

Working for business.
Working for Australia



Productivity Commission: 5-year Productivity Inquiry — Interim Reports

October 2022



Australian
Chamber of Commerce
and Industry

WORKING FOR BUSINESS.

WORKING FOR AUSTRALIA

Telephone 02 6270 8000

Email info@australianchamber.com.au

Website www.australianchamber.com.au

CANBERRA OFFICE

Commerce House

Level 3, 24 Brisbane Avenue

Barton ACT 2600 PO BOX 6005

Kingston ACT 2604

MELBOURNE OFFICE

Level 2, 150 Collins Street

Melbourne VIC 3000

SYDNEY OFFICE

Level 15, 140 Arthur Street

North Sydney NSW 2060

Locked Bag 938

North Sydney NSW 2059

ABN 85 008 391 795

© Australian Chamber of Commerce and Industry 2019

This work is copyright. No part of this publication may be reproduced or used in any way without acknowledgement to the Australian Chamber of Commerce and Industry.

Disclaimers & Acknowledgements

The Australian Chamber of Commerce and Industry has taken reasonable care in publishing the information contained in this publication but does not guarantee that the information is complete, accurate or current. In particular, the Australian Chamber is not responsible for the accuracy of information that has been provided by other parties. The information in this publication is not intended to be used as the basis for making any investment decision and must not be relied upon as investment advice. To the maximum extent permitted by law, the Australian Chamber disclaims all liability (including liability in negligence) to any person arising out of use or reliance on the information contained in this publication including for loss or damage which you or anyone else might suffer as a result of that use or reliance.

Executive Summary

Recommendation 1: Data, Digitisation and Cyber Security

- Transition the USG to a market-based mechanism, developing low-cost options, incentivising technology investment and improving targeted approach to regional digital needs.
- Review Mobile Black Spot Program to ensure effective and efficient allocation of mobile towers to boost regional connectivity.
- Advance the review of the DAT Act with the agenda to allow sharing of government data to the private sector and within the public sector itself, following international movements.
- Establish a body to provide information and advice on digital opportunities and access to digital training programs to small business.
- Greater coordination across federal and state jurisdictions with an emphasis on the economic gains from the coordinated, ethical application of artificial intelligence and other advanced, data-driven technologies.
- Review the skilled migration program to prioritise skill gaps, notably in digital literacy and data analytics
- Work with industry to develop cybersecurity awareness and resources to protect small business from cybercrime.
- Install a cyber security requirement in technology contracts offered to the government.
- Guidelines should be established to safeguard AI and data uses, promoting confidence and adoption in these advanced technologies. A risk-based approach will ensure AI applications with low risks don't face overregulation.
- Review international regulation on digital, data and cyber security areas to create an Australian framework that builds trust and supports business technology investment.

Recommendation 2: Innovation of the 98%

- Broaden the patent box to all industry sectors.
- Enhance this support with low interest loans and other financial assistance to assist businesses to commercialise R&D and innovation in Australia.
- Review and remove any unnecessary red tape of foreign direct investment, particularly targeting the approval and screening processes.
- Increase funding for CSIRO, CRCs/RDCs and universities to provide greater incentive for industry to collaborate and partner with government R&D organisations/institutions.
- Incentivise university engagement in academic consulting and allow for academic discretion in their engagement.

- Provide continued funding for Industry Growth Centres to aid the diffusion of innovation implementation information
- Evaluate the efficacy of a public growth centre or a best practice diffusion function in an established body to promote innovation diffusion and unity between all levels of government and their agencies.

Recommendation 3: A Competitive, Dynamic and Sustainable Future

- Stimulate investment through an extension of the Temporary Full Expensing measure beyond 2023.
- Introduce a broad-based investment allowance of 20% of the value of an asset purchased for all business investments in plant, equipment and machinery.
- Provide a SME loan guarantee for longer-term investments that support business growth and show clear productivity improvements.
- Work with states, territories and local government to more efficiently and effectively deliver infrastructure investment, including incentive to improve procurement practices to increase competition by enabling a larger number of smaller contractors to bid for projects.
- Greater focus on regional infrastructure as an enabler of decentralisation.
- Finance public infrastructure through the issuing of government securitised infrastructure bonds.
- Remove undue barriers to trade of goods and services by reviewing tariff levels, design and technical barriers
- Policy targeting the emissions reduction should be transparent, consistent amongst governments and productivity oriented.
- Facilities covered under the Safeguard Mechanism should undertake their share of the emissions reduction task, but flexibility should be provided through crediting and trading, so facilities can optimise their investment and achieve the most effective outcomes
- The Safeguard Mechanism should provide tailored treatment to EITE industries, including grants, but they should still be required to contribute their share of emissions reduction
- Integrate carbon emission reduction policy into energy policy, taking into account the substantial contribution of energy exports to our economy and the need for a secure, reliable and affordable domestic supply of energy.
- Prioritise competitive, market-based solutions that provide economy-wide benefits, while delivering sustainable long-term emissions reductions at lowest costs
- Incentivise greater private R&D investment in emerging technologies such as hydrogen and batteries by reallocating CEFC and ARENA funding from proven technologies (wind/solar).
- Review and realign research and development incentives and other supportive policies with the aim of enabling Australian business to become a world leader in innovative emissions reduction technology and adaptation infrastructure.

- Place greater emphasis on educating the public and business on achieving greater energy efficiency
- To avoid trade disputes and prevent global economic implications, Australia needs to remain opposed in the international arena to trade protectionism
- With the impacts of climate change already being observed, the focus should equally be on adaptation and resilience to climate variability, particularly in land management, planning decisions and infrastructure selection and design.

Recommendation 4: From Learning to Growth

- Use JSA to take a holistic approach to the education and training, employment and migration systems to ensure it meets the skills workforce needs of the future.
- Ensure that the education system focuses on improving literacy and numeracy levels to give Australians strong foundational skills.
- Finalise the National Agreement on Skills and Workforce Development with a commitment to increase overall funding.
- Funding of VET places should be untied to provider, allowing students to pick the provider that suits them best.
- Identify the most relevant and useful vocational training to be delivered to school students (both in terms of qualifications and quality of delivery) and identify the barriers to school-based apprenticeships and traineeships.
- Explore the possibility of applied learning elective subject(s) in Year 11 and/or 12 that offer academic learning in practical contexts incorporating pre-apprenticeships.
- Establish a National Apprenticeship Advisory Board, which would report directly to JSA.
- Review the training and assessment qualification required for experienced industry practitioners to encourage more experienced people to become full or part time VET trainers.
- Enhance work integrated learning programs, particularly for science and maths courses, and create more cadetship opportunities, to ensure graduates are both skilled and job ready
- Continuation of uncapped university places
- Greater collaboration between higher education institutions and industry in the design and offering of courses to ensure they best meet workforce needs.
- Explore how micro-credentials can complement full qualifications / nationally recognised training to support opportunities for flexible learning and training in both the higher education and VET sector.
- Provide incentives for individuals to continue self-education, such as a set credit for lifelong learning or an expansion of tax deductibility for self-education expenses

Recommendation 5: A More Productive Labour Market

- Increase the permanent migration intake, including a significant increase in the cap for skilled migration to 200,000 for the next two years at least, to replenish the skills lost during the pandemic
- Ensure access to all skilled occupations for employers nominating workers under the employer sponsored temporary and permanent skilled streams.
- Improve processing times and reduce regulatory red tape for both permanent and temporary skilled migrants
- Enable pathways to permanency for all temporary skilled migrants.
- Establish new program to actively promote workplace productivity and enterprise bargaining
- Fund bargaining coaches for employers and employees to promote bargaining and productivity improvement
- Provide additional resources for the Fair Work Commission (FWC) to actively support and facilitate enterprise bargaining

Table of Contents

1	Introduction	8
2	Data, Digitisation and Cyber Security	9
2.1	Regional Digital Infrastructure	9
2.2	Creating New Data Sharing and Integration Opportunities	10
2.3	Developing Digital, Data and Cyber Security Skills	11
2.4	Balancing Cyber Security and Growth	13
2.5	Ethical Use of Technology and Data	14
2.6	Policy and Regulatory Framework	15
3	Innovation for the 98%	17
3.1	Enabling Innovation Diffusion	18
3.2	Innovation and Diffusion in Government Services	20
4	A Competitive, Dynamic and Sustainable Future	21
4.1	Business Investment	21
4.2	Infrastructure Investment	22
4.3	Openness to Trade and Foreign Investment	23
4.4	Managing the Climate Transition	24
5	From Learning to Growth	28
5.1	An integrated approach to learning	28
5.2	Vocational Education and Training	28
5.3	Higher Education	30
5.4	Lifelong Learning	31
6	A More Productive Labour Market	33
7	About the Australian Chamber	34

1 Introduction

ACCI welcomes the opportunity to contribute to the review of Australia's productivity performance and provide recommendations that will assist governments to make productivity enhancing reforms.

