The capstone tests have been designed to test 31 of these capabilities; the remaining 35 are assessed by RTOs.

RTOs are required to conduct the capstone assessment after the completion of all other assessment requirements of the National Electrotechnology Training Package Certificate III in Electrotechnology Systems Electrician qualification. The industry-approved final capstone assessment requires that the student undertake a six- to eight-hour test comprising 70 per cent practical and 30 per cent written.

The practical assessment is conducted by the RTO, which obtains instructions and a marking key for the examination from VETASSESS. The written assessment is conducted online through VETASSESS under the supervision of the RTO. VETASSESS offers these assessments through its assessment system known as Assessitnow. The questions in Assessitnow have been quality-assured by EE-Oz and the regulators.

Source: EE-Oz, *Licensing & Regulation*, <http://www.ee-oz.com.au/index.php/electrotechnology/licensing-regulation>, accessed 31 December 2012.

AWPA recommends that the NSSC consult on and develop the model for final external assessments during its review of the national standards for VET regulation. We note that there are several challenges which would need to be explored with stakeholders, including who will set the assessment, how it will be administered, who will assess it and how the costs will be managed. We consider that the following key elements would need exploration, with each requiring options development and costings:

- Industry Skills Councils would develop the assessments in the identified qualifications in consultation with industry and other stakeholders.
- The assessments should vary in nature depending on the qualification. For example, the assessments for the Training and Education Training Package would ideally require a written examination focused on VET pedagogy supplemented by submission of teaching resources and a practical involving the student delivering a teaching session. However, a starting option could be a written test completed online. Consideration would need to be given to how best to supervise these online tests.
- Administration of the test should be rigorous, and could include an online model similar to the one used in the electrotechnology safety capstone,⁴⁰⁰ with use of examination supervisors. Administration could also be conducted by an RTO (potentially allocated by the regulator) with the same qualifications on scope but independent of the delivery RTO.
- External assessment would be an essential feature to guarantee consistency of outcomes and independence from the RTO that delivered the qualification.

We acknowledge that whatever model is adopted, additional costs for the RTO may ultimately be passed on to the student. However, we believe this is likely to be a worthwhile investment that will generate long-term benefits through consistent, quality learning outcomes in which industry and individuals can have confidence.

It would also be important to introduce this kind of assessment in a way that did not deter students, especially disadvantaged students, from undertaking courses that involve what might be perceived as daunting final-year examinations.

Higher level requirements for RTO applicants in high-risk areas

In *Skills for prosperity* we argued for more stringent requirements for applicants seeking to deliver the Training and Education Training Package (TAE), as already imposed by some jurisdictions. This is based on the fact that the TAE provides the central qualifications for teachers in the VET sector and there was persistent evidence of systemic and widespread concerns about quality in this area.

We continue to advocate that entry to this market should be subject to more rigorous requirements—specifically, that applicants seeking registration to deliver qualifications in the TAE must meet the requirements of the national VET standards and in addition must:

- ✓ demonstrate a track record in delivery of nationally recognised qualifications in an industry area other than the TAE for a period of at least two years
- ✓ not be a holder of provisional registration
- ✓ demonstrate a track record in ongoing formal professional development of their staff
- ✓ meet a requirement for an external validation conducted by an expert validation panel before initial and renewal registration.

They would also be required to meet the more stringent governance requirements for all new applicants outlined in the next section.

The requirements should also apply to those RTOs currently registered to deliver TAE and other identified high-risk qualifications, once they seek renewal of registration. This will assist in lifting the standards across the sector over time, ensuring they will eventually apply to current RTOs as well as new entrants.

Recommendation 6.2

That the National Skills Standards Council's review of the standards for the regulation of VET consider implementation of the following measures:

- ✓ development of a requirement for externally set and administered assessments for identified high-risk qualifications
- ✓ introduction of higher level requirements on registered training organisations seeking initial and renewal registration to deliver the Training and Education Training Package and other identified high-risk qualifications.

Other quality assurance measures

We fully support several of the approaches flagged for consideration in the NSSC's issues paper, in particular the possibility of lifting the standards for new RTO entrants to the training market and applying provisional registration for newly registered RTOs.

Lifting the standards for new entrants to the training market

According to the NSSC's issues paper, consultations have identified that entry into the market is too easy.⁴⁰¹ We agree, and support the option of lifting the standards for all new RTO applicants in addition to imposing specific higher level entry requirements on those applicants seeking to deliver the TAE and other high-risk qualifications as recommended above. While we acknowledge the difficulty in assessing applicants for registration who can only demonstrate capacity to deliver rather than a track record in the industry, we believe a stronger focus in the following two key areas would assist in more rigorous consideration of all new applications:

- *Governance.* Governance is a risk indicator considered by ASQA at both applications for initial and continuing registration.⁴⁰² AWPA believes the criteria could be strengthened to require that RTO applicants have sufficient governance and management structures in place to ensure the quality of training delivery and assessment. This would include academic or advisory councils that comprise expertise in teaching and learning, competency-based training and assessment, the vocational areas within scope of the application, and the client groups served by the RTO applicant. The applicant's systems should demonstrate that this expertise is used to monitor and improve learning outcomes.
- *Currency and depth of relationships with industry and key stakeholders.* It is essential that applicants can demonstrate currency and depth in their relationships with enterprises, employment agencies, community, industry and other peak bodies so that they are up to date with contemporary developments in occupations and industry settings. Evidence should be demonstrated through concrete factors such as contributions to the applicant's design of offerings, planning, and proposed delivery and assessment activities, and should also be reflected officially in the applicant's governance model.

These more stringent requirements could also be applied to RTOs seeking renewal of registration.

Provisional registration for newly registered RTOs

In addition to imposing higher level requirements for RTO applicants to achieve registration, we support provisional registration for newly registered RTOs. This was an idea that was flagged as a possibility in the NSSC issues paper⁴⁰³ as a way to manage a significant risk in the system around new entrants, and identify and resolve issues of poor quality early. We believe provisional registration should incorporate the following elements:

- It should be in place for a set period of time (one or two years) with potential for extension if required.
- Limits should be imposed on the RTO's scope of registration and breadth of activity during the provisional registration period.
- Provisional RTOs should be subject to more intensive scrutiny by the regulator and full registration should not be granted unless there is a satisfactory audit outcome at the end of the period.
- A sample of the RTO's assessments should be subject to mandatory external validation.

The national regulator

AWPA supports the national VET regulator, ASQA, and we believe it provides the opportunity to drive reforms consistently across Australia. However, to be successful it must be adequately resourced. As outlined in *Skills for prosperity*, data shows that VET quality regulation is considerably underfunded in comparison to the higher education sector.⁴⁰⁴ With proper resourcing ASQA would be better positioned to take a proactive approach to quality regulation. In addition, ideally all states and territories should refer their regulatory powers to ensure consistency across a single set of national standards and reduction of regulatory duplication.

AWPA also advocates continuing work towards merging the functions of the Tertiary Education Quality and Standards Agency (TEQSA) and ASQA into a single national regulatory body. Skills Australia's 2009 *Foundations for the future* report argued that as the VET and higher education sectors became increasingly connected, with more collaboration between and assimilation of institutions, it would be essential to put in place an integrated apparatus for governance of regulation and quality. Although the Australian Government originally intended for TEQSA to expand and cover the entire tertiary sector from 2013, there has been no further development in this area.

We also support incorporation of best practice features to enhance regulatory efficiency and effectiveness and to ensure procedural fairness.

A provider classification system

TAFE Directors Australia has suggested that a provider classification system could assist in managing the challenge of regulating the wide diversity of providers in the VET sector, and could assist learners and industry to distinguish providers by factors such as size, scope, history, quality and capability.⁴⁰⁵ The system would recognise that regulatory requirements may differ according to the size and spread of operations, level of risk, and depth of experience.

One benefit of this approach is that a system of classification could align with the Higher Education Standards Framework, which outlines standards for six provider categories. Ultimately this could assist with the move towards a single tertiary sector and the future alignment of ASQA and TEQSA.

However, on balance we consider that the elements of diversity across VET providers are already covered by the four categories of risk indicators used by ASQA and that they give the regulator flexibility to intervene based on an assessment of those factors.⁴⁰⁶

Transparency of information

Finally, we continue to stress the need for transparency of information in VET, as exists in higher education, in relation to regulatory status, audit outcomes, sanctions and RTO performance to drive quality and client choice.⁴⁰⁷ Transparency is essential at both the system and individual provider level.

A key measure to improve transparency in the VET sector has been the launch of the *My Skills* website in 2012. *My Skills* allows students and other interested parties to research courses being offered by registered providers. It is planned that *My Skills* will eventually cover student fees, results of satisfaction surveys, individual campus information and links to local job opportunities.⁴⁰⁸

We note that both the New Zealand and United Kingdom systems provide well-developed approaches to VET and higher education transparency by mandating requirements for the publication of various aspects of performance. The New Zealand Qualifications Authority undertakes a periodic 'external evaluation and review' of all tertiary education providers (including universities, polytechnics, institutes of technology, private training establishments and industry training organisations). A report is published for every completed review and is available on the agency's website.⁴⁰⁹

In the United Kingdom, the Further Education Public Information Framework provides information on key performance indicators for further education providers. Users are able to search for providers and find their scores in four key performance areas relating to success rates, learner destinations, learner satisfaction and employer satisfaction.⁴¹⁰

We welcome the fact that transparency is one of the key issues for consideration in the NSSC's issues paper.

6.3 Building high quality in VET through professional development

Earlier in this chapter, we canvassed the argument for a review of VET, similar to the review that was conducted in higher education, and advocated more robust quality assurance in the VET sector to address persistent concerns about poor-quality delivery and assessment. However, while effective regulation is necessary, it is not sufficient to create a high-performing VET sector that is valued by its clients and inspires confidence in its outcomes. We need strategies and measures in place to ensure that we are building continuous improvement and excellence in teaching, learning and assessment in RTOs. International examples and the higher education model of promoting teaching excellence help make the case for a strong and coordinated national approach to building capability in the VET sector.

The Productivity Commission in its 2011 report on the VET workforce noted:

The VET workforce, like the early childhood, schools and universities workforces, is primarily comprised of 'educators'. The role of its members is complex, multi-dimensional and resists generalisations. Some of the tasks they fulfil are common to all educators: impart learning; motivate and encourage students to develop; use teaching aids and materials effectively; assess students fairly and accurately; collaborate with other educators; and maintain and develop their own educational skills.

However, unlike most of their counterparts in other education sectors, VET teachers, trainers and assessors are 'dual professionals', with a range of capabilities variously recognised in either the education or industry spheres. In addition to their educational capabilities, these professionals are expected, if not required, to have strong industry currency—that is, to be in touch with the day-to-day practices, solutions and challenges of industry work.⁴¹¹

The current minimum qualification for VET teachers, in addition to their industry qualification, is the Certificate IV in Training and Assessment. If well taught this qualification can provide a sound base for effective practice, although it is a lower level qualification than the bachelor or postgraduate programs required to become a secondary school teacher. Yet, as noted by the Productivity Commission, VET teachers have challenging roles. They often interact with a large number of disadvantaged and special needs students, who require additional support and attention, including those who did not have positive school education experiences. They also need the skills to build adaptive capacity in their students so that graduates are equipped for a world of work that is constantly changing.