Productivity growth is the key to sustaining economic activity, creating jobs and maintaining our future living standards. Yet Australia's productivity growth has slowed since the turn of the century. As noted in the Interim Report of this Inquiry, productivity growth over the past decade is at its slowest pace in 60 years, at an average of just 1.1% per year. It also suggests productivity performance will continue to deteriorate with further growth in service sectors, particularly government funded and regulated non-market services such as schools, aged-care, childcare and disability support services, where a lack of competition and contestability mask underperformance.

Recognising the challenges, rather than look to ways to raise productivity, the new Labor Government announced it will lower its future productivity growth forecasts to 1.2% per year in the October 2022 Budget, from 1.5% per year previously. This will have a sizable impact on Australia's economic growth going forward. Treasury's Intergeneration Report released last year showed that the difference between an average productivity growth forecast of 1.5% per year and 1.2% per year, is a 9½% reduction in nominal and real GDP and 9¼% lower wages growth over the next 30 years.

If we are to achieve a sustained, long-term economic expansion, we need productivity growth to be stronger than that experienced over the past 30 years. Labour productivity must rise at a rate above 1.5% per year if we are to wind back the mounting government debt and maintain our living standards into the future. There needs to be a concerted effort to put in place the conditions for strong, sustainable, productivity growth.

Australia needs greater investment in productive capital, particularly in innovation and diffusion, digital technology and cyber security and skills and training, to drive innovation and technical improvement. To allow business to meet the challenges over the coming decades and seize opportunities, we need reforms that will give the structure, flexibility and entrepreneurial culture to create the dynamism, resilience and competitiveness needed for businesses to thrive.

2 Data, Digitisation and Cyber Security

2.1 Regional Digital Infrastructure

Greater support needs to be given to regional areas to connect to the digital world. Currently there are significant gaps in the digital infrastructure provided to regional areas in Australia. The 2021 Australian Digital Inclusion Index (ADII) recorded a difference of 5.5 index points between the regional average index (67.4) and metropolitan average index (72.9).

The pandemic has seen a population shift towards regional areas as working from home became common place, yet only 13% of regional areas saw an upgrade to internet access, compared to 21% in metropolitan areas¹. Whilst the gap is narrowing, this has been an ongoing issue with the 2019 Australian Infrastructure Audit stating only one third of Australia's total landmass has mobile access, meaning regional and rural areas have suffered and are still suffering from limited service that halts significant economic progress. With 40% of national economic output and over one third of Australia's workforce in regional areas in 2016,² improving the digital infrastructure in regional Australia is important to ensure their participation in the workforce and economy.

The Universal Service Guarantee (USG), developed in late 2017, has been unsuccessful in delivering all Australians access to both broadband and voice services. Reforms are needed if it is to fulfil its goal. ACCI supports a move from allocating funding for regional government infrastructure programs to a market-based mechanism that delivers contracts to bidding service providers. Whilst this transition was unsuccessful in 2001 due to uncommitting private service providers, advances in technology facilitate greater reach and capacity to supply telecommunication services to these remote regions, improving interest from private providers. A market-based mechanism offers the government lower cost options to meet the USG with service providers bidding to win the contract to deliver connectivity to a particular area, whilst also incentivising investment in new technologies. Regional areas will benefit greatly from this change with private service providers conducting in-depth research and developing targeted approaches to meet USG requirements under a least-cost effective scheme. Contract lengths should be evaluated per bid to ensure adequate time for the service providers to earn a return on their investment. With this mechanism likely to initially create regions dominated by single providers, the monitoring of pricing and output should be regular.

Improving access to digital infrastructure in regional Australia is aided by the Mobile Black Spot Program. Up to its sixth round of investment and design, the program has built 1229 mobile base stations, positively contributing to connecting regional Australia. However, the 2019 Infrastructure Audit recognised a range of limiting factors, most notably the prioritisation of funding to residentially populated areas rather than assessing social or economic needs (although likely to cross-over), poor mobile coverage data limiting efficient placement of new mobile towers, and lack of shared infrastructure limiting network options for consumers. A 2016 study³ found 72% of regional and

¹ The 2021 Australian Digital Inclusion Index, <https://www.digitalinclusionindex.org.au/download-reports/>

² 5-year Productivity Inquiry: Australia's data and digital dividend, Interim report

<https://www.pc.gov.au/inquiries/current/productivity/interim2-data-digital>

³ Better Internet for Rural, Regional and Remote Australia, 2016 Getting Left Behind Survey

<https://birraus.files.wordpress.com/2016/05/birrr-report-2016-survey-results-final.pdf>

remote mobile broadband users purchased additional equipment, costing \$1,000 to \$2,000, to ensure access to reliable mobile coverage. Continuing to fund the Mobile Black Spot Program for future rounds, with an emphasis on effective and efficient allocation of mobile towers will help support a targeted approach to improving the productivity of regional areas through greater regional digital infrastructure.

Further, stronger back-up, contingency measures for telecommunication support regional areas during and following a natural disaster event should be installed. As the 2019 bushfires and recent flooding events in Southeast Australia has demonstrated, there are cracks in the ability of lead telecommunication providers, such as Telco and NBN, to provide ongoing coverage during regional and rural crisis. Prioritisation of telecommunication as an essential service in the days during and following a natural disaster will greatly benefit the resilience of the impacted communities and businesses.

Recommendation:

- Transition the USG to a market-based mechanism, developing low-cost options, incentivising technology investment and improving targeted approach to regional digital needs.
- Continue to fund the Mobile Black Spot Program with the agenda of efficient allocation of mobile towers to boost regional connectivity.
- Strong contingency plans and greater prioritisation of telecommunication services during and after natural disasters

2.2 Creating New Data Sharing and Integration Opportunities

Sharing data provides a broad range of advantages and enhances productivity to businesses and government. The governments planned expansion of the Consumer Data Right (CDR) into the economy is a positive step that is contingently supported by ACCI due to its ability to engage customers, tailor services, incentivise innovation and improve operational efficiencies. The contingent being the need for newly covered sectors to be afforded adequate time to understand and engage with the process and its implementation. The sharing of data amongst the government, government agencies and businesses has yet to follow the trajectory of consumer data sharing. Whilst some data is shared such as releases through the Australian Bureau of Statistics, there still exists reluctant and risk avoidant behaviour from the public sector in the release of data. The 2017 *Data Availability and Use* inquiry urged the government to move from risk aversion system to a transparent data sharing system, which businesses and consumers can place confidence in. The benefits to businesses from engaging in public sector data includes building pricing strategies, tailor investment, improved collaboration, quicker diffusion of knowledge, and reduced cost and time spent on research. Furthermore, greater sharing between government regulators can booster productivity within the public sector. A 2022 report conducted on Australian and New Zealand government regulators found that 95% believe data sharing across agencies is relevant, however, only 14% of regulators reported that they are currently sharing

data.⁴ A commonly held response to the existing lack of data sharing was legislative barriers to sharing information.

The Australian Data Strategy in May 2021 stipulates three data priorities, enabling greater data use, improving data safety and security, and maximising the value of data. These are currently failing with the Data Availability and Transparency Act 2022 (DAT Act) undermining the goals and preventing public sector data to be shared between government agencies and with the private sector. Changes to DAT Act need to occur, prioritising the safe and productive use of government collated data. Understanding that appropriate frameworks need to be established to ensure secure and safe use and storage of data outside of the government, the review of the scheme scheduled to occur in three years should be brought forward. The recommendations proposed by the OECD should be considered during this review, most importantly the need to encourage ‘data-sharing partnerships,’ including public-private partnerships, and the adoption of a ‘strategic whole-of-government approach to data access and sharing.’⁵

ACCI supports a two-way stream of data sharing if the data shared from businesses to government is not invasive or engaging in conflicts of interest. This will boosting public and private productivity, whilst promoting a safe regulatory environment. A whole-of-government approach should be implemented by the Australian Government also, looking at the Estonian Government’s technology infrastructure and data sharing as a model. Basic information provided by Estonia citizens to their government can be easily shared amongst agencies, saving time and effort for both the citizens and the government. The European Union is working on a “once only principle” that is projected to save 11 billion euros annually for businesses and 855,000 hours for citizens.⁶

A strong data sharing culture between the public and private sector will enable Australian businesses and the government to fill in data gaps, create more representative data, and better target their approach to community needs, while improving Australia’s slow productivity and economic growth. Yet this also requires safeguards, including expanding the CDR to increase protections and privacy, so that customers/clients data is not shared without informed consent.

Recommendation:

- Advance the review of the DAT Act with the agenda to allow sharing of government data to the private sector and within the public sector itself, following international movements.

2.3 Developing Digital, Data and Cyber Security Skills

Data, digitization and cyber security skills offer business of all sizes in all sectors of the Australian economy commercial opportunities to increase productivity, enabling them to grow, create jobs, and provide an improved work-life balance. It is increasingly important for businesses, SMEs in particular, to look to the adoption of digital technologies within a trusted ecosystem, secured by design that is both robust and resilient. The better use of technology and data can reduce business

⁴ Objective Corporation, The Government Regulatory Technology Report 2022; <https://www.objective.com.au/resources/report-it-capacity-and-funding-are-blocking-regulatory-technology-adoption>

⁵ OECD, Recommendation of the Council on Enhancing Access to and Sharing of Data; <https://legalinstruments.oecd.org/en/instruments/OECD-LEGAL-0463>

⁶ Deloitte, Government Trends 2020; <https://www2.deloitte.com/us/en/insights/industry/public-sector/government-trends/2020.html>

costs, including search, transportation, tracking and verification costs. Research conducted by ANZ has quantified productivity enhancement received through digital technology adoption with each small business having the potential to save 10 hours per week and boost revenues by 27%⁷. This equates to a \$385 billion increase in revenue per year across all small businesses.

Currently, the adoption and productive use of technology in businesses is limited by the digital, data and cyber security skills a business has at their disposal. Thirteen per cent of Australian businesses in 2019-20 identified lack of skilled persons as a hurdle to the use of information and communications technology (ICTs)⁸, this being the most acknowledged factor. Similarly, 13.6% of small businesses had insufficient knowledge to use paid cloud computing. This was only 0.3 percentage points more than medium businesses, but over 6% greater than large businesses. Consequently, the Government's Future Productivity report showed that prior to COVID-19, many Australian industries were lagging in the adoption of digital technology, particularly more advanced technology. Data collated by OECD ranked Australia 23rd of the 38 OECD countries for the use of artificial intelligence (AI), 26th for data analytics and 20th for Internet of Things. Whilst the use and relevance of AI is skewed heavily towards knowledge-intensive industries, data analytics and Internet of Things (IoT) are applicable to more businesses. Firmly within the digital age, the Australian business sector needs greater access to technologically training employees and to technology training programs to facilitate quicker adoption of advanced technologies.

Even with the most basic technologies such as online sales, Australian small businesses lagged behind, with Asian small businesses far more likely to implement and utilise. This is an alarming trend, with a CPA Australia survey on small business in 2021 showing that businesses that did not grow, or rather shrank, were much more likely to have made no investment in technology over the past year relative to those that grew strongly.⁹ With nearly 60% of small business owners born before 1971, before publicly available internet, and the percentage of Australians adults scoring within levels 2 and 3 on OECD's computer problem-solving skills falling from an average of 40% for all Australian adults to 17.2% within the 55-65 age group¹⁰, there is clearly a significant lack of digital and data skills in small businesses. A report published by the Small Business Digital Taskforce recommended the best way to accelerate the rate of small business technology use was through a trusted adviser program to assist businesses to access the right tools, information and skills. It was recommended a body be established as a central nodal point for information and advice on digital opportunities for small business.¹¹ ACCI extends this to include recommendations of programs to train and upskill employees in their data, digital and cyber security knowledge.

In addition to improving digital literacy and awareness for small business operators, a small business ICT Modernisation Fund or equivalent would assist in accelerating the transition by businesses to modern digital capabilities and stimulate investment in technology and innovation.

⁷ ANZ, The Digital Economy: Transforming Australian Businesses, August 2018.

⁸ ABS, Characteristics of Australian Business 2019-20, <https://www.abs.gov.au/statistics/industry/technology-and-innovation/characteristics-australian-business/latest-release>

⁹ CPA, Asia-Pacific Small Business Survey 2020-21 <https://www.cpaaustralia.com.au/professional-resources/business-management/small-business/asia-pacific-small-business-survey>

¹⁰ Tam, Rao and Hall, 2021. The good, the bad and the missing: A Narrative review of cyber-security implications for Australian small businesses. <https://doi.org/10.1016/j.cose.2021.102385>

¹¹ Small Business Taskforce: Report to Government - <https://www.industry.gov.au/data-and-publications/small-business-digital-taskforce-report-to-government>

ACCI welcomes and supports the *Skills and Training Boost* and *Technology Investment Boost* draft legislation. These two 20% tax deductions for small businesses will incentivise the improvement in digital and technology capabilities in small businesses. These programs target small business cohorts that are less resourced and skilled in the data, digital and cyber security area. Yet, ignoring incentives for large businesses to integrate advanced technologies will dampen economic productivity and hinder SMEs that rely on the efficient operation of larger businesses.

The Australian Government has taken considerable steps in bolstering the presence of advanced technology. Included in this is the development of the AI Action Plan, the National Artificial Intelligence Centre and incorporating 'artificial intelligence, computing and communications' as one of the seven key areas in the 2022 List of Critical Technologies in the National Interest. However, with Australia's low-base and current slow uptake of advanced technology, the government's role in incentivising businesses to adopt technology is ongoing and should not be limited by industry or business size. The increased uptake of skilled migration is a welcomed decision. Nonetheless, the government should go further, to review the skilled migration program and prioritise skilled migrants with high digital literacy and data analytics to fill skill gaps in Australia.

Recommendation:

- Establish a body to provide information and advice on digital opportunities and access to digital training programs to small business.
- Greater coordination across federal and state jurisdictions with an emphasis on the economic gains from the coordinated, ethical application of artificial intelligence and other advanced, data-driven technologies.
- Review the skilled migration program to prioritise skill gaps, notably in digital literacy and data analytics

2.4 Balancing Cyber Security and Growth

An increased uptake of digital technology needs to be complemented with further investment in protecting business and national security assets from the risk of cyber-attacks. Cybercrime costs the economy more than \$1 billion annually and it disproportionately impacts SMEs. The recent Optus cyberattack brings greater attention and reduced confidence to the little understood and developed cybersecurity landscape. In addition to the Government's \$156 million cyber resilience and workforce package, further investment is required to provide small business with the confidence to take the opportunities granted to them in the digital economy.¹² The NSW Small Business Commissioner in 2017 found that cybercrime was rated by SMEs as the third biggest risk to their business. Furthermore, 42% of small businesses nationwide believed they can protect their business from cybercrime by reduced their digital presence¹³. The government should consider a more engaged guidance program to small businesses on their cyber security systems. This comes as reports on the Australian Cyber Security Centre (ACSC) show that its information is too general,

¹² CPA, Asia-Pacific Small Business Survey <https://www.cpaustralia.com.au/professional-resources/business-management/small-business/asia-pacific-small-business-survey>

¹³ NSW Small Business Commissioner, Cyber Aware 2017, <https://www.smallbusiness.nsw.gov.au/sites/default/files/2019-07/Cyber-Aware-full-report.pdf>

making it hard for businesses to translate to their own circumstances¹⁴. Providing step-by-step guides and/or low-cost consultancy, in particular to small businesses, will help minimize cyber risks, improve responses to breaches and bolster the economy's cyber network.

The Australia Government itself holds a large responsibility over the data it holds of Australians and Australian businesses. Ensuring that their cyber security framework is secure holds significant weight over the actions and investments made in Australia. Incorporating minimum security requirements as a measure alongside cost, quality and timescales as the government evaluates its own technology procurement, as proposed by the Australian Strategic Policy Institute, will increase confidence in the safety of data held by the government but also incentivize suppliers to invest in strong cyber security measures. The government should work with industry to determine the level of security required to be eligible for government contracts, taking into account discrepancies between industries and business size. The importance of a cyber security requirement needs to be balanced with the inclusion of all industries and businesses, installing a cyber security requirement that is complex and expensive will deter smaller to medium-sized businesses engaging with government. This method imposed adequate regulation on the government's own procurement and promotes investment in cyber security whilst not mandating cyber requirements on the economy.