When the Certificate IV became the minimum teaching qualification for VET teachers, many university departments that specialised in VET teaching, learning and assessment lost a significant percentage of their core business, which has limited their research and development programs in VET teaching and delivery. Although there are still some university departments focusing on the VET sector, such as those in Ballarat, Charles Sturt and Griffith Universities as well as the LH Martin Institute, overall the number of VET university-based academics has diminished.

To support the development of VET practitioners, Innovation and Business Skills Australia (IBSA) recently developed a VET practitioners capability framework that categorises VET practitioners into three levels and documents the main capabilities required (see Figure 9).

Figure 9 VET practitioners capability framework



Source: <http://www.ibsa.org.au/news-and-projects/current-projects/12-09.aspx>.

IBSA has found that the Certificate IV in Training and Assessment meets the requirement for level 1 (base level) practitioners while the Diploma in Training and Assessment fits fairly well for level 2 practitioners. However, level 3 practitioner capabilities are generally not covered by the TAE10 training package. The capabilities associated with level 3 practitioners describe a person with high-level expertise in teaching and assessment who demonstrates leadership skills and can mentor other practitioners. IBSA is currently considering options to fill this gap, including developing units within the TAE training package to cover level 3 practitioner capabilities and mapping undergraduate and graduate programs in the higher education sector to the capability framework.

This framework demonstrates the importance of continuing professional development to enable VET teachers to attain high levels of capability. It also highlights the need to address gaps in current provision.

International approaches to ensuring quality in VET

International examples demonstrate a strong commitment to teaching and learning excellence and support for VET practitioners.

In the United Kingdom, a Learning and Skills Improvement Service has been established to accelerate quality improvement and achievement in the VET sector. The program develops resources that help providers improve quality. This includes identifying and sharing good practice throughout the system and providing tailored programs of support to VET teachers.

Following the Lingfield report into professionalism in the further education sector, the UK Government recently announced the establishment of a Further Education Guild to act as a focal point for government efforts to promote professionalism in the sector. The guild will seek to enhance the reputation and status of the sector by providing a single collective focus for raising standards of professionalism and being a custodian of excellence. Individual colleges meeting required standards will be awarded 'chartered status' as a public stamp of recognition.

In Switzerland, the Swiss Federal Institute for Vocational Education and Training provides basic and continuing training to VET professionals and undertakes research and development in the VET field. Among its offerings are continuing education and training courses designed to upgrade the skills of VET professionals; enable VET organisations to develop their activities; provide VET managers with advanced training; and promote quality and innovation within the Swiss VET system.

Finland also provides professional development for VET teachers, through its National Centre for Professional Development in Education, called Opeko. Opeko is a continuing education centre for professionals in education. The Finnish National Board of Education has also designed two continuing training programs for vocational teachers: the specialist in competency-based qualifications; and studies for teachers to increase their competence in the world of work.

Sources: <http://www.lsis.org.uk>; Lingfield, R, 2012, *Professionalism in further education: Final report of the independent review panel established by the Minister of State for Further Education, Skills and Lifelong Learning*, Department for Business Innovation and Skills, UK Government, London; <http://www.ehb-schweiz.ch/en/Pages/default.asp> and <http://www.educode.fi/>.

The Australian higher education model

As we noted in Chapter 5, in Australia the VET sector has national bodies responsible for regulation (ASQA), for standards setting (NSSC) and for the collection of data and research (NCVER). However, there is no national body driving quality improvement and professional development for the 5,000 RTOs in the sector, nor is there any overarching national strategy or program to provide a framework for coordinated activity and leadership.

In contrast, the Australian higher education sector with fewer than 250 institutions has an Office for Learning and Teaching with funding of \$50 million over four years for the Promotion of Excellence in Learning and Teaching in Higher Education Program.⁴¹² The office promotes and supports change in higher education institutions for the enhancement of learning and teaching. Its responsibilities include:

- providing grants to academics and professional staff to explore, develop and implement innovations in learning and teaching and to develop leadership capabilities
- commissioning work on issues of strategic significance to the higher education sector to inform policy development and practice in relation to learning and teaching

- ✔ managing a suite of awards to celebrate, recognise and value teaching excellence and programs that enhance student learning
- ✔ funding fellowships and secondments for leading educators to address significant national educational issues
- ✔ disseminating resources on innovations in learning and teaching
- ✔ supporting the development of effective mechanisms for the embedding of good practice in learning and teaching in Australian higher education
- ✔ encouraging collaboration and sharing of good practice for improved student learning outcomes
- ✔ facilitating networking and professional development opportunities for academics and professional staff.

Other approaches in Australia

National initiatives in Australia like the Office for Learning and Teaching are currently lacking in the VET sector, although some jurisdictions and organisations have their own initiatives. The former Commonwealth Reframing the Future program provided significant resources and funding for VET staff development.⁴¹³ When the program was wound down in 2008 governments agreed that responsibility for VET workforce development rested with the states and territories and with individual providers.

There has been no national and broad-based approach to VET workforce development since, and current approaches to professional development vary considerably across the jurisdictions. In April 2012, COAG signed up to an ambitious set of reforms to the national training system. The package included a revised National Agreement for Skills and Workforce Development and the new National Partnership Agreement on Skills Reform. However, although these agreements emphasise the importance of quality, there is no specific focus on the professional development of the VET workforce and its contribution to quality outcomes.

As Wheelahan and Moodie point out, there are many organisations, networks and other bodies committed to improving the quality of VET practice, but they are diverse, often small, and have a specialist focus such as by industry, occupation or target group.⁴¹⁴

Examples at the state and territory level include:

- ✔ the Victorian VET Development Centre⁴¹⁵
- ✔ Queensland's VET Professional Development website, which provides access to information and resources to support VET teachers⁴¹⁶
- ✔ TAFE NSW's website for teachers and support staff to collaborate, ask questions, and share knowledge tips and experience with each other.⁴¹⁶ NSW State Training Services provides support for broader VET networks and communities of practice⁴¹⁸
- ✔ Western Australia's WestOne Services, which provide support, advice and professional development to managers and lecturers in both public and private training organisations across Western Australia.⁴¹⁹ The services and resources they provide to VET teachers include professional development workshops, online presentations, and a range of career development, VET teaching and learning materials
- ✔ South Australia's education department, which conducts professional development seminars, workshops and training sessions for RTO providers.⁴²⁰ Each professional development workshop is targeted to a specific audience from novice to advanced VET practitioners.



However, apart from the Victorian VET Development Centre, which receives approximately \$4 million from the Victorian Government,⁴²¹ these programs generally do not have substantial funding or public profile, are limited in scope, or are only available to certain categories of VET teachers, for instance within the TAFE sector.

At a national level the Australian Council for Private Education and Training, the Industry Skills Councils and organisations like the Flexible Learning Advisory Group provide a number of resources and programs to support VET teacher development. The NCVER through its community of practice research scholarships also supports professional development, albeit and quite justifiably with a research focus.

There are excellent elements to each of these programs; however, their focus on quality teaching, learning and assessment is variable and they are not accessible to all. We consider it critical that this void is filled to ensure *all* VET teachers, in both the public and private sectors, and throughout Australia, have access to quality VET professional development. Given the concerns about consistency of assessment throughout the sector, an emphasis on assessment policy and practice is required to lift the overall quality of the sector.

A strong and coordinated national approach

In the 2012–13 Budget, the Australian Government redirected \$18.1 million over three years from the NWDF to support the establishment of three Australian Skills Centres of Excellence.⁴²²

The centres will support innovative production processes and teaching and learning methods in the VET sector. Each centre will receive \$2 million per annum and be administered by a consortium led by an RTO in partnership with industry, state and territory governments and other relevant stakeholders. Commonwealth funding for the centres will be supplemented by co-investment from industry or state and territory governments.

However, on the available information, the nature of the centres and their exact focus is unknown. Further, we are not confident that this initiative will achieve the scale and impact of change and improvement required for the sector. In both *Australian workforce futures* and *Skills for prosperity* we recommended that a national workforce development strategy be developed for the VET workforce to elevate the issue as a central national priority.⁴²³ This was to include an investment of \$40 million per annum.

Given the complex and varied backgrounds of VET learners, the diminished academic focus on VET, including VET pedagogy, the variability of current programs provided by jurisdictions and the general lack of emphasis on quality improvement in teaching, learning and assessment, we continue to recommend a new national body and program. The new body would be similar to the Office for Learning and Teaching. It would have comparable funding and would be responsible for distributing the professional development funds we recommended in *Skills for prosperity*. Its role would be to drive and support teaching, learning and assessment in VET, with improvement of assessment knowledge and practice being a top priority. The new body would also prioritise professional development for VET teachers in:

- new ways of learning that equip learners with the adaptive skills needed for the changing nature of work and workplaces and for operating in the global marketplace
- e-learning approaches, including e-assessment and flexible and blended learning options
- teaching LLN, given the shortage of specialist capability in this area and the centrality of achieving better LLN to lift workforce participation and productivity
- capability in the delivery and assessment of higher level qualifications, given that Australia's workforce of 2025 is projected to be increasingly higher skilled.

In view of the prevalence of contract and casual teaching in VET, it is imperative that any new initiatives are accessible to contract and casual staff.

The new body would need to work collaboratively with existing bodies in the jurisdictions to avoid duplication, promote coordination of effort and resources and share good practice. It would also need to work with the peak provider groups such as the Australian Council for Private Education and Training, the Enterprise RTO Association and TAFE Directors Australia. Ultimately, over time, there may be potential for the body to become sector owned and managed.

AWPA also reiterates recommendation 15 in *Skills for prosperity* that funding be provided for a program for professional development in a VET workforce development strategy. Funding for the program would be allocated on the advice of the new national body.

Recommendation 6.3

That a national body and program be established, based on the model of the Office for Learning and Teaching, to:

- drive excellence in VET teaching, learning and assessment
- design and promote teaching and learning strategies that can be used to develop adaptive capacity in individual learners
- promote effective use of technology in teaching and learning
- provide a substantial program of professional development in teaching and learning strategies to improve language, literacy and numeracy
- develop and implement a national VET workforce development strategy.



7

Investment for growth

7 Investment for growth

To sustain Australia's economic growth we recommend that total real spending on tertiary education increases in line with the long-term real GDP growth rate. This is estimated at an average of 3.3 per cent in our higher growth scenarios and by Treasury at 3.1 per cent. If spending on tertiary education is maintained at today's share of GDP, as recommended, Australia will be spending 0.1 per cent of GDP more in this area in 2025 than currently projected by Treasury.⁴²⁴ The revenue benefits this investment will bring will far outweigh the costs.

Our recommendations provide a suite of measures that will position Australia to meet future skills and workforce development needs, regardless of what the future holds. Some require additional investment, while others can be achieved within existing resources or through efficiencies. To realise Australia's capacity for growth we recommend additional investment of public and private expenditure per year to 2025 (see full costing table in Appendix 4), with this additional expenditure increasing at an annual rate of \$1.3 billion (2011–12 prices) by 2025.⁴²⁵

We identify three main areas of investment for future growth:

- meeting industry demand for higher level qualifications
- supporting the less advantaged to participate in training and work
- addressing the clear and urgent need to improve LLN skills.

These areas of focus are underpinned by strategies to increase productivity by supporting workforce development, measures to improve quality and equity and ways to ensure we have the adaptive capacity we need to meet the challenges of the future world of work.

The payoff for the investment we recommend includes improved productivity, avoidance of skills shortages and opportunities for individuals through better skills and greater labour force participation. Clearly the economy, society and the government would benefit, and in this chapter we consider the benefit to government revenue just from the increase in participation that our recommendations would support.