Nonetheless, with the need for greater cyber security in government and business level and the largely increased media platform on cyber security, government funding should not be free from scrutiny. Planned investments should undergo thorough evaluation alongside business to ensure they are effective, efficient and diffused through the economy on a least-cost approach.

With greater cyber security framework at a business and government level, businesses will place greater trust and confidence in digital technologies and data, leading to improved adoption and participation in the digital era.

Recommendation:

- Work with industry to develop cybersecurity awareness and resources to protect small business from cybercrime.
- Work with industry and all business sizes to develop a least-cost, minimal required cyber security requirement in technology contracts offered to the government.

2.5 Ethical Use of Technology and Data

As technology advances and the range of data collected increases, the government should ensure that the use of technology and data follows ethical guidelines. Customers and businesses, knowing that their data is securely supported, will continue to provide and engage in data uptake and advanced technologies such as artificial technology. Without this trust the productivity growth seen from using data sharing and AI will diminish as consumers will no longer participate and businesses will correspondingly reduce their adoption of these technologies. Establishing a framework that promotes these values will create trust between user and implementer, consumers and business, which will support adoption of advanced technologies, encourage data collaboration and lead to greater productivity.

¹⁴ 5-year Productivity Inquiry: Australia's data and digital dividend, Interim report
<https://www.pc.gov.au/inquiries/current/productivity/interim2-data-digital>

The framework for regulation on artificial intelligence and data use needs to have minimal impact on the free market, ensuring businesses don't face heavy regulatory burdens that deters activity in the digital market. Australia already overburdens businesses with complex and duplicated regulatory processes. The requirements for AI use should not be so limiting to discourage its uptake by business. The outlined 'risk-based approach' in the *5-year Productivity Inquiry: Australia's data and digital dividend*, following international AI guidelines, provides adequate regulation that builds trust with AI use whilst not inflicting unnecessary burdens on AI applications deemed to be of limited or minimal risk. Careful consideration should be made to the categorisation of AI application risks such that correct allocation occurs and the regulation adequately matches the risks.

Recommendation:

- Guidelines should be established to safeguard AI and data uses, promoting confidence and adoption in these advanced technologies. A risk-based approach will ensure AI applications with low risks don't face overregulation.

2.6 Policy and Regulatory Framework

Regulation in the technology sector faces a tough challenge to ensure advanced technology and data use is safe, secure and ethical, whilst also not overburdening business creating barriers to investment and participation in the digital economy. The Australian Government can look to policies implemented internationally to guide their level of engagement in the technology sector. For example, the EU developed the General Data Protection Regulation (GDPR) which places strict rules on businesses who hold and use data on European citizens. The GDPR, whilst successful in developing stronger cyber security, has been unsuccessful in delivering greater trust from consumers in their data collation¹⁵¹⁶ and has disrupted business and generated significant costs on emerging technologies¹⁶. Technologies such as artificial intelligence, block chains and cloud computing are effective in improving productivity through their vast collation of data and implementation of complex, high-quality algorithms. Placing strict regulation upon the collection of this data and need for transparency in the design of the algorithms inhibits the development of these technologies and increases the cost to develop¹⁷. A survey conducted by Bitkom found that data protection requirements imposed by the GDPR was the largest barrier for the development of new technologies for 74% of respondents¹⁶. Furthermore, installing data protection into the technological infrastructure disproportionately impacts small to medium businesses whose use and storage of personal data is minimal and not at the core of the organisation. The Australian Government should revise this model such that confidence and cyber security are implemented into the economy at little to no disadvantage to business. This can be achieved through grants or low interest loans to aid development data requirements into the technology to make the business complaint with the regulation.

Recommendation:

¹⁵ Bauer et al., 2021. Did the GDPR increase trust in data collectors? Evidence from observational and experimental data; <https://doi.org/10.1080/1369118X.2021.1927138>

¹⁶ Center for Data Innovation, What the evidence shows about the impact of the GDPR after one year.

¹⁷ Li, Yu & He, 2019, The impact of GDPR on global technology development; <https://doi.org/10.1080/1097198X.2019.1569186>

- Review international regulation on digital, data and cyber security areas to create an Australian framework that builds trust and supports business technology investment.

3 Innovation for the 98%

Innovation underpins the growth and dynamism of all economies. Businesses now invest as much in knowledge-based assets that drive innovation, such as software, databases, firm-specific skills and organisational capital, as they do in physical capital, such as machinery, equipment or buildings. Going beyond technological breakthroughs, innovation involves the evolution of existing industries over time, adopting new technologies and skills or adapting to changing markets.

The OECD estimates that innovation accounts for 50% of long-term productivity and economic growth in advanced industrial countries. Yet, Australia's business expenditure on R&D is very low relative to many comparable developed countries and, as a country, we have a very poor history in commercialising R&D and innovation developed here. In 2019-20, gross expenditure on R&D was \$35.6 billion. While this is a \$2.5 billion increase over the past two years, it represents less than 1.8% of GDP. This is well below the OECD average of 2.4% of GDP and other major economies such as Japan (3.2%), Germany (3.0%) and the United States (2.8%).

To stimulate investment in R&D, New Zealand is raising its R&D investment incentive to 15%. Other countries, including the USA and UK, have highly diversified innovation ecosystems underwritten by favourable tax and regulatory environments which support the commercialisation of R&D and innovation and are highly attractive to global firms.

Australia's relatively low overall R&D expenditure and poor performance in commercialisation of research output compared to many other countries is a cause for concern and has been exacerbated by COVID-19. The Australian Bureau of Statistics are yet to publish data on Gross Expenditure on R&D beyond 2019-20, but it is likely to have fallen dramatically over the past two years.

Further, it is the ability to commercialise innovation that is holding investment back. Having achieved a breakthrough, businesses often face the 'commercialisation chasm,' where they are unable to access funding to further develop their idea into a viable product, scale-up their operations and produce their innovative new technology on a commercial scale in Australia. The small size of the Australian market, low risk appetite by domestic companies and limited access to venture capital often leads to Australian inventions leaving our shores to be further developed and scaled up for production in other countries.

The patent box reforms announced in the 2021-22 Budget are a step in the right direction, lowering the tax rate on profits businesses derive from eligible intellectual property. However, initially the 'eligible intellectual property' was too narrowly focused on new patents in medical and biotechnology sectors. While eligibility was expanded in the April 2022 Budget to include energy, ICT and agriculture, the sectors covered are still too limited. New technology breakthroughs in all sectors should be able to access the patent box, particularly manufacturing industries, so that all businesses are incentivised to research, develop innovations and commercialise them, providing a commercial advantage to Australia.

On top of broadening the patent box's low tax rate, direct support is needed. This should include the use low interest loans, direct grants or other financial support methods, to assist businesses and enable them to capitalise R&D. The Clean Energy Finance Council and the Australian

Renewable Energy Agency have proven very successful in facilitating increased flow of finance to stimulate investment and drive development of the clean energy sector in Australia, such that Australia is now a global leader in both commercial scale (grid connected) wind and solar, as well as household solar. Similar models can be used to support the commercialisation of innovation in Australia, particularly in advanced manufacturing, ICT, robotics and automation, circular economy (recycling and waste management) and construction (design and the use of innovative new materials).

Recommendations:

- Broaden the patent box to all industry sectors.
- Enhance this support with low interest loans and other financial assistance to assist businesses to commercialise R&D and innovation in Australia.

3.1 Enabling Innovation Diffusion

On Australian shores, greater focus can be made on creating an environment where new ideas are generated and translated into new products, services and processes that are industry relevant. Challenges in finding people with the right technical and professional skills is faced by businesses internationally. However, Australia's qualification mismatch of 38.7% is greater than Canada (38.2%), the OECD average (34.4%), the US (32.9%) and the EU (32.2%). More effort needs to be placed into aligning studies to the needs of industry. SMEs, more so than large corporations, are disadvantaged by the lack of industry-relevant experience joining the workforce as they don't possess the required resources to hire employees for specific functions such as IT experts.