Accordingly, we have compared our recommended additional investment to the increase in expenditure as estimated by the Treasury, consistent with a continuation of existing policy and the projections of increased participation in the 2010 Intergenerational Report (IGR). We estimate that by 2025 the Treasury expenditure projection on a comparable basis with our estimate of public expenditure on tertiary education would amount to around \$28.2 billion. By comparison the estimated expenditure in 2025 consistent with our proposals would amount to around \$30.3 billion, or about \$2.1 billion more than the cost of maintaining existing policy as projected by the Treasury.⁴²⁶

We have further estimated that by 2025 this additional expenditure of around \$2.1 billion would support increases in labour force participation and higher economic growth, resulting in increases in annual government revenue, over and above the Treasury IGR projections, amounting to \$24.8 billion in the Long Boom, \$6.7 billion in Smart Recovery, and \$10.3 billion in Terms of Trade Shock (see Appendix 6 for a full discussion of the methodology).

Clearly these estimates of the additions to revenue by 2025 greatly exceed the estimated additional cost of around \$2.1 billion. Therefore we can say with confidence that the additional expenditure involved in funding our proposals is a sound investment.

These outcomes, including the increased participation rate, could be attained through increased migration rather than increased training. However, this approach would mean that existing Australian citizens would have a higher level of unemployment and a lower average level of skills, wages and job opportunities, relative to our preferred outcome. This approach would also result in labour shortfalls, and highly skilled migrants may not be available. Furthermore, we would also experience lower levels of economic growth.

7.1 Meeting demand for higher level qualifications

Our modelling projects that in the three higher growth scenarios, industry demand for total qualifications held by those employed, unemployed and not in the labour force will increase at an annual rate of between 3 and 3.9 per cent. In addition, the modelling projects that growth in total qualifications held will be strongest at higher qualification levels, that is, diploma and above. We therefore recommended in Chapter 1 that Australian governments support the achievement of a minimum annual growth of 3 per cent in tertiary education qualifications to 2025 to meet the additional demand for qualifications, recognising that higher level qualifications will grow relatively faster.

To achieve the additional growth in qualifications, we are recommending an expansion of public and private funding of at least 3 per cent per annum to meet industry demand. This 3 per cent increase in funding is in real terms, and assumes similar levels of indexation in higher education and VET for the publicly funded component.

Investing an additional 3 per cent per annum would require an additional \$860 million in public and private expenditure in 2014, compounding annually to reach \$1,190 million in 2025.⁴²⁷ The public sector contributes the major part of this investment. For example public grants currently provide for 80 per cent of the revenues of the VET sector and 100 per cent of VET support funding such as incentives to employers. Government grants and advances for student loans provide about 60 per cent of all university revenues. The government share of both VET and higher education is greater when revenues from international students and research-related funding are excluded. We consider it is reasonable that individuals and employers should bear a fair share of the projected expenditure and ongoing consideration of this issue is advocated.

7.2 Supporting the less advantaged to participate in training

As discussed in Chapter 3, there is a clear relationship between qualifications and employment. Investing in skills development to support the less advantaged is crucial in ensuring that people do not get left behind.

The Bradley Review recommended additional support for learners from low socioeconomic backgrounds to promote their participation in higher education, which was accepted by the government.

There are, however, more than three times as many learners from the lowest socioeconomic quintile in VET than in higher education. We therefore recommend additional funding for VET of at least \$200 million per annum, which is above that of the Bradley Review but at the same time recognises the investment already made by the jurisdictions. It seems likely that the required amount will be considerably larger than this. AWPA allows for continuing growth in our cost projections to \$700 million by 2025 but a full assessment of existing provision for the disadvantaged learners in VET should be considered as part of the VET funding review recommended in section 6.1.

In addition, we noted in *Skills for prosperity* that there is inequity in income support provision between VET and higher education. Higher education students in receipt of Commonwealth income support under Youth Allowance, Austudy and ABSTUDY gain access to Student Start-Up Scholarships of \$1,097 per six months of eligible study, but their VET counterparts on income support are not able to access these payments. We reiterate our call for equity in relation to access to these scholarships for VET students, particularly as they are likely to experience greater levels of disadvantage than students in higher education.

About 80,000 VET students are estimated to receive the various forms of income support in 2012–13. Provision to these students of the start-up scholarship would cost just under \$180 million per year.

Recommendation 7.1

That the Australian Government extend student start-up scholarships to full-time VET students in receipt of government income support.

7.3 Language, literacy and numeracy

In *Australian workforce futures* we highlighted the need to lift the unacceptably low levels of literacy and numeracy in Australia. As discussed in Chapter 4, improving literacy and numeracy must underpin Australia's efforts to meet industry demand for higher level qualifications. This issue needs to be taken seriously and funded appropriately, and we recommend investment in a range of measures to support the achievement of improved literacy and numeracy.

Our recommendations to support an increase in qualifications by 3 per cent per annum to 2025, and also to provide extra support to the less advantaged, can be expected to have a positive impact on improving LLN.

We also make more specific recommendations in this area. The National Foundation Skills Strategy for Adults, launched on 28 September 2012, provides an opportunity for all levels of government to develop innovative and collaborative strategies to raise Australia's LLN skill levels. However, it will take time for it to be fully implemented. It will also take time for the associated policies to have a noticeable impact on LLN. Our recommendations aim to bolster the implementation of the Foundation Skills Strategy by recommending funding for many of the activities within the strategy and addressing challenges and gaps in service provision that we have identified.

The total cost of our specific LLN recommendations is \$16 million in 2014, which includes a national sample survey for the assessment of LLN, a national public awareness campaign, comprehensive national LLN information service, Workplace Champions Program, upscaling of the LLN Practitioner Scholarship and national pilot of online foundation skills assessment. Given the scale of the challenge this can be argued to be a relatively modest amount, but the issue will also be addressed through our broader recommendations to raise qualification levels and support the less advantaged to participate in training and pathways to employment.

It would be difficult to overstate the benefits that would flow from this investment. They would range from providing individuals with increased economic opportunities, to supporting the economy-wide benefits that flow from achieving higher participation. Many of the benefits would flow directly to disadvantaged individuals, supporting a more inclusive society.

7.4 Strategies to support workforce development, quality and adaptive capacity

To complement the focus on increasing qualifications, supporting the less advantaged to participate in training and improving language, literacy and numeracy, we recommend a range of strategies to assist in achieving our vision. While some of these strategies are within existing resources, the total additional cost is estimated at \$100 million in 2014.

Strategies to increase productivity by supporting workforce development include leveraging government-funded training programs to encourage employers to maximise the capabilities of their employees through changes to work organisation, better alignment of government programs to support workforce development, and expansion of business improvement services for SMEs.

To be prepared for what the future might hold, individuals and education institutions need creative and flexible ways of responding to change. We advocate strengthening and aligning career development services to encourage people to manage their careers. Given changing industry demand, we also caution against the use of a 'firstness' approach to public funding. We highlight the importance of stakeholders working together to ensure that we have employer-ready graduates and graduate-ready employers.

Given ongoing concerns about quality, we identify a range of measures to improve quality in the tertiary sector. This includes a recommendation for a review of VET funding to determine an appropriate price for the delivery of high-quality VET. AWPA believes that for high-risk qualifications, there is a case for considering a requirement for externally set and administered assessments, and more stringent registration requirements for RTOs. Much more also needs to be done to ensure quality teaching and learning in the VET sector, and we recommend a new national program and overseeing body comparable with the Office for Learning and Teaching in the higher education sector.

Together, these recommendations will position Australia as a knowledge economy, and should be considered as a package rather than as individual initiatives.

7.5 Context of investment

The investment levels we recommend in this chapter were determined in the context of recent changes in funding models in both higher education and VET.

The most notable development in the context of higher education is the introduction of demand-led funding, which has resulted in significant increases in enrolments. From 2009 to 2011, domestic student commencements in higher education (all levels) increased by an average of 4.5 per cent per annum.⁴²⁸ Our modelling indicates that industry demand will require this growth to continue in each of the three higher growth scenarios.

Student numbers in VET increased at 5 per cent per annum from 2009 to 2011 but the change has been patchy. Victoria, the first state to introduce entitlement funding, had a 10 per cent per annum growth and the others much less. Numbers in South Australia have increased significantly since the introduction of entitlements in 2012.⁴²⁹ The three higher growth scenarios project demand for VET increasing to 2025, but at a slower rate than for higher education.

As noted above, it is important to consider how the increased demand for qualifications will be funded. The Commonwealth has committed to support demand-led funding in higher education. This has already led to significant increases in funding. In addition, the 2012–13 Budget provided a further increase in funding for higher education, with total funding for higher education support set to increase from \$6.9 billion in 2011–12 to \$7.2 billion in 2012–13.⁴³⁰

For VET, however, total payments from the Commonwealth to states and territories for skills and workforce development have decreased, largely due to replacing the National Partnership Agreement on Productivity Places Program (NP PPP) with the National Partnership Agreement on Skills Reform. The new agreement provides for funding totalling \$238 million in 2012–13, which is \$138 million less than payments to jurisdictions under the NP PPP in 2011–12.⁴³¹ Nevertheless, as Table 8 highlights, the Commonwealth's share of total VET funding increased relative to other funding sources between 2006 and 2011.

Table 8 VET provider revenue, 2006 to 2011, by revenue source, real 2011–12 prices^(a)

Year	Revenue from Commonwealth (\$'000)	Revenue from states and territories (\$'000)	Revenue from activities (\$'000)	Total VET revenue ^(b) (\$'000)	Proportion of Commonwealth funding of total revenue (%)
2006	1,791,427	3,658,348	1,573,754	7,104,650	25.2
2007	1,962,075	3,615,589	1,591,404	7,247,370	27.1
2008	1,954,045	3,632,223	1,756,208	7,425,601	26.3
2009	2,635,540	3,542,962	1,782,950	8,053,221	32.7
2010	2,584,594	3,712,956	1,866,819	8,250,635	31.3
2011	2,451,351	4,141,614	1,711,247	8,376,146	29.3
% increase 2006 to 2011	36.8	13.2	8.7	17.9	

The NCVER collection focuses on VET administered or provided by the main training authority or training department within each state and territory, their public training providers and the Commonwealth. Public funding for training delivery paid to private providers by the Commonwealth and state and territory training authorities or departments is also included in this collection.

(a) Real dollar amounts calculated using the Chain Price Deflator for GDP in 2011–12.

(b) In addition to the revenue sources listed, total VET revenue also includes additional sources such as fee-for-service, students fees and charges, assumption of liabilities, ancillary trading, gain on sale of property, other activity revenue, assumption of liabilities, and resources received free of charge.

Source: NCVER, 2012, *Australian vocational education and training statistics: Financial information 2011*.

Several states have claimed that reduced Commonwealth funding will present considerable challenges to delivering on the ambitious new reform milestones and have attributed recent budget cuts to reduced funding from the Commonwealth.⁴³² It appears that most jurisdictions have reduced VET budgets for 2012–13.

Nevertheless all jurisdictions have signed up through the new National Partnership Agreement on Skills Reform to an increase in completion of qualifications in the order of 375,000 nationally over the life of the agreement, using a common baseline of the average of 2008 and 2009 calendar year data.⁴³³ This equates to 3.7 per cent average annual growth in VET student completions over the life of the agreement (2012 to 2017). Our modelling indicates that the growth in demand for VET qualifications for the equivalent period (2012 to 2017) is 4.9 per cent for the Long Boom scenario, 4.4 per cent for Smart Recovery, 3.3 per cent for Terms of Trade Shock and 1.6 per cent for Ring of Fire. As such, even if completions are achieved as planned the VET sector will fall short in delivering the VET qualifications needed in two of the higher growth projections.

7.6 Realising efficiencies

This report has recommended a considerable expansion in funding particularly for the provision of education and training in VET and higher education. The recommendation is at the low end of what is perceived to be needed. The funding required could be contained or even reduced if greater efficiency can be achieved. For instance much could be gained by increasing completion rates in the VET sector, which are low. NCVER (2011) estimates a national average qualification completion rate of 28.4 per cent.⁴³⁴ Improving this rate would contribute significantly to the required growth in qualifications and represent much more efficient use of resources, both in terms of public monies and in industry and student investment.

We must guard, however, against increasing completion rates at the expense of quality. This has been a significant risk in the VET sector where, as noted in Chapter 6, quality assurance has been less than adequate and funding per hour of training has fallen by 20 per cent in the last decade including 14 per cent from 2006 to 2010.⁴³⁵

Nevertheless it is clear that significant additional investment in training is required to meet Australia's workforce needs of the future. This investment will need to be made by governments at all levels, by industry and by individuals. While the costs appear large in the current fiscal environment, the investment is necessary and will pay for itself through increased participation, output and government revenues.

While governments play an important role in providing funding for education and skills development, investing in training is a shared responsibility. Employers make a significant contribution to training, although much of this training is unaccredited and not recognised in official statistics. Co-investment models such as the National Workforce Development Fund are proving successful in engaging employers and delivering training that meets the needs of industry.

Given the constraints on public expenditures and the private benefits that are received, particularly from higher level courses, ways of tapping private expenditures further need consideration.

Higher education and VET have been increasing their private revenues over a considerable period. In higher education, Australian government grants in 2011 provided less than 45 per cent of total revenues. Student fees provided nearly 40 per cent: international student fees 17 per cent, domestic student fees funded under the Higher Education Loan Program (HELP) 14 per cent and upfront contributions and other fees and charges another 7 per cent. Student loans under the HELP scheme involve the waiver of the real interest and of repayment by those who do not reach the threshold for repayment. But repayments of loans now underpin a considerable part of the current outlays.

Government grants make up about 80 per cent of the revenues of the publicly supported VET sector. Domestic student fees provided less than 5 per cent of revenues in 2011 but the student contribution is likely to grow with the rollout of HELP loans for diploma and advanced diploma courses and their trialling for Certificate IV under the National Partnership Agreement on Skills Reform. International activities provided nearly 5 per cent, though this substantially understates the revenues as the large majority of international VET students and their fees are received by private RTOs and are not currently recorded in the national financial statistics.

It is not easy to estimate how much employers pay to higher education and VET institutions. The extent to which employers pay student fees is not known. Fee-for-service activities in higher education and VET, which might be attributed largely to employers, provided about 5 per cent of revenues in 2011.

In the VET sector the National Workforce Development Fund represents a way in which employer contributions to training can be increased. Participants are contributing between 33 per cent and 66 per cent of the cost of training, far higher than the average private contribution to the usual publicly provided VET. Consideration could be given to the development of similar models for a larger share of VET training.

Expanding partnerships between tertiary providers to share facilities, equipment and infrastructure as discussed in section 5.2 will also contribute to increased efficiency in the use of resources.

Recognising the shared responsibility for education and training, we recommend that Australian governments support the required increase in investment to meet Australia's future skills needs and position Australia as a knowledge economy.

Recommendation 7.2:

That Australian governments support an expansion of public and private funding of at least 3 per cent per annum to meet industry demand and commit further funds to support the implementation of the suite of measures outlined in this strategy, with this additional expenditure increasing at an annual rate of \$1,266 million (2011–12 prices) by 2025. These measures include:

- supporting the less advantaged to participate in training and work
- addressing the clear and urgent need to improve LLN skills
- increasing productivity by supporting workforce development
- improving quality and equity
- ensuring we have the adaptive capacity we need to meet the challenges of the future world of work.



A large, stylized graphic of a fan palm frond, composed of several triangular segments radiating from a central point, rendered in a dark red color against a lighter red background.

Appendix 1

Additional tables

Appendix 1 Additional tables

Table 9 Persons employed by highest level qualification, by scenario

Highest level qualification	2011	2015	Average annual change 2011–15	2020	Average annual change 2015–20	2025	Average annual change 2020–25	Average annual change 2011–25
Long Boom								
Postgraduate	887.1	1,067.3	4.7%	1,388.6	5.4%	1,753.0	4.8%	5.0%
Undergraduate	2,188.3	2,541.3	3.8%	3115	4.2%	3,678.7	3.4%	3.8%
Advanced diploma/ diploma	1,114.7	1,274.6	3.4%	1,541.9	3.9%	1,817.8	3.3%	3.6%
Certificate III and IV	2,228.3	2,686.4	4.8%	3,352.1	4.5%	3,809.5	2.6%	3.9%
Certificate I and II	396.9	358.9	-2.5%	318.5	-2.4%	281.5	-2.4%	-2.4%
Total with post-school qualifications	6,815.2	7,928.6	3.9%	9,716.2	4.2%	11,340.5	3.1%	3.7%
Total without post-school qualifications	4,613.1	4,406.8	-1.1%	4,111.1	-1.4%	3,721.4	-2.0%	-1.5%
Total employment	11,428.3	12,335.4	1.9%	13,827.3	2.3%	15,061.9	1.7%	2.0%
Smart Recovery								
Postgraduate	887.1	1010	3.3%	1,254.4	4.4%	1,534.8	4.1%	4.0%
Undergraduate	2,188.3	2,419.8	2.5%	2,858.5	3.4%	3,303.3	2.9%	3.0%
Advanced diploma/ diploma	1,114.7	1,216.7	2.2%	1,407.3	3.0%	1,607.9	2.7%	2.7%
Certificate III and IV	2,228.3	2492	2.8%	2,933.9	3.3%	3,213.5	1.8%	2.6%
Certificate I and II	396.9	362.8	-2.2%	328.9	-1.9%	295.6	-2.1%	-2.1%
Total with post-school qualifications	6,815.2	7,501.3	2.4%	8,783.1	3.2%	9,955.3	2.5%	2.7%
Total without post-school qualifications	4,613.1	4,440.6	-0.9%	4315	-0.6%	4,170.1	-0.7%	-0.7%
Total employment	11,428.3	11,941.9	1.1%	13,098	1.9%	14,125.4	1.5%	1.5%
Terms of Trade Shock								
Postgraduate	887.1	1,060.7	4.6%	1,342.7	4.8%	1,665.5	4.4%	4.6%
Undergraduate	2,188.3	2,515.3	3.5%	2,998.2	3.6%	3,485.9	3.1%	3.4%
Advanced diploma/ diploma	1,114.7	1,259.7	3.1%	1,480.5	3.3%	1,708.2	2.9%	3.1%
Certificate III and IV	2,228.3	2,588.7	3.8%	3,114.5	3.8%	3,434.8	2.0%	3.1%
Certificate I and II	396.9	358.1	-2.5%	312.5	-2.7%	272.5	-2.7%	-2.7%
Total with post-school qualifications	6,815.2	7,782.5	3.4%	9,248.4	3.5%	10,566.9	2.7%	3.2%

Highest level qualification	2011	2015	Average annual change 2011–15	2020	Average annual change 2015–20	2025	Average annual change 2020–25	Average annual change 2011–25
Total without post-school qualifications	4,613.1	4,392.9	-1.2%	4,060.1	-1.6%	3,685.6	-1.9%	-1.6%
Total employment	11,428.3	12,175.4	1.6%	13,308.5	1.8%	14,252.5	1.4%	1.6%
Ring of Fire								
Postgraduate	887.1	957.7	1.9%	1,078.3	2.4%	1,214.6	2.4%	2.3%
Undergraduate	2,188.3	2,330.2	1.6%	2,548	1.8%	2,772.2	1.7%	1.7%
Advanced diploma/ diploma	1,114.7	1,175.1	1.3%	1,259.7	1.4%	1,340.1	1.2%	1.3%
Certificate III and IV	2,228.3	2,354.1	1.4%	2,525.3	1.4%	2,603.6	0.6%	1.1%
Certificate I and II	396.9	380.6	-1.0%	358	-1.2%	329.6	-1.6%	-1.3%
Total with post-school qualifications	6,815.2	7,197.7	1.4%	7,769.3	1.5%	8,260.2	1.2%	1.4%
Total without post-school qualifications	4,613.1	4,552.6	-0.3%	4,498.7	-0.2%	4,427.9	-0.3%	-0.3%
Total employment	11,428.3	11,750.3	0.7%	12,268	0.9%	12,688.1	0.7%	0.7%

Source: Deloitte Access Economics, 2012, *Economic modelling of skills demand and supply*, Tables 5.6–5.9.

Table 10 Number of additional qualifications required per annum under each scenario, 2012 to 2025 ('000)

All qualifications	Annual average for each period			
	2012–15	2016–20	2021–25	2012–25
Long Boom				
Due to increasing labour market size	230	331	306	294
Due to changing employment composition	41	51	59	51
Due to retirement	180	211	259	219
Due to skills deepening	184	224	237	217
Due to skills broadening	60	73	72	69
Due to unemployment and not in the labour force leakage	45	28	36	36
Total	740	920	969	886
Smart Recovery				
Due to increasing labour market size	129	247	239	210
Due to changing employment composition	32	48	56	46
Due to retirement	187	222	264	227
Due to skills deepening	125	143	143	138
Due to skills broadening	41	47	43	44
Due to unemployment and not in the labour force leakage	57	26	36	38
Total	571	734	781	705
Terms of Trade Shock				
Due to increasing labour market size	189	249	231	226
Due to changing employment composition	47	52	62	54
Due to retirement	185	224	274	231
Due to skills deepening	166	198	201	190
Due to skills broadening	55	65	61	61
Due to unemployment and not in the labour force leakage	48	23	35	34
Total	690	812	864	796
Ring of Fire				
Due to increasing labour market size	79	105	89	92
Due to changing employment composition	26	35	46	37
Due to retirement	186	220	253	222
Due to skills deepening	57	59	52	56
Due to skills broadening	19	20	16	18
Due to unemployment and not in the labour force leakage	80	44	41	54
Total	448	483	499	479

Source: Deloitte Access Economics, 2012, *Economic modelling of skills demand and supply*, Tables 5.18–5.21 for employed persons and 5.23–5.26 for those unemployed or not in the labour force

Table 11 Change in total number of people employed by industry, 2011–25 ('000)

Industry	Number employed June 2011	Change to 2025			
		Long Boom	Smart Recovery	Terms of Trade Shock	Ring of Fire
Agriculture, Forestry and Fishing	337.6	17.8	-18.2	-18.3	-68.4
Mining	217.7	132.4	109.1	76.8	2.2
Manufacturing	982.7	-187.2	-169.3	-133.4	88.7
Electricity, Gas, Water and Waste Services	149.3	7.9	-5.2	3.4	-18.1
Construction	1,051.7	258.2	138.1	-32.1	-91.3
Wholesale Trade	399.4	110.8	61.1	58.4	-1.8
Retail Trade	1,238.4	256.5	186.8	173.2	68.6
Accommodation and Food Services	791.2	185.7	143.2	200.1	62.6
Transport, Postal and Warehousing	582.7	200.0	166.4	136.0	70.4
Information Media and Telecommunications	213.2	63.3	45.2	53.2	36.5
Financial and Insurance Services	427.6	191.4	173.2	149.2	93.4
Rental, Hiring and Real Estate Services	207.7	74.9	48.9	32.3	20.4
Professional, Scientific and Technical Services	855.3	583.1	353.9	433.7	233.5
Administrative and Support Services	400.4	133.2	75.3	91.2	28.7
Public Administration and Safety	717.6	155.7	145.1	162.1	66.1
Education and Training	883.8	497.3	462.6	514.4	296.7
Health Care and Social Assistance	1,296.7	798.9	643.8	773.8	339.3
Arts and Recreation Services	218.8	78.9	73.1	82.8	45.4
Other Services	456.4	75.0	64.0	67.4	-13.0
All industries	11,428.3	3,633.6	2,697.1	2,824.2	1,259.8

Source: Deloitte Access Economics, 2012, output model, October.