The \$296 million committed by the Commonwealth for the National Industry PhD Program will help increase the number of relevant skills in industry. However, supporting 1800 PhD candidates and 800 industry members to undertake research projects is not of significant scale to make a lasting impact on industry. ACCI has previously proposed increasing public funding for CSIRO, Cooperative Research Centres (CRCs), Research and Development Corporations (RDCs) and universities to undertake collaborative research with industry. This would stimulate greater business investment in research, as business would be encouraged to collaborate with these institutions to access the matched funding. Linking research at these institutions to industry, would also ensure the research has greater practical outcomes for business, which would likely lead to further investment to scale up and develop the innovation further in Australia.

Along with increased public funding to universities, the federal government should look to improve the processes of academic consulting. Academic consulting provides significant benefits to the private and public sector by facilitating the diffusion of up-to-date knowledge and skills surrounding developments to industry. As acknowledged in the Productivity Commissions, there are deterrents for industry and universities to partake in academic consulting. To increase the level of academic consulting to the private industry, policy should focus on structural changes to the implementation on academic consulting. A Deloitte study found universities have opportunities to adopt new, or stronger, models of business development and industry engagement to drive industry partnerships, including the empowerment of academics. A US paper found that individual discretion is the main

determinant of academic engagement with industry¹⁸. Policy measures should correspondingly target the individual alongside organisational incentives for academic consulting. For example, improving the engagement skills of academics would bolster the quality of academic consulting, improve diffusion of skills and innovation, and increase industry's interest and reliance on academic consulting. Additionally, incentivising universities to allow for academics to conduct consulting on their own accord, whilst still adhering to their university obligations, would provide greater flexibility for academics to engage with industry. This could be achieved through additional funding based upon the level of academic engagement in the private and public sector.

Greater sharing of government data to the private sector supports productivity growth through tailored investment, improved collaboration, quicker diffusion of knowledge, and reduced cost and time spent on research. It also leads to more representative and transparent benchmarking, an important tool that provides businesses with a criterion to measure their own performance from and prompts the adoption of updates and innovations within their industry. The need for greater public data sharing explored earlier in Section 2.2 and the recommended advancement of the Data Availability and Transparency Act 2022 review is bolstered through the benefits of increased benchmarking for businesses.

Furthermore, there is little incentive for businesses to share information about the adoption of new technologies and innovation amongst the private sector. Early adopters, having incurred significant costs to trial and implement new technologies and innovation are unlikely to aid their competitors by willingly transferring information. As acknowledged by the Productivity Commission, this would reduce the payoff and incentive to innovate. Nonetheless, this lack of cohesion within the private sector slows the diffusion of innovation. The Government, however, already has a tested model that aid industries in diffusing knowledge and innovation. Industry Growth Centres being involved with research, industry, government and global markets provides a suitable, established model to try and test new innovations in industry-relevant settings. With increasing collaboration and commercialisation as a key priority of these Growth Centres, expanding their focus into testing innovations is a logical step. Having conducted the evaluation, the information can be shared amongst the industry and aid the adoption and diffuse of the innovation. However, having burdened the cost of the research and evaluation, these Industry Growth Centres should continue to receive Government funding due to the overall economic value they derive. For example, the Advanced Manufacturing Growth Centre (AMGC) 2020 Projects Report forecasted a \$1.2 billion increase in revenues generated from \$66.8 million invested by the private and public sector¹⁹. Additionally, in 2019-20 the Food and Agricultural Growth Centre (FIAL) reported 35 collaborative projects between researchers and businesses that commercialised 15 innovations with a value of \$25 million²⁰.

Recommendation:

- Increase funding for CSIRO, CRCs/RDCs and universities to provide greater incentive for industry to collaborate and partner with government R&D organisations/institutions.

¹⁸ Perkmann and Walsh, 2022; Engaging the Scholar: Three types of academic consulting and their impact on universities and industry.

¹⁹ Advanced Manufacturing Growth Centre, Projects Report 2020.

²⁰ Food and Agricultural Growth Centre, Annual Report 2019-2020.

- Incentivise university engagement in academic consulting and allow for academic discretion in their engagement.
- Provide continued funding for Industry Growth Centres to aid the diffusion of innovation implementation information

3.2 Innovation and Diffusion in Government Services

The government, a significant contributor to the Australia economy, should also look intrinsically to ensure innovation and technologies are adequately diffused amongst the public sector. With government-funded organisations and agencies spread across many industries, the public sector has the advantage of sharing information and applying innovative best-practices from one industry into another. However, the government lacks the appropriate forum for their many subsidiaries to share their success and failures and promote the transfer of evidence-based best practice. The Industry Growth Centres, as discussed above, are suitable models that help diffusion across industry and are beneficial to the government. The government should explore avenues to implement a public growth centre or include the function of sharing best practice into an established body. This will act as benchmarking within government bodies to promote the diffusion of innovation and lead the economy and businesses.

Further, this will promote greater coordination between the Commonwealth and state and territory governments. Currently many areas of government overlap but are incohesive in their management and aims. An area of cohesion, however, is there risk averse cultural norms. These not only contribute to a lack of experimentation, efficiency and diffusion within the public sector but also causes burdens on business stakeholders. Federal, state and territory, and local government must work more effectively together, take a more collaborative approach to become more efficient internally and effective in their purpose in the greater economic environment.

Recommendation:

- Evaluate the efficacy of a public growth centre or a best practice diffusion function in an established body to promote innovation diffusion and unity between all levels of government and their agencies.

4 A Competitive, Dynamic and Sustainable Future

4.1 Business Investment

A key factor behind Australia's lagging productivity growth over the past decade has been low business investment. Non-mining capital investment in new plant, equipment and machinery has been stagnant since the GFC in 2009 with annual growth of non-mining investment slowing to an average of less than 0.2% per annum in real terms between 2009-10 and 2018-19. In comparison, for the decade up to 2008-09 the average was 4.3%, and in the decade to 1989-99 it was 5.6%. The pandemic has not helped with private new capital expenditure falling 7.2% in 2019-20. As the economy emerges from the pandemic and businesses can begin to place greater confidence in the market, they should be supported by government to ensure long-term productivity growth.

The temporary full expensing measure that enabled assets to be immediately written-off (fully expensed) in the year of purchase/installation has provided necessary support to stimulate investment. Since its introduction in October 2020, private new capital expenditure has grown by 20% to June 2022, with a 15.4% from December 2020 to December 2021. Removing the cap on the value of asset purchased and providing access to the arrangement for larger businesses has complemented improved business confidence and pent-up demand. However, the measure is set to expire on 30th June 2023, stunting economic recovery and slowing productivity growth during a period of needed momentum. Given the measure's success, extending it beyond the current expiry date and considering making it permanent would support strong growth in investment in plant and equipment and bolster productivity.

In addition, large-scale investments particularly in heavy industrial machinery, and advanced manufacturing equipment and technology is needed to achieve substantial productivity gains that will support economic activity in the long run. Whilst the full expensing measure has helped stimulate investment, this is largely in smaller items of plant and equipment that deliver modest productivity gains to business. The government should consider an investment allowance of 20% of the value of investment in machinery, plant and equipment to engage larger (i.e. above \$500,000) and longer-term investments.

Further, SMEs face significant challenges in acquiring major banks to provide credit for longer-term (more than 7 years) capital investment. This barrier hinders the ability for SMEs to reach their full potential and engage in productivity-enhancing investments. A SME loan guarantee for longer-term capital investment would address this barrier and substantially improve SMEs productivity and support long-term growth.

Recommendation:

- Stimulate investment through an extension of the Temporary Full Expensing measure beyond 2023.
- Introduce a broad-based investment allowance of 20% of the value of an asset purchased for all business investments in plant, equipment and machinery.
- Provide a SME loan guarantee for longer-term investments that support business growth and show clear productivity improvements.

4.2 Infrastructure Investment

Australia's population growth is expected to increase from 25.5 million in 2020 to 30 million around 2030. With Australia's major cities already under strain, greater investment in infrastructure across a range of sectors including transport, communications, energy, water and waste is needed to reduce congestion, improve the liveability of cities and increase productivity. In addition, existing infrastructure is aging and there is increasing demand for upgrades, maintenance and replacements.

Given infrastructure investment is not solely a Commonwealth responsibility, the Commonwealth must work with state and territory governments through the National Cabinet Infrastructure and Transport Reform Committee to deliver cost effective and efficient infrastructure investment.