Table 12 Change in total number of people employed by occupation, 2011 to 2025 ('000)

Occupation: ANZSCO	Number employed, 2011	Change to 2025			
		Long Boom	Smart Recovery	Terms of Trade Shock	Ring of Fire
Managers	1,457.8	641.5	508.0	519.8	334.8
Professionals	2,507.0	1,263.2	993.5	1,111.7	591.9
Technicians and Trades Workers	1,681.0	266.6	146.1	87.7	-33.5
Community and Personal Service Workers	1,073.7	551.1	470.5	546.0	278.2
Clerical and Administrative Workers	1,699.1	379.6	251.0	266.3	44.1
Sales Workers	1,072.0	194.2	126.6	121.4	36.3
Machinery Operators and Drivers	750.1	142.0	91.8	63.2	-0.5
Labourers	1,187.5	195.5	109.6	108.2	8.4
All occupations	11,428.3	3,633.6	2,697.1	2,824.2	1,259.8

Source: Deloitte Access Economics, 2012, October, Tables 5.1–5.5.

Table 13 Proportion of persons employed by occupation with a post-school qualification, 2011 and 2025 (%)

Occupation: ANZSCO	2011	Long Boom	Smart Recovery	Terms of Trade shock	Ring of Fire
Managers	63	77	74	77	69
Professionals	89	95	93	95	91
Technicians and Trades Workers	68	77	75	76	71
Community and Personal Service Workers	59	89	82	88	70
Clerical and Administrative Workers	53	79	67	74	58
Sales Workers	35	56	46	52	39
Machinery Operators and Drivers	34	40	37	39	35
Labourers	31	35	33	34	32
Total	60	75	70	74	65

Source: Deloitte Access Economics, 2012, October, Tables 5.1–5.5.

**Table 14 Top 10 occupation unit groups with largest increase in job openings
(from employment growth and retirement replacement) by modal
qualification, total, 2012–25**

Long Boom		Smart Recovery	
Higher education			
Registered Nurses	181,040	Registered Nurses	162,487
Advertising & Sales Managers	119,396	Advertising & Sales Managers	106,163
Software & Applications Programmers	93,951	Chief Executives & Managing Directors	83,324
Accountants	93,606	Secondary School Teachers	80,334
Chief Executives & Managing Directors	89,324	Accountants	77,027
Secondary School Teachers	84,781	Software & Applications Programmers	74,750
Primary School Teachers	78,381	Primary School Teachers	73,968
Private Tutors & Teachers	76,511	Private Tutors & Teachers	73,750
Contract, Program & Project Administrators	68,575	Contract, Program & Project Administrators	62,853
General Managers	57,525	General Managers	54,028
VET (Certificate I to Advanced Diploma)			
Aged & Disabled Carers	104,860	Aged & Disabled Carers	95,621
Child Carers	103,704	Child Carers	95,002
Electricians	77,060	Electricians	65,476
Nursing Support & Personal Care Workers	65,395	Nursing Support & Personal Care Workers	59,009
Construction Managers	57,150	Construction Managers	48,961
Real Estate Sales Agents	53,895	Real Estate Sales Agents	46,429
Welfare Support Workers	49,445	Welfare Support Workers	45,993
Metal Fitters & Machinists	46,754	Education Aides	44,076
Plumbers	46,014	Chefs	42,068
Education Aides	45,108	Metal Fitters & Machinists	41,695
No post-school qualification			
Sales Assistants (General)	176,882	Sales Assistants (General)	153,509
General Clerks	141,187	General Clerks	127,534
Retail Managers	136,551	Retail Managers	122,020
Commercial Cleaners	95,570	Commercial Cleaners	83,602
Receptionists	92,221	Receptionists	81,320
Office Managers	85,237	Office Managers	77,845
Livestock Farmers	74,047	Livestock Farmers	67,811
Truck Drivers	70,760	Truck Drivers	65,693
Accounting Clerks	65,041	Accounting Clerks	59,707
Drillers, Miners & Shot Firers	58,517	Drillers, Miners & Shot Firers	52,863

Terms of Trade Shock		Ring of Fire	
Higher education			
Registered Nurses	180,474	Registered Nurses	118,863
Advertising & Sales Managers	107,398	Advertising & Sales Managers	93,783
Chief Executives & Managing Directors	83,419	Chief Executives & Managing Directors	75,131
Secondary School Teachers	87,361	Software & Applications Programmers	60,503
Accountants	80,889	Private Tutors & Teachers	60,359
Software & Applications Programmers	80,766	Secondary School Teachers	57,755
Primary School Teachers	80,675	Accountants	57,721
Private Tutors & Teachers	77,736	Primary School Teachers	51,771
Contract, Program & Project Administrators	64,113	Contract, Program & Project Administrators	49,273
General Managers	54,220	General Managers	48,567
VET (Certificate I to Advanced Diploma)			
Aged & Disabled Carers	106,463	Aged & Disabled Carers	70,674
Child Carers	105,644	Child Carers	68,912
Nursing Support & Personal Care Workers	66,510	Nursing Support & Personal Care Workers	42,116
Electricians	50,867	Electricians	42,936
Welfare Support Workers	50,137	Welfare Support Workers	35,481
Education Aides	48,000	Education Aides	33,209
Chefs	43,757	Chefs	35,011
Real Estate Sales Agents	40,508	Real Estate Sales Agents	36,786
Construction Managers	38,939	Construction Managers	34,693
Metal Fitters & Machinists	37,569	Metal Fitters & Machinists	32,650
No post-school qualification			
Sales Assistants (General)	152,436	Sales Assistants (General)	115,408
General Clerks	128,549	Retail Managers	99,361
Retail Managers	122,391	General Clerks	96,000
Receptionists	87,518	Commercial Cleaners	66,484
Commercial Cleaners	87,214	Office Managers	64,347
Office Managers	77,157	Receptionists	58,366
Livestock Farmers	66,167	Livestock Farmers	54,161
Accounting Clerks	58,772	Accounting Clerks	49,808
Waiters	56,614	Truck Drivers	45,637
Truck Drivers	56,037	Sports Coaches, Instructors & Officials	37,346

Source: Deloitte Access Economics, 2012, output model, October.
Modal qualification based on 2011 Census highest qualification level by unit group.

Table 15 Projected supply of qualifications by scenario and source, 2010 and 2025

	Domestic	Migration	Total
	Per annum change 2010–25 (%)	Per annum change 2010–25 (%)	Per annum change (%)
Long Boom			
Postgraduate	1.9	1.8	1.9
Undergraduate	1.8	2.0	1.9
Advanced diploma/diploma	1.1	2.1	1.4
Certificate III and IV	1.2	-0.9	1.2
Certificate I and II	1.1	1.3	1.1
Total	1.4	1.8	1.5
Smart Recovery			
Postgraduate	1.7	0.7	1.6
Undergraduate	1.8	1.1	1.6
Advanced diploma/diploma	0.9	1.4	1.0
Certificate III and IV	1.0	-3.4	0.9
Certificate I and II	0.9	1.1	0.9
Total	1.2	1.0	1.2
Terms of Trade Shock			
Postgraduate	1.6	-0.9	1.3
Undergraduate	1.6	-0.2	1.2
Advanced diploma/diploma	0.9	0.2	0.7
Certificate III and IV	1.0	-10.3	0.9
Certificate I and II	0.9	0.3	0.8
Total	1.2	-0.4	1.0
Ring of Fire			
Postgraduate	0.9	-8.8	0.2
Undergraduate	1.1	-5.7	-0.1
Advanced diploma/diploma	0.2	-4.3	-0.7
Certificate III and IV	0.2	N/A	0.0
Certificate I and II	0.1	-1.8	0.0
Total	0.5	-6.2	-0.1

Source: Deloitte Access Economics, 2012, *Economic modelling of skills demand and supply*, Tables 7.1, 7.4 and 7.6.

Table 16 Cumulative surplus (+) or deficit (-) of annual demand and supply flows (qualifications)

Years to:	2012–15	2016–20	2021–25	2012–25
Long Boom				
Postgraduate	-73,630	-241,647	-363,058	-678,335
Undergraduate	-131,421	-398,816	-556,235	-1,086,472
Advanced diploma/diploma	-188,221	-364,264	-442,448	-994,933
Certificate III and IV	+49,009	-68,584	+119,236	+99,661
Certificate I and II	+231,498	+274,369	+304,905	+810,772
Total	-112,766	-798,942	-937,600	-1,849,308
Smart Recovery				
Postgraduate	-3,747	-140,057	-231,370	-375,173
Undergraduate	+7,326	-216,741	-335,692	-545,107
Advanced diploma/diploma	-113,824	-255,708	-313,554	-683,086
Certificate III and IV	+272,737	+205,706	+366,113	+844,556
Certificate I and II	+261,758	+308,441	+340,811	+911,010
Total	+424,251	-98,359	-173,692	+152,200
Terms of Trade Shock				
Postgraduate	-72,392	-213,033	-334,229	-619,654
Undergraduate	-128,339	-355,798	-531,978	-1,016,115
Advanced diploma/diploma	-178,825	-323,824	-399,383	-902,032
Certificate III and IV	+152,343	+72,944	+253,310	+478,597
Certificate I and II	+246,176	+298,103	+321,532	+865,811
Total	+18,963	-521,609	-690,747	-1,193,392
Ring of Fire				
Postgraduate	+78,389	+27,426	-42,645	+63,169
Undergraduate	+170,812	+77,042	-70,121	+177,733
Advanced diploma/diploma	-39,845	-99,166	-143,219	-282,230
Certificate III and IV	+445,376	+532,874	+582,251	+1,560,501
Certificate I and II	+264,922	+344,066	+352,027	+961,014
Total	+919,655	+882,241	+678,291	+2,480,187

Source: Deloitte Access Economics, 2012, demand supply balance tables (individual years) (L).



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Appendix 2

2013 Specialised
Occupations List

Appendix 2 2013 Specialised Occupations List

ANZSCO	Occupation
1331	Construction Managers
1332	Engineering Managers
133513	Production Managers (Mining)
1341	Child Care Centre Managers
1342	Health and Welfare Services Managers
1343	School Principals
1344	Other Education Managers
2211	Accountants(a)
2212	Auditors, Company Secretaries and Corporate Treasurers(b)
2221	Financial Brokers
2241	Actuaries, Mathematicians and Statisticians(c)
2245	Land Economists and Valuers
2311	Air Transport Professionals
2312	Marine Transport Professionals
2321	Architects and Landscape Architects
2322	Surveyors and Spatial Scientists
2326	Urban and Regional Planners
2331	Chemical and Materials Engineers
2332	Civil Engineering Professionals
2333	Electrical Engineers
2334	Electronics Engineers
2335	Industrial, Mechanical and Production Engineers
2336	Mining Engineers
2339	Other Engineering Professionals
2341	Agricultural and Forestry Scientists
234211	Chemists
2346	Medical Laboratory Scientists
2347	Veterinarians
234912	Metallurgists
234913	Meteorologists
234914	Physicists [Specifically Medical Physicists](d)
2411	Early Childhood (Pre-Primary School) Teachers
2412	Primary School Teachers
2413	Middle School Teachers
2414	Secondary School Teachers
2415	Special Education Teachers

ANZSCO	Occupation
2421	University Lecturers and Tutors
2493	Teachers of English to Speakers of Other Languages
2511	Dietitians
2512	Medical Imaging Professionals
2513	Occupational and Environmental Health Professionals
2514	Optometrists and Orthoptists
2515	Pharmacists
251912	Orthotists and Prosthetists
2521	Chiropractors and Osteopaths
2523	Dental Practitioners
2524	Occupational Therapists
2525	Physiotherapists
2526	Podiatrists
2527	Speech Professionals and Audiologists
2531	Generalist Medical Practitioners
2532	Anaesthetists
2533	Specialist Physicians
2534	Psychiatrists
2535	Surgeons
2539	Other Medical Practitioners
2541	Midwives
2542	Nurse Educators and Researchers
2543	Nurse Managers
2544	Registered Nurses
2611	ICT Business and Systems Analysts
2613	Software and Applications Programmers
263111	Computer Network and Systems Engineers
2633	Telecommunications Engineering Professionals
2711	Barristers(e)
2712	Judicial and Other Legal Professionals(e)
2713	Solicitors(e)
2723	Psychologists
2725	Social Workers
3122	Civil Engineering Draftspersons and Technicians
3123	Electrical Engineering Draftspersons and Technicians
3124	Electronic Engineering Draftspersons and Technicians
3132	Telecommunications Technical Specialists
3211	Automotive Electricians
3212	Motor Mechanics
3221	Metal Casting, Forging and Finishing Trades Workers
3222	Sheet Metal Trades Workers

ANZSCO	Occupation
3223	Structural Steel and Welding Trades Workers
3231	Aircraft Maintenance Engineers
3232	Metal Fitters and Machinists
3233	Precision Metal Trades Workers
3241	Panel Beaters
3243	Vehicle Painters
3311	Bricklayers and Stonemasons
3312	Carpenters and Joiners
3321	Floor Finishers
3322	Painting Trades Workers
3331	Glaziers
3332	Plasterers
3334	Wall and Floor Tilers
3341	Plumbers
3411	Electricians
3421	Air-Conditioning and Refrigeration Mechanics
3422	Electrical Distribution Trades Workers
3423	Electronics Trades Workers
3424	Telecommunications Trades Workers
3941	Cabinetmakers
3942	Wood Machinists and Other Wood Trades Workers
3991	Boat Builders and Shipwrights
3996	Sign Writers
4111	Ambulance Officers and Paramedics
4112	Dental Hygienists, Technicians and Therapists
4114	Enrolled and Mothercraft Nurses
4115	Indigenous Health Workers
4211	Child Carers
4231	Aged and Disabled Carers
4233	Nursing Support and Personal Care Workers
4412	Fire and Emergency Workers
4413	Police

(a) Professional accountants only

(b) Auditors only

(c) Actuaries only

(d) Medical physicists only (can demonstrate appropriate qualification)

(e) Legal professionals admitted to practice only

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Appendix 3

Workforce development plan

Appendix 3 Workforce development plan

Workforce development can boost productivity and the innovative capacity of enterprises. In the enterprise, workforce development is concerned with:

- ✓ using knowledge and skills effectively at work
- ✓ further developing knowledge and skills in the workplace, e.g. by mentoring, training.

In an enterprise that takes a workforce development approach business strategy drives organisational development as well as skills development and use. Training is relevant to business needs and work is organised to maximise employee capabilities. Strategies to achieve this change include job redesign, increased employee participation and autonomy, mentoring and applying new learning.

Ideally workforce development is a consultative process.

1. Identify goals/desired outcomes of workforce development, for example:
 - ✓ improved productivity
 - ✓ more innovation.
2. Relate workforce development goals/outcomes to strategic priorities as identified in business plan, for example:
 - ✓ planned business expansion
 - ✓ move to new products/markets.
3. Identify context for workforce development in terms of the environment impacting on business workforce needs, for example:
 - ✓ market demand
 - ✓ competition for skills
 - ✓ regulatory changes.
4. Identify current workforce profile:
 - ✓ demographics (if relevant)
 - ✓ skills and qualifications audit
 - ✓ part-time/full-time/casual profile.
5. Identify budget available for investment in workforce development and available sources of funding, e.g. internal resources, the NWDF.

6. Identify workforce development needs of organisation, for example:
 - ✔ leadership/management capability
 - ✔ recruitment
 - ✔ retention
 - ✔ job design
 - ✔ maximising staff capabilities
 - ✔ training.
7. Add any particular workforce priorities, for example:
 - ✔ retain older workers
 - ✔ design part-time role for person with disability.
8. Analyse gaps in capability for future needs, for example:
 - ✔ expected retirements
 - ✔ upskilling requirements.
9. Identify future workforce profile based on outcomes of previous steps.
10. Develop plan to address needs (see template on next page):
 - ✔ triple focus on human resources practices/organisational design, learning and innovation capacity
 - ✔ include measurement and evaluation process.
11. Identify provider if training is part of workforce development plan.
12. Implement workforce development plan.
13. Carry out measurement and evaluation.
14. Repeat process at regular intervals or when firm is undergoing change, for example technological or organisational change or restructuring.

Sample workforce development plan

Possible strategy	Outcome sought	Link to strategic goal/s of organisation	Action	Timeframe	Budget (where relevant)	How outcome will be evaluated
Job redesign						
Employee participation						
Autonomy						
Job rotation and multi-skilling						
Knowledge transfer						
Skills audit (existing skills and new skills required)						
Training program						
Management capacity audit						
Innovation audit						

Key:

Focus on human resource practices/organisational design
Focus on learning
Focus on innovation

Notes:

A skills audit identifies the skills that employees currently have so that these can be used effectively, as well as identifying the skills that are needed.

A management capacity audit considers existing skills of management in the light of skills required to foster innovation and enhance productivity within the organisation.

An innovation audit gathers information on areas where innovation is happening within the organisation, the nature of the innovations (e.g. in products, processes, work organisation), what current practices encourage/discourage innovation, and what could be done to further foster innovation.

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Appendix 4

Australian Workforce and
Productivity Agency
supporting activities

Appendix 4 Australian Workforce and Productivity Agency supporting activities

To support the activities associated with this strategy, AWPAs plans to:

- ✔ annually benchmark progress towards the required 3 per cent growth in enrolments to ensure the education and training system is meeting workforce needs
- ✔ maintain the Specialised Occupations List in recognition that planning is required where there is a long lead time, strong occupational fit and high opportunity cost
- ✔ work collaboratively with industry, the jurisdictions and other stakeholders to coordinate the development of strategic workforce development plans for priority sectors as identified by our scenarios and other labour market indicators
- ✔ conduct a capability review to assess the extent to which workforce development tools and standards in Australia at all levels (national, regional, sectoral, enterprise and local) are fit for purpose
- ✔ propose revised guidelines for the National Workforce Development Fund to facilitate recommendation 2.1
- ✔ lead in cross-agency collaboration between relevant agencies to streamline and coordinate the full range of existing and upcoming workforce and skills programs (including employment services) for employers and to scope and develop further opportunities for using government funding to leverage employer investment, both financial and in-kind
- ✔ lead a review, if requested, of VET in Schools that will examine:
 - ✔ the need to clarify the policy and funding framework for VET in Schools
 - ✔ how to address obstacles for young people making the transition from VET in Schools to work and further education
 - ✔ policy on VET in Schools delivery across jurisdictions, including implementation of the requirement for work placements for all VET qualifications
- ✔ lead a review, if requested, in 2013 with a focus on:
 - ✔ the interface between VET and higher education (role of higher level VET qualifications vis-à-vis higher education qualifications)
 - ✔ the delivery of higher education qualifications in VET institutions.



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Appendix 5

2013 National Workforce
Development Strategy costing

Appendix 5 2013 National Workforce Development Strategy costing

Recommendation	Comment	Resourcing 2014	Resourcing 2015–2025
Workforce planning			
1.1 Annual increase of 3% in tertiary education qualifications to 2025	<p>Funding also to be fully indexed.</p> <p>Total VET expenditure = VET less overseas student fees + Commonwealth VET related (e.g. employer incentives) + student assistance in VET (estimate 19% of tertiary student assistance). VET total estimate just under \$10b.</p> <p>Total higher education expenditure = Total higher education expenditure less income from overseas students, research funding and consultancies + Commonwealth student assistance for higher education (estimate of 91% of total student assistance). Higher education total estimate just under \$18b.</p> <p>Total VET + higher education estimate \$28b in 2011 prices.</p>	<p>\$860m additional public and private expenditure in 2014</p> <p>Public/private allocation to be broadly in line with current provision</p> <ul style="list-style-type: none"> Public grants provide 80% of VET funding for domestic students including assistance to employers and student assistance Public grants and HELP loans provide 76% of higher education 	Compounds annually to \$1,190m public and private expenditure in 2025
Productivity			
2.1 Adjust NWDF guidelines	To allow other workforce development activities that maximise the use of employee skills and complement training delivery.	Within existing resources	
2.2 Joint funding of Enterprise Connect and Skills Connect	Seek greater alignment of business improvement and skills programs to support workforce development for SMEs. Includes NWDF.	Within existing resources	
2.3 Extend Enterprise Connect	<p>Enterprise Connect extended to SMEs industries such as hospitality and retail.</p> <p>Total proposed Enterprise Connect funding \$41.4m in 2014. From 2015, \$42.8m annually to 2025.</p>	<p>Additional \$17m in 2014</p> <p>(Increase from Australian Government but program is co-funded)</p>	Additional \$18.4m in 2015 and each year to 2025

Recommendation	Comment	Resourcing 2014	Resourcing 2015–2025
2.4 Review leadership and management	Review commissioned by Australian Government, to include front-line management.	Within existing resources	
2.5 Governments co-fund regional employment and workforce development	Support proposals from regional partnerships to increase the efficiency of local resource allocation. Funding from Commonwealth and jurisdictions where there is co-founding from regional partners.	\$15m in 2014 (jointly from Commonwealth and jurisdictions where there is co-funding)	\$15m per annum to 2025
Participation			
3.1 Goal of 69% labour force participation by 2025	Given the link between qualifications and employment, raising skill levels to make a significant contribution.	See recommendations 1.1 and 3.4	
3.2 Co-fund industry-led initiatives to support employment for men and women in non-traditional occupations	Commonwealth co-funding of industry-led initiatives in skills shortage areas.	\$1m in 2014 (Australian Government funding where there is industry co-funding)	\$1m in 2015 \$1m in 2016 Reviewed after third year
3.3 Consider upscaling approaches to help older workers (45+) to re-enter the workforce	E.g. Experience+	Review within existing resources	
3.4 Additional funding for training delivery strategies and wraparound services	Meeting industry demand for qualifications and increasing participation will require increased participation in training and employment from the less advantaged.	\$200m in 2014 (Australian Government)	AWPA allows for continuing growth in our cost projections to \$700m by 2025
3.5.1 Better alignment of incentives for JSA to work with RTOs	To occur in the 2015 review of the Job Services Australia contract by the Australian Government.	Within existing resources	
3.5.2 Extend JSA post-placement support to 52 weeks		\$9m in 2014 (Australian Government)	\$36.2m over four years Approx \$9.5m per annum in 2025
Language, literacy and numeracy			
4.1 National sample survey for the assessment of literacy and numeracy	To occur every five years from 2015.	\$4.25m in 2014 (Australian Government)	\$4.25m in 2015 \$8.5m in 2020 \$8.5m in 2025
4.2 LLN national public awareness campaign	Promote the development of LLN skills as a mainstream issue and showcase assistance available.	\$7m for design and one-year delivery (Australian Government)	\$7m for delivery in 2015