With the accumulation of large amounts of public debt by the Commonwealth and state and territory governments due to the COVID-19 pandemic response, it has become more important than ever that decision-making for public investment is independent, market-focused, evidence-based and well-targeted at priority projects.

Independent bodies such as Infrastructure Australia, and its Infrastructure Priority List, should be relied on for the assessment, selection and sequencing of infrastructure investment. A key part of Infrastructure Australia's role should be to undertake stringent cost-benefit analysis on all proposed investment prior to commencement, to ensure it is cost effective and the most efficient investment to meet a specific need.

The current infrastructural spend is heavily focused on larger projects, leading to increasing bottlenecks in the procurement of design, planning and construction contractors, particularly in Sydney and Melbourne. This is bidding up costs and contributing to increasing delays in the commencement and completion of major projects.

A range of new techniques are emerging that offer the opportunity to break tendering processes into several smaller components, enabling contractors to make several bids for different components of a project. These offer the opportunity to widening the pool of contractors to small and medium businesses as well as the large ones to increase the competition. These new techniques will improve the overall efficiency of delivery of major infrastructure projects, lowering costs and reducing delays in the commencement and completion.

Public infrastructure can capture broad benefits, including economic, social and environmental, that make it attractive to investors seeking long term investments with particular characteristics. With impaired government balance sheets, one option is for government to fund investment in public infrastructure through securitised borrowing in the form of infrastructure bonds, rather than through general purpose borrowing. Infrastructure bonds would facilitate private sector investment, providing opportunities for a range of investor types from individuals to large funds. Investors such as superannuation and pension funds, insurance companies and sovereign wealth funds would find these bonds an attractive vehicle to increase their investment in Australian infrastructure. There is considerable scope to leverage the sector's \$2.7 trillion to invest in public infrastructure to support the government's policy priorities for economic growth and increased productivity.

Recommendation:

- Strengthen infrastructure prioritisation function of Infrastructure Australia to ensure market capacity constraints are managed
- Work with states, territories and local government to more efficiently and effectively deliver infrastructure investment, including incentive to improve procurement practices to increase competition by enabling a larger number of smaller contractors to bid for projects.
- Greater focus on regional infrastructure as an enabler of decentralisation.
- Finance public infrastructure through the issuing of government securitised infrastructure bonds.

4.3 Openness to Trade and Foreign Investment

Australia, being a resource wealthy country with a high demand for capital and small population, needs to remain open for foreign investment. Not only do foreign investments bridge the gap between domestic savings and investments, but it broadens Australia's networks and our exposure to international innovation, new technologies and services that boosts productivity and overall performance.

In 2021, Australia's foreign direct investment (FDI) as a percentage of GDP was 1.8%, whilst above the OECD average of 1.4%, there is scope for improvement with the comparable Canada at 3% and Australia in 2018 recording 4.7%. Australia's high regulatory burden on FDI due convoluted screening and approval processes, placed us behind only New Zealand and Mexico in OECD countries for complexity and lack of transparency. A 2021 review of the *Foreign Investment Reform (Protecting Australia's National Security) Bill 2020*, conducted by the Secretary of the Treasury, found stakeholders reported the need to clarify, liberalise and simplify the screening framework. This bill increased the regulatory burden facing businesses through extension of mandatory notifications of investments in a sensitive national security business. Data published by the ABS shows FDI inflows during the first nine months of the reforms was \$1.7 billion dollars less than the preceding nine months. It is noted that the extent that the reforms had on this decline is convoluted with COVID-19 impacts, nonetheless, increased red tape on foreign investment is a deterrent. The Commonwealth, therefore, should continue to promote our open economy and attract international recognition by removing impediments to imports and foreign direct investments. This will create spillovers of knowledge, innovations and technologies on an international and industry level.

Expanding upon the need for greater openness to FDI to aid the diffusion of innovation in Australia, Australia needs to carefully assess arguments for building economic resilience and productivity. Despite the global economic environment (Russia's war in Ukraine, fuel prices, US and UK monetary policies) significantly impacting productivity on Australian shores, we should not lose sight of the economic success Australia has built upon free trade and foreign investment. Additionally, domestic disruptions such as floods and supply chains issues are in part to blame for our lagging productivity and economic growth. Rather greater economic resilience and productivity will occur through more exposure to international competition that drives innovation adoption and

lowers import prices for domestic producers. Consequently, the government should reduce barriers to imports of goods and services.

One such barrier, although minor, is the remaining low tariff levels. Australia's low tariff levels are welcomed and have supported domestic producers through reduced costs. However, the mere presence of tariffs causes compliance costs, particularly to small businesses with fewer resources and businesses importing a wide range of products that creates multiple tariff lines. Australia's already low tariffs are becoming increasingly redundant due to more trade agreements occurring at equal terms between countries, the value of tariffs, albeit low, is noted. The government should consider tariff reform as freer trade is encouraged internationally.

Recommendation:

- Review and remove any unnecessary red tape of foreign direct investment, particularly targeting the approval and screening processes.
- Remove undue barriers to trade of goods and services by reviewing tariff levels, design and technical barriers

4.4 Managing the Climate Transition

Climate change has the potential to create major economic disruption and social costs. The impact of increasing climatic variability through drought, flood and bushfire, higher temperatures and more severe natural events will place increasing strain on our health systems, energy demands and emergency response capability.

With more frequent incidences of extreme weather events leading to rising insurance premiums, increasing energy prices, and changing customer and investor expectations, efforts to mitigate climate change are in the long-term interest of all Australian business.

Consistent with Australia's international commitments and recent legislative changes, the economy must reduce carbon emissions by 43% below 2005 levels by 2030 and achieve to net-zero carbon emission by 2050. This will necessarily involve the realignment of many business activities, and as such will require clear policies, market incentives and financial support.

The Government's *Powering Australia* strategy goes some way to identify the means of achieving the necessary emissions reduction. The focus is on renewable energy and electrification of sectors, such as transport and manufacturing. Yet, far more detail is required on the emissions reduction that will be achieved by the proposed regulatory measures and the timing of investment in emissions reduction technology.

While the targets are important to focus on an outcome, what's needed is a detailed roadmap setting out the timing of these investments, when new technologies are expected to be available and how these contribute to the emissions reduction over time. The Government should be presenting specific projections of the emissions levels (or annual rate of emissions reduction) over the next 8 years, rather than a straight-line expectation. Further, work must commence now on a roadmap, with the milestones along the way, for emission reduction over the subsequent 20 years, to achieve net-zero emissions by 2050.

Reform of the Safeguard Mechanism is a key feature of the Government's *Powering Australia* strategy, involving a 28% reduction in emissions over the next seven years (from 2023 to 2030) from the 215 largest emitting incorporated facilities releasing at least 100,000 tonnes of greenhouse gases per year. In general, ACCI agree covered facilities should contribute their proportional share of the emissions reduction effort. Yet, it is important the Safeguard Mechanism provide certainty for investment in low emissions technology and a level of flexibility so facilities can optimise their investment and achieve the most effective outcomes. Redesigning the baseline settings for facilities covered by the Safeguard Mechanism is required to support business and economic growth and maintain competition whilst also ensuring their share of the 2030 and 2050 targets are met. Production-adjusted baselines should be set facility-by-facility, ensuring the emissions reduction baselines are specific to the covered facility, as for some industries there is less scope for facilities to reduce the emissions-intensity of their productions.

The transition to lower emissions baselines is not linear, so it is important the Safeguard Mechanism grants facilities flexibility through crediting and trading, and multi-year monitoring periods. Allowing facilities to generate tradable Safeguard Mechanism Credits (SMCs) when their emissions fall below their baseline provides an incentive to businesses to overachieve in their emissions-reduction efforts and the ability to purchase SMCs assists facilities whose abatement tasks has proven more costly or have more limited options. Similarly, accepting Australian Carbon Credit Units (ACCUs) in the Safeguard Mechanism provides further flexibility in the timing of investments, as a facility can purchase ACCUs until it becomes economically viable to purchase the technology required to reduce on-site emissions.

Emissions-intensive, trade exposed (EITE) businesses should be granted tailored treatment under the Safeguard Mechanism, so they can remain competitive in international markets. This support is best provided by grants through the Reconstruction Fund rather than leniency in the baseline decline rates, as this would disincentivise investment in low emissions technology and make the national emissions targets harder to reach.