Recommendation	Comment	Resourcing 2014	Resourcing 2015–2025
4.3 Comprehensive national LLN information service	Information service includes expanded funding for the Reading Writing Hotline and an interactive website. Current hotline underfunded at \$410,000 per annum.	\$1m in 2014 Reading Writing Hotline \$2m per annum. (Australian Government)	Total \$3m per annum to 2025
4.4 Fund Workplace Champions	To help foster a culture of lifelong learning and promote training in the workplace. Costs include developing and delivering training as well as time off to train. 500 Workplace Champions trained per year to 2025, advanced training built in over time.	\$500,000 in 2014—includes developing and delivering training and time off to learn. (Australian Government and employers)	Increases each year to 2025 with additional Champions and advanced training \$2.3m in 2025
4.5 Upscale LLN Practitioner Scholarships	There are currently 90 scholarships per year and demand exceeds supply. At an average of \$5,000 per scholarship, 200 would cost \$1m per annum.	\$1m per annum in 2014	\$1m per annum to 2025
4.6 Evaluation and national pilot of an online foundation skills assessment	Based on existing initiatives such as the Basic and Key Skills Builder and RU Ready?	Evaluation—\$200,000 in 2014 Piloting—\$200,000 in 2014	Piloting \$200,000 in 2015. National rollout not costed
Adaptive capacity			
5.1 Align and strengthen career development advice services	Improve coordination of existing career development services, explore ways to more actively involve industry and establish a national brand.	\$500,000 in 2014	\$500,000 per year to 2017
5.2 Governments review their entitlement systems	To ensure restrictions to publicly subsidised qualifications do not undermine the capacity of individuals to adapt to labour market change.	See recommendation 1.	
5.3 Support transitions from higher level VET and higher education to employment	Australian Government work with VET and higher education stakeholders and peak industry bodies to expand work-integrated learning and establish co-funded professional cadetships.	Within existing resources	
5.4 NSSC and ISCs further develop reforms in <i>VET products for the 21st century</i> .	Investigate how training packages can most effectively build individuals' adaptive capacity for the changing context and nature of work.	Within existing resources	

Recommendation	Comment	Resourcing 2014	Resourcing 2015–2025
Quality			
6.1 Review of funding in the VET sector	Determine an appropriate price for the delivery of high-quality VET.	\$3m	
6.2 Measures to be considered in the NSSC review of the standards for the regulation of VET	<ul style="list-style-type: none"> Externally set and administered assessments for identified high-risk qualifications Higher level requirements on RTOs seeking initial and renewal registration to deliver identified high-risk qualifications. 	Consideration of measures within existing resources	
6.3 National body and program for VET based on the Office for Learning and Teaching	Includes excellence in VET teaching, learning and assessment; teaching and learning strategies to develop adaptive capacity and e-learning; professional development to improve LLN; and a national VET workforce development strategy.	\$14.5m in 2014 for national body and \$40m in 2014 for VET workforce development strategy	\$14.5m per annum for national body and funding per annum at \$42m in 2015, \$47m in 2020 and \$52m in 2025 for VET workforce development strategy
Investment			
7.1 Extend student start-up scholarships to full-time VET students in receipt of government support	80,000 VET students estimated to receive support under ABSTUDY, Austudy and Youth Allowance in 2012–13. Startup scholarship payment is \$1,097 each 6 months.	\$175m in 2014 (Australian Government)	\$200m in 2015 Future allocation from VET funding review (rec 6.1) Funding to rise in line with growth in student numbers to \$245m in 2025
7.2 Governments support expansion of public and private funding of at least 3% per annum to meet industry demand and commit further funds to support implementation of measures outlined in this strategy	Additional expenditure increasing at an annual rate of \$1,266m (2011–12 prices) by 2025.		

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Appendix 6

Methodology for estimating
fiscal costs and benefits
from recommended further
investment in tertiary
education

Appendix 6 Methodology for estimating fiscal costs and benefits from recommended further investment in tertiary education

This appendix details the methodology used to compare the increase in Australian Government revenue relative to the costs in 2025 that would flow from the investments recommended in this strategy. The methodology does not aim to provide a precise figure but rather a conservative indication of the magnitude of the fiscal gains relative to the costs of the recommendations.

The methodology to establish revenue primarily involves an assessment of the revenue gains resulting from increased labour force participation as a result of adopting the recommended policies compared with the counterfactual of continuing current policies. The three main steps adopted as part of the methodology are set out below:

- ✓ estimating the increase in participation that would result from adopting the recommended policies relative to the increase in participation which might be expected from a continuation of present policies, as projected in the Treasury Intergenerational Report (IGR) 2010
- ✓ estimating the resulting increase in GDP from that increase in participation
- ✓ estimating the effect of such GDP increase on government revenue.

This methodology was undertaken for each of the three highest growth scenarios—the Long Boom, Smart Recovery and Terms of Trade Shock. Each of the steps is discussed in greater detail below.

To fully consider the benefits of the proposals, we need to consider our proposed expenditure to implement the recommendations of the National Workforce Development Strategy relative to projected expenditure in the IGR which assumes the continuation of existing policy to 2025.

The main steps in achieving this are:

- ✓ estimating the total cost of our proposed recommendations to 2025, using the 2010–11 Budget as a base. Also estimating the total public element of the investment required
- ✓ identifying the cost of continuing existing policy as defined by Treasury and which is consistent with their projected growth rate for tertiary education expenditure as shown in the IGR 2010
- ✓ identifying the difference between the cost of our recommendations in 2025 and those of the IGR in 2025, and comparing this to the estimated difference in revenue outlined above.

The impact on labour force participation

In order to estimate the effect of the recommended policies on participation in 2025, it is necessary to apply an appropriate participation rate for the purpose. The participation rate is generally defined as the labour force (that is the total of those who are employed or actively seeking employment) as a percentage of the civilian population aged 15 years and over.⁴³⁶ However, the present methodology applies a narrower participation rate limited to workers aged between 20 and 59.

For the purposes of the present methodology, a narrower participation rate comprising individuals aged between 20 and 59 is more appropriate, as the participation of older people is less dependent on their qualifications. This more limited definition of participation also provides a more conservative measure of revenue that would be gained.

As noted in Chapter 3 of this strategy, there is a strong positive correlation between qualifications and labour force participation.⁴³⁷ This relationship is likely to become stronger over the modelled period, 2012 to 2025. As highlighted by this strategy, likely futures will be characterised by greater and more rapid structural change than in the past. Increased qualifications will enhance the capacity of labour force participants to adapt to this change, particularly changes in the labour market.

However, evidence suggests that the relationship between new qualifications and participation is not as strong for individuals over 60 as it is for individuals aged between 20 and 59. The participation rate of individuals over 60 has grown markedly during the last decade, from 14.1 per cent in 2001 to 23.5 per cent in 2012.⁴³⁸ This increase includes a significant proportion of participants who are already highly qualified. This suggests that for those aged over 60, decisions to remain in the labour force may be driven as much or more by factors such as financial circumstances, existing educational attainment and lifestyle choices, rather than the achievement of additional qualifications.

Given this weaker correlation for the 60 and over age group, people aged 60 and over were excluded from the participation rate used by this methodology. The decision to exclude this cohort also reflects the conservative nature of the methodology. For example, skills broadening and deepening of individuals approaching 60 during the modelled period would likely enhance their ability to adapt to changes in the labour market, and their chances of retaining employment in their fifties. In turn this higher participation rate for people in their fifties can be expected to flow on and have a positive effect on their participation post 59 years of age. This positive effect on participation is not accounted for by this methodology, and is an aspect of its overall conservatism.

Individuals aged between 15 and 19 are excluded from the participation rate used by the methodology for similar reasons. Individuals in this cohort have increasingly opted to remain in formal education rather than join the labour market. This trend, which also reflects government policy, will enhance the adaptive capacity of Australia's future workforce. However, it would also distort the participation rate for present purposes.

The above discussion highlights the beneficial role of qualifications in enhancing the 'adaptive capacity' of labour force participants, particularly for those aged between 20 and 59. In this regard, qualifications can be viewed as a necessary, albeit not sufficient, condition for participation.

To assess the effect of adopting the recommended policies on participation in 2025, it is also necessary to select an appropriate counterfactual for comparison (a base case showing a state of the world where the recommendations are not followed). The participation projections used for the 2010 IGR were adopted for this purpose. The IGR projections were selected as they assess the financial implications of continuing current policies and trends over a period that includes 2025. The IGR projects the participation rate of those aged 20 to 59 to be 83.9 per cent in 2025. As at November 2012 the rate was 78.6 per cent.⁴³⁹

To assess the changes that would be brought about by the recommended policies, the IGR projection was compared to the participation rates in 2025 in the three highest growth scenarios—the Long Boom, Smart Recovery and Terms of Trade Shock. The results are shown in Chart A. As can be seen the resulting differences in participation range from 1.3 to 3.4 percentage points, indicating the increase in participation by those aged 20 to 59 in all three scenarios relative to a continuation of present policies and trends.

Chart A Participation rate of 20- to 59-year-olds in 2025

Scenario	20–59 participation rate	IGR 20–59 participation rate	Difference (% pt)
Long Boom	87.3%	83.9%	3.4%
Smart Recovery	85.2%	83.9%	1.3%
Terms of Trade Shock	85.6%	83.9%	1.7%

The impact on GDP

To estimate the increase in GDP from the changes in participation identified above, it was necessary to first estimate the resulting change in employment for each scenario relative to the counterfactual. The change was estimated by:

- ✓ taking the population projections for each scenario and applying the relevant change in the participation rate identified in Chart A above (to calculate the change in the number of 20- to 59-year-olds participating in 2025 for each scenario)
- ✓ subtracting from the above number an estimate of the change in unemployment for each scenario relative to the counterfactual.⁴⁴⁰

The resulting increase in employment for each scenario compared with the counterfactual is shown in Chart B. As can be seen, the increased participation identified in Chart A above results in an increase in employment relative to the counterfactual in each of the three scenarios.

Chart B Employment effect of increased participation rate in 2025

Scenario	20- to 59-year-olds employed	20- to 59-year-olds employed (IGR participation rate)	Difference
Long Boom	12,540,864	12,049,995	4.1%
Smart Recovery	11,750,173	11,577,613	1.5%
Terms of Trade Shock	11,827,744	11,596,993	2.0%

The increase in GDP from the abovementioned increase in employment was determined by assuming a proportionate relationship between the growth rates for the two variables. There are a variety of factors that may influence the relationship between employment growth and GDP growth. On one hand, as additional units of labour are employed, marginal returns may fall, implying that a 1 per cent increase in employment may result in a less than 1 per cent increase in GDP. On the other hand, the investment proposed by this strategy not only provides skills to enable additional participation in the labour force but would also increase the skills of existing participants,⁴⁴¹ enhancing their productivity.⁴⁴² Overall, in the present circumstances it is likely that the latter effect would be greater than the former. Despite this, a conservative one-for-one relationship between employment growth and GDP growth was adopted. The results are detailed in Chart C below.