To ensure Australia has a future with sustainable, secure sources of energy, we need to integrate our long-term emissions reduction plan with our energy policy. This policy needs to have a focus on secure, reliable and affordable domestic supplies of energy to power our households and businesses and improve the international competitiveness of our industries. We also need to recognise the substantial economic contribution of energy exports and maintain our position as a leading global exporter.

Climate change policy should prioritise competitive, market-based solutions that provide economy-wide benefits, while delivering sustainable long-term emissions reductions at lowest costs. Australia should adopt a no regrets approach, with the focus on developing productivity enhancing new technologies that strengthen the economy and at the same time deliver emissions reduction.

In the transitions to a low emissions energy future, all technology options available need to be considered. It is essential Australia maintains a technology neutral approach to electricity generation and supply if we are to maintain the affordability, reliability and security of energy supply throughout the transition. This may mean we accept some energy sources and export opportunities that lower, but don't fully eliminate, emissions, to keep the cost of energy down, retain jobs and realise the economic benefit. The residual emissions would need to be offset via a faster rate of

reductions by other sectors or increased sequestration activities. For example, this may include transitioning from coal-fired to gas power generation as an interim measure until technologies such as battery storage and green hydrogen become efficient and cost-effective. Alternatively, this may require planting millions of trees to offset emissions from grey hydrogen while green hydrogen technology is developed, commercialised and scaled-up to be economic.

Emissions reduction policies and measures should aim to minimise regulation and government subsidies. They should also be consistent with the principles of equity (sharing the mitigation effort fairly across industries and states/territories), risk management, least cost abatement, and policy stability.

The Government should review and realign research and development incentives and other supportive policies, with the aim of enabling Australian business to become a world leader in innovative emissions reduction technology. Australia's economic, social, and technical advantages should be deployed in the global effort to mitigate against adverse climate change.

Australia has the capacity to be a leading player in the development of innovative new technologies to address climate change. Our businesses and their skilled workforce have the potential to play a major role in the next wave of renewable energy generation, storage and transportable energy technology. We should be investing in developing and producing this technology in Australia, rather than seeing our research and innovation move offshore and then importing the technology back to Australia. For example, Australia has some of the largest reserves of lithium, cobalt and rare earths, giving us the potential to be a major producer and exporter of lithium batteries for energy storage and magnets for wind turbines. Similarly, our environment is well suited to further expansion of wind and solar generation to support green hydrogen production.

These are emerging technologies that still require significant research and development, as well as support to commercialise and scale-up production. There are substantial domestic and export opportunities from being a first mover and developing these technologies to an economic and commercial scale in Australia. Increasing incentives for R&D and supporting greater private investment in these technologies, will enable Australia to become a major supplier of renewable energy resources in the future. This can be achieved by shifting funding currently provided by Clean Energy Finance Corporation (CEFC) and Australian Renewable Energy Agency (ARENA) from now proven technologies of wind and solar, to support greater investment in these developing technologies, such as hydrogen and lithium batteries.

Australia needs to maintain its opposition in the international arena to trade protectionism disguised as climate action, especially measures like the carbon border adjustment mechanism. Border adjustment strategies have serious global economic and trade implications and must be avoided. A carbon tax on imported goods would encourage protectionism under the guise of environmental benefit and could lead to damaging trade disputes. The UN Framework Convention for Climate Change guidelines states that climate change management shouldn't impose new trade barriers or market distortions, so we should remain opposed to trade protectionism to preserve the free trade agenda advanced by countries like Australia.

The impact of increasing climate variability is already being observed. Therefore, policies and measures should equally focus on adaptation and resilience, particularly in land management and planning decisions, as well as in infrastructure selection and design.

Recommendations

- Policy targeting the emissions reduction should be transparent, consistent amongst governments and productivity oriented.
- Facilities covered under the Safeguard Mechanism should undertake their share of the emissions reduction task, but flexibility should be provided through crediting and trading, so facilities can optimise their investment and achieve the most effective outcomes
- The Safeguard Mechanism should provide tailored treatment to EITE industries, including grants, but they should still be required to contribute their share of emissions reduction
- Integrate carbon emission reduction policy into energy policy, taking into account the substantial contribution of energy exports to our economy and the need for a secure, reliable and affordable domestic supply of energy.
- Prioritise competitive, market-based solutions that provide economy-wide benefits, while delivering sustainable long-term emissions reductions at lowest costs
- Incentivise greater private R&D investment in emerging technologies such as hydrogen and batteries by reallocating CEFC and ARENA funding from proven technologies (wind/solar).
- Review and realign research and development incentives and other supportive policies with the aim of enabling Australian business to become a world leader in innovative emissions reduction technology and adaptation infrastructure.
- Place greater emphasis on educating the public and business on achieving greater energy efficiency
- To avoid trade disputes and prevent global economic implications, Australia needs to remain opposed in the international arena to trade protectionism
- With the impacts of climate change already being observed, the focus should also be on adaptation and resilience to climate variability, particularly in land management, planning decisions and infrastructure selection and design.

5 From Learning to Growth

5.1 An integrated approach to learning

Our education and training system plays an essential role in growing our skills base, supporting a knowledge economy, and maximising the productive capital of our workforce and its contribution to our national prosperity. Australians need to be better prepared for modern workplaces and the changes ahead, including the changing future of work. Businesses need to have access to a skilled and qualified workforce to enable them to seize opportunities and operate at their fullest potential.

We should not view Schools, VET, higher education, the migrant system and employment services separately, rather an integrated approach should be undertaken. The establishment of Jobs and Skills Australia (JSA) should be used a key instrument to break down the silos within and across the sectors and improve collaboration. JSA should act as an umbrella organisation responsible for providing advice to Government and the industry partners on economy-wide workforce needs analysis and assessment to guide the allocation of skills investments for all industries. Its focus should be on assessing how the education and training of Australians, complemented by the migration system, address our immediate and long-term labour market (human capital) needs. It should also focus on developing supporting industry initiatives and projects to expand our national capacity and meet the needs of economic transition.

Preparing young Australians to enter the workforce empowered and ready to value-add to productivity and output is a main function and significantly impacted through our schools, VET and higher education systems. While young people are a vitally important part of the labour market, youth unemployment is more than double the overall unemployment rate, at 8.4 per cent compared with 3.5 per cent. Nationally, in 2021 only 73.9 per cent of 17–24 year-old school leavers were fully participating in education, training and/or employment. There is scope for improvement. Failing to support young Australians now will not just have immediate ramifications in terms of the current skills and labour crisis but will diminish Australia's long-term labour force productivity.

Australia's quality of education can be improved to deliver improved literacy and numeracy, contributing to a more skilled and productive workforce. One in five Australians have low basic skills, this limits their job opportunities, versatility, capacity to acquire further skills and lifetime wages. Beyond this, it tarnishes their output and contribution to business, community and economic goals. Improving the quality of education can help prevent young Australians from ending up with low basic skills, improve social inclusion and deliver productivity gains.

Recommendation:

- Use JSA to take a holistic approach to the education and training, employment and migration systems to ensure it meets the skills workforce needs of the future.
- Ensure that education systems focus on improving literacy and numeracy levels to give Australians strong foundational skills.

5.2 Vocational Education and Training

Australia has never had a greater need for apprentices and trainees. Apprenticeships and traineeships provide pathways for school to work transition as well as a valuable career change avenue, combining structured learning alongside work experience within a model where the student receives remuneration, and the employer has access to pay rates that reflect the work/training nature of the employment relationship.

Finalising the National Agreement on Skills and Workforce Development will lead to real funding increases in VET and deliver an increase in the number of funded students. This may not deliver “free” qualifications for all students, but subsidies should be available through both public and private provision on a relatively consistent basis, with incentives for quality delivery, noting that priorities for support will differ on a sector, state and regional basis.

Further, the funding for VET courses should be attached to the student rather than the provider. This allows the student to select the skills training provider of their choice, whether a quality independent Registered Training Organisation (RTO) or a public provider. In addition, the competition for funding across education providers (both independent and public) would increase, encouraging sector innovation, productivity-enhancements, and improved quality of service.

A better system around pre-apprenticeships programs is also needed to allow easier access to apprenticeships. There is not a one-size-fits-all occupations approach to pre-apprenticeships, and industries place differing value on them.