Chart C 2025 GDP (2011 dollars, '000,000)

Scenario	Under scenario participation rate	Under IGR participation rate	Difference (%)
Long Boom	2,318,067	2,227,334	4.1%
Smart Recovery	2,027,070	1,997,301	1.5%
Terms of Trade Shock	2,143,632	2,101,811	2.0%

The impact on Australian Government revenue

A 10-year historical average (2001–2011) of total taxation revenue as a proportion of GDP was used as the basis for estimating the revenue implications of the changes in GDP identified in Chart C above. The resulting increase in tax revenue was calculated by multiplying the relevant change in GDP for each scenario by the 10-year average of taxation share of GDP (29.6 per cent).⁴⁴³ The results are shown in Chart D. In all scenarios taxation revenue would increase by over \$8 billion (in 2011 dollars).

Chart D 2025 tax revenue (2011 dollars, '000,000)

Scenario	Under scenario participation rate	Under IGR participation rate	Difference (\$)	Difference
Long Boom	686,148	659,291	26,857	4.1%
Smart Recovery	600,013	591,201	8,812	1.5%
Terms of Trade Shock	634,515	622,136	12,379	2.0%

In addition, the projected increases in participation might also be expected to lead to reductions in government expenditures, as many of the people who would then remain in employment would otherwise be likely to be receiving Australian Government income support, principally in the form of parenting payments and disability support pensions. The exclusion of this reduction in government outlays from the analysis, and focusing on the revenue impact alone, is a further factor leading to a conservative estimate of the overall improvement in Australian Government fiscal positions which might be expected from the projected improvements in participation.

Methodology for estimating expenditure

To fully consider the benefits of our proposals in relation to estimated revenue as detailed above, we need to consider our proposed expenditure relative to expenditure in the IGR.

Our recommendations include 3 per cent per annum growth in qualifications to 2025, funding to support the less advantaged to participate in training and employment pathways, and strategies to improve language, literacy and numeracy skills. These areas of focus are underpinned by strategies to increase productivity by supporting workforce development, measures to improve quality and equity and ways to ensure we have the adaptive capacity we need to meet the challenges of the future world of work.

We have developed an estimate of costs for our recommendations using the following method:

- ✔ Total VET expenditure = VET less overseas student fees + Commonwealth VET-related expenditure (e.g. employer incentives) + Student assistance VET (estimate 19 per cent of tertiary student assistance). Our estimate for VET total expenditure in 2011 is just under \$10 billion.
- ✔ Total higher education expenditure = Total higher education expenditure less income from overseas students, research funding and consultancies + Commonwealth student assistance for higher education (estimate 91 per cent of total student assistance). Our total higher education expenditure estimate is just under \$18 billion in 2011.
- ✔ Our estimate of total VET and higher education expenditure is \$27.8 billion in 2011 in real terms. To estimate expenditure in 2012 we assumed 3 per cent growth in VET and higher education funding. This gives a figure of \$28.3 billion in 2012, which is based on public and private expenditure.
- ✔ To determine public expenditure alone, we estimate that in 2011, 88 per cent of VET and about 56 per cent of higher education expenditure was public. For higher education the HELP outlays made up 18 per cent of revenues. The public cost of the outlays for HELP is estimated at 25 per cent to allow for non-repayment of those who do not reach the threshold and the waiver of real interest. Overall we estimate that the public cost of VET and higher education (excluding research and international) at 71.5 per cent of the total. We have assumed all other costs of our recommendations are 100 per cent public.
- ✔ Therefore our baseline for our expenditure is 71.5 per cent of \$28.3 billion in 2012, which gives us an estimated public expenditure of \$20.2 billion. When we apply a 3.16 per cent annual growth (comprising funding for the 3 per cent annual increase in qualifications plus all other qualifications over 13 years), our estimated public expenditure in 2025 is \$30.3 billion in real terms. See Chart E below for more detail.

Chart E Strategy cost by public and private spend

Policy recommendation settings	2012	2013	2025	Increase from 2013	Annual rate of increase 2013 to 2025 (12 years)	Increase from 2012	Annual rate of increase 2012 to 2025 (13 years)
	\$m	\$m	\$m	\$m	%	\$m	%
Higher education and VET expenditure growing at 3% per annum from 2013	28,296	28,664	40,868	12,204	3.0	12,572	2.87
Total investment	28,296	28,689	41,959	13,270	3.22	13,663	3.08
Estimated public spending							
71.5% of higher education and VET	20,232	20,495	29,221	8,726		8,989	
Presume 100% of all other recommendations	0	25	1,091	1,066		1,091	
Total public spending	20,232	20,520	30,312	9,792	3.30	10,080	3.16

Chart E1 Cost summary

Increase (\$ millions)	2013 to 2025	2012 to 2025
Total increase	13,270	13,663
Public only increase	9,792	10,080

The next step is to identify the cost of continuing existing policy as defined by Treasury and which is consistent with the projected increase in tertiary education expenditure as shown in the 2010 IGR.

There are quite significant differences between the IGR assumptions for education expenditure and our approach. It appears that this is because Treasury does not include the same items as we do, with apparent exclusions of state expenditure and student assistance. The IGR estimate for tertiary expenditure is for Australian Government education spending only. In 2011–12 the IGR spending is \$11.6 billion (compared to our figure for Australian and state and territory spending of \$20.2 billion). The IGR estimate for 2024–25 is \$21.6 billion (compared to our \$28.9 billion). More details about the Treasury estimates are at Chart F.

Chart F Treasury IGR education expenditure nominal and estimated real growth rates, 2011–12 to 2024–25

Item	2011–12 (nominal values)	2024–25 (nominal values)	2024–25 (real 2011–12 values)	Annual growth rate 2011–12 to 2024–25 (nominal %)	Annual growth rate 2011–12 to 2024–25 (estimated real %)
GDP (\$ million; % growth rates)	1,428,030	2,801,770	2,110,424	5.3%	3.1%
Higher education expenditure (% GDP)	0.26%	0.25%	0.25%		
VET expenditure (% GDP)	0.55%	0.52%	0.52%		
Total tertiary education expenditure (% GDP)	0.81%	0.77%	0.77%		
Total tertiary education expenditure (\$ million)	11,567	21,574	16,250	4.9%	2.6%
Total tertiary recipients	2,554,659	2,871,545	2,871,545	0.9%	0.9%
Expenditure per recipient (\$)	4,528	7,513	5,659	4.0%	1.7%

Treasury's annual average growth rate for expenditure is 2.6 per cent. To estimate the cost of continuing policy based on expenditure we can apply the Treasury tertiary education real annual growth rate of 2.6 per cent to our 2012 base public expenditure of \$20.2 billion. Applying the 2.6 per cent growth in expenditure gives a total public expenditure of \$28.2 billion in 2025 to continue existing policy. In 2025 this is \$2.1 billion less than if our expenditure growth rate of 3.16 per cent is applied to our base of \$20.2 billion to reflect this strategy's recommendations. See Chart G below.

Chart G Cost/benefit comparison for the different additional cost methods in 2025 (\$ million)

	Long Boom	Smart Recovery	Terms of Trade Shock
Government revenue from difference between AWP and IGR participation rate	26,857	8,812	12,379
Difference between AWP and projected additional IGR expenditure (2.6% growth)	2,066	2,066	2,066
Balance	24,791	6,746	10,313

Conclusion

The above methodology is not intended to provide a precise assessment of the revenue that would be generated by the recommendations and the additional costs involved. However, it does provide a conservative estimate of the benefits of investing in our future, as envisaged by the strategy. Even discounting for very considerable margins of potential error, clearly these benefits are very likely to far exceed the costs.

In fact our best estimate is that by 2025 the additional expenditure to finance this strategy's recommendations will amount to \$2.1 billion more than the cost of continuing existing policy. This is clearly very much less than the revenue benefits, which are estimated to amount to \$24.1 billion in the Long Boom, \$6.7 billion in Smart Recovery, and \$10.3 billion in the Terms of Trade Shock scenarios.

Furthermore, these estimated revenue benefits are derived primarily from considering the effects of this strategy's recommendations on labour force participation in 2025 and the impact of improved participation on employment and GDP. However, there are numerous other benefits that would be derived including improved productivity of existing participants from skills deepening and broadening; improved efficiencies from avoiding skill shortages; and provision for a more inclusive society and one which is less dependent on government income support.



Notes

Notes

- 1 Note that these projections are for qualifications and not for people. Given the propensity for people to hold more than one post-school qualification, by 2025 the annual shortfall of qualified people with qualifications at diploma level or above is projected to range from 108,650 to 162,485. The range reflects the variety of scenarios on which AWPAs modelling is based. See discussion of scenarios in Chapter 1.
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- 16 See Appendix 6 for a discussion of the methodology used.
- 17 Income-contingent loans were introduced under the National Agreement for Skills and Workforce Development and increased with the National Partnership Agreement on Skills Reform to provide expanded access from 2012 to 2015. See www.dpmc.gov.au/publications/skills_for_all_australians/chapter9_taking_a_reform_plan_to_the_states_and_territories.html.
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- 424 \$2.1 billion is 0.1 per cent of 2025 GDP of \$2,110,424 million in 2011–12 dollars. \$2.1 billion is the difference between the AWPAs estimate of public expenditure derived by applying growth in expenditure of 3.16 per cent to the 2012 base (\$20.5 billion) which gives us \$30.3 billion, and the figure we arrive at by applying the Treasury growth rate (2.6 per cent) to the same \$20.5 billion base.
- 425 \$1.3 billion is the estimated additional cost of AWPAs recommendations in 2025 compared to 2024.
- 426 Figures are from a cost/benefit comparison between the projected AWPAs and 2010 Intergenerational Report participation rates and cost methods to 2025 (\$ million). See Appendix 6.
- 427 Figures are calculated by applying a 3 per cent growth rate to the average per annum cost of training places in the VET and higher education sectors. For this purpose, we estimated total current expenditure on VET and higher education to be around \$10 billion and \$18 billion per annum, respectively.

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- 440 The Deloitte Access Economics modelling utilised did not project unemployment for age cohorts. As a result the unemployment rate for 20- to 59-year-olds for each scenario was estimated by multiplying the projected total unemployment rate in 2025 for each scenario by the ratio of the current unemployment rate of 20- to 59-year-olds (4.6 per cent in November 2012) to the current total unemployment rate (5.2 per cent in November 2012). Source: ABS, 2012, *Labour force, Australia, detailed—Electronic Delivery*, cat. no. 6291.0.55.001, ABS, Canberra.
- 441 In each of the three scenarios the ratio of the increase in higher qualifications to lower qualifications is 1.6.
- 442 For example, the Productivity Commission in reporting the potential benefits of the National Reform Agenda estimated that enhancements to the productive potential of baseline workers would lead to a 0.63 per cent increase in employment but a 2.72 per cent increase in GDP (this was estimated separately to the effects of potential additional participants that had lower productivity, on average, than incumbent workers). Productivity Commission, 2006, *Potential benefits of the national reform agenda*, Report to COAG, Australian Government, Canberra.
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