VET delivered to school students is an important area where action is required to improve the return on public investment. In 2020, more than 241,200 secondary school students participated in a VET in Schools (VETiS) program. While there are some very successful examples of VETiS, many students are undertaking training that employers don't value and don't lead to jobs or link to further education.

VETiS should enable students to gain nationally recognised qualifications while at school and provide a pathway to further training or a job. However, too many courses offered as “VET” by schools do not come from the industry approved training packages, instead are courses the schools have sought to have accredited locally to suit their particular facilities or VET providers. There have been long held concerns that trainer quality or facilities are not of sufficient standard to deliver skills that employers respect.

While vocational training for school students is largely the responsibility of state and territory governments, it requires national leadership. What is needed is a national process that:

- Identifies through consultation with industry the most relevant and useful vocational training to be delivered to school students (both in terms of qualifications and quality of delivery).
- Examines the barriers to school-based apprenticeships while working with industry, school sectors and states to improve opportunities.
- As a complement to VET delivery, explores the possibility of applied learning elective subject(s) in Year 11 and/or 12 that allows students to apply academic learning in practical contexts and incorporates pre-apprenticeships or VET pathways that will better articulate to further education and apprenticeships beyond school.

- Establish a National Apprenticeship Advisory Board, which would report directly to JSA, for apprentice policy generally and to provide valuable input into the most appropriate school-based pathways to industries

It is essential that industry, schools and governments work together within the community to ensure that VET in Schools delivers real results that connect students to qualifications that will lead to employment outcomes.

Recommendation:

- Finalise the National Agreement on Skills and Workforce Development with a commitment to increase overall funding.
- Funding of VET places should be untied to provider, allowing students to pick the provider that suits them best.
- Identify the most relevant and useful vocational training to be delivered to school students (both in terms of qualifications and quality of delivery) and identify the barriers to school-based apprenticeships.
- Explore the possibility of applied learning elective subject(s) in Year 11 and/or 12 that offers academic learning in practical contexts incorporating pre-apprenticeships.
- Establish a National Apprenticeship Advisory Board, which would report directly to JSA.
- Review the training and assessment qualification required for experienced industry practitioners to encourage more experienced people to become full or part time VET trainers.

5.3 Higher Education

Australia's higher education sector is well regarded worldwide. Most students undertake higher education for the career opportunities they will be able to access once qualified. A university degree is often the only way to be able to work in key fields such as engineering, medicine, nursing, sciences, teaching and law. In 2021, 33 per cent of Australians hold a bachelor degree or higher qualification.

The higher education sector is an important element in the delivery of skilled workers to increase the productive capacity of our economy.

In order to assist potential higher education students as they choose courses, it is essential that information exists that is easy to access and understandable such as the future job market and likely jobs. Most year 12 students are unaware of ComparEd (incorporating QILT) and it is strongly recommended that more resources are put into promoting this website, leading to more informed student choices. The website can also provide information about the funding changes and comparisons across course units and qualifications.

The recent Job Ready Graduates higher education reforms were supported by industry. However, there are growing concerns expressed by industry sectors that a reduction in funding arising from the restructuring of the funding bands may lead to less positions being made available or lead to poorer quality delivery.

An important contributor to improving job readiness for university graduates is the opportunities they have to integrating work experience with their learning, and it was good to see that Work

integrated learning (WIL) was a key component of the recent reforms. Ironically, given all the focus on science and maths skills, those disciplines have lagged behind others in embedding WIL into their courses and it shows in their graduate employment outcomes — full time employment outcomes for science and maths graduates being 61% in 2021 compared with an overall average of 70%. This illustrates the need to focus on those disciplines where there is not a strong history of WIL.

As an extension of WIL, the higher education sector is strongly encouraged to work with industry to identify more cadetship opportunities, tailoring courses to be a combination of work and study similar to an apprenticeship (but purposely not calling this option “higher apprenticeships” as this term has caused confusion). Cadetships will not suit all occupations and industries, but the limited experience to date is encouraging.

The imperative to improve WIL, the opportunity for cadetships and the relatively poor performance of industry-university research collaboration all point to the need to improve the voice of industry in higher education. As part of workforce planning and the implementation of skills clusters, it is essential that higher education institutions are included in the process and act on the advice from industry about where the skill needs are and to design and market their courses that best meet workforce needs.

Potential students looking to enter higher education should also be well informed about their choice of course and career. It is essential that students are provided with information on the likelihood of employment in a subject area prior to enrolling in a course of study. The graduate outcomes and student satisfaction surveys are both valuable resources, but they need to be more widely marketed to school students and others that are seeking a career change.

Recommendation:

- Enhance work integrated learning programs, particularly for science and maths courses, and create more cadetship opportunities, to ensure graduates are both skilled and job ready
- Continuation of uncapped university places
- Greater collaboration between higher education institutions and industry in the design and offering of courses to ensure they best meet workforce needs.

5.4 Lifelong Learning

The adoption of a lifelong approach to learning and skill development will enable employees to better equip themselves with the new and emerging skills needed to keep pace with the changing nature of work and help businesses adapt to the future of work, including any technological advancements.

Lifelong learning not only better equips the workforce for the careers of the 21st century and ensures businesses can remain cutting edge and internationally competitive but has been found to be beneficial both for the business in terms of productivity, and for the employee in terms of wages.

There is scope to further promote lifelong learning and the benefits it can bring for both employers and workers to encourage more to take part. Australia needs to foster a culture of upskilling throughout a person's career, rather than the traditional route of undertaking training in your 20s, working, then retiring.

The current policy settings present some roadblocks and there is room for improvement. Micro-credentials, with external training that is shorter and provides targeted skills development, is preferred by 52 per cent of businesses. Workers also show a strong preference for shorter courses, as it enable them to build specific skills without committing to a full degree qualification. The increased focus on micro-credentials is an important development, particularly for valuable VET skill sets, postgraduate qualifications, or short courses that stack towards qualifications. This makes further learning more attractive for those juggling work and life commitments and would ensure the incentive of working towards a tangible achievement remains.

The development of micro-credential courses should be industry driven and used to top-up skills and knowledge. It is essential that industry play a leading role in the creation and implementation of these short courses. This will ensure the skills developed meet industry's skills needs both now and in the future. In addition, micro-credentials should continue to be considered as stackable or transferable, meaning they are utilised to upskill or pivot to different skills rather than reliance upon them as a sole qualification.

However, the focus of micro-credentials should be on augmenting VET and university education, not as a replacement. There are a range of foundational skills that are gained from an apprenticeship, certificate and university education, that are not gained through a single unit or short training course. Therefore, the focus of micro-credentials should be to build on previous education and training, rather than a substitute for it.

It is also important to provide incentives for individuals to continue self-education. In Singapore, for example, all citizens are provided with a set credit for approved lifelong learning of \$500 per year, with top ups available for those over 40 years old to improve individuals' access to career transition programmes. This could be considered in Australia, or alternatively Government could expand the tax deductibility for self-education expenses so that an individual can claim not only training expenditure relevant to their existing job role, but to future income.

Recommendation:

- Explore how micro-credentials can complement full qualifications / nationally recognised training to support opportunities for flexible learning and training in both the higher education and VET sector.
- Provide incentives for individuals to continue self-education, such as a set credit for lifelong learning or an expansion of tax deductibility for self-education expenses

6 A More Productive Labour Market

Given the very short time provided to respond, ACCI will respond to Interim Report 6: *A more productive labour market*, in a subsequent supplementary submission.

7 About the Australian Chamber

The Australian Chamber represents hundreds of thousands of businesses in every state and territory and across all industries. Ranging from small and medium enterprises to the largest companies, our network employs millions of people.

The Australian Chamber strives to make Australia the best place in the world to do business – so that Australians have the jobs, living standards and opportunities to which they aspire.

We seek to create an environment in which businesspeople, employees and independent contractors can achieve their potential as part of a dynamic private sector. We encourage entrepreneurship and innovation to achieve prosperity, economic growth and jobs.

We focus on issues that impact on business, including economics, trade, workplace relations, work health and safety, and employment, education and training.

We advocate for Australian business in public debate and to policy decision-makers, including ministers, shadow ministers, other members of parliament, ministerial policy advisors, public servants, regulators and other national agencies. We represent Australian business in international forums.

We represent the broad interests of the private sector rather than individual clients or a narrow sectional interest.

ACCI Members

State and Territory Chambers



Industry Associations

