

Australian Industry Group

Ai GROUP SUBMISSION

to the NSW Government's
2018-19 Budget

JUNE 2018

Ai
GROUP

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About Australian Industry Group

The Australian Industry Group (Ai Group) is a peak industry association in Australia which along with its affiliates represents the interests of more than 60,000 businesses in an expanding range of sectors including: manufacturing; engineering; construction; automotive; food; transport; information technology; telecommunications; call centres; labour hire; printing; defence; mining equipment and supplies; airlines; and other industries. The businesses which we represent employ more than 1 million people. Ai Group members operate small, medium and large businesses across a range of industries. Ai Group is closely affiliated with more than 50 other employer groups in Australia alone and directly manages a number of those organisations.

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1. Introduction

This submission sets out the parameters and policies Ai Group believes should form the basis of the 2018-19 NSW State Budget.

The NSW Government has an important role in helping to shape and secure the state's economic future. This will largely depend on maintaining a focus on boosting the state's competitiveness and creating a climate for business success.

NSW's economy is continuing to exhibit strength and is exceeding growth in most other states. NSW's robust economic performance reflects strong population growth, the significant upswing in publicly funded infrastructure projects and elevated residential and commercial building activity.

With the State's fiscal position also remaining strong, the Government should use the 2018-19 Budget to lift the State to a new level.

While business conditions remain mixed and margins are generally tight amid strong competitive pressures and the escalation in energy costs, the Government can pave the way for further advances in the opportunities faced by the workforce, by households and by the State's businesses.

This will require the Government to be strongly focused on the long term, by embarking on reforms that build the capacity and capability of the economy to ensure we make the most of the opportunities that lie ahead.

Consequently, Ai Group urges the NSW Government to concentrate on reducing business costs, through reductions in taxation and regulation to assist current and future NSW businesses to develop and gain market share domestically and internationally.

Ai Group also emphasises the importance of innovation, investment and exports in providing the foundation for future growth and productivity. NSW is well represented in the innovative, knowledge intensive and high margin businesses of the future. Through our food processing firms, developing new products and technology to meet a global market; our machinery and equipment manufacturers, producing technologically advanced goods; and our new manufacturing industries in biotechnology, information technology and pharmaceuticals, NSW industry is combining innovation, investment and exports to ensure the state is able to compete on the global marketplace. This process must continue and accelerate in the years ahead.

A key element to maximising the growth potential of NSW is ensuring that industry is able to meet its current and future skills needs. Significant areas of concern for businesses are the lack of work-readiness and foundation skills of school leavers, the decline of STEM skills and considerable employer unease about the quality of VET in Schools arrangements. Ai Group believes that the Government's role in relation to addressing these issues lies with

funding major initiatives to lift school sector literacy and numeracy, and developing initiatives that promote STEM skills in schools, the tertiary education sector and the workplace.

In relation to investments in infrastructure, the state's strong fiscal outlook will lend support for undertaking further critical investments through the recurrent budget. This is a key positive for providing the foundation for future growth and improvements in living standards for the people of NSW. It is important, however, that the Government's procurement policy supports full and fair participation of Australian suppliers with a view to leaving a legacy of globally capable local industries. The Government's infrastructure program must also ensure taxpayers get value for money throughout the life of infrastructure, and not from just the initial cheapest bids.

This submission also recommends the establishment of well-targeted programs with significant upside potential for boosting the state's competitiveness and initiatives that we believe should be an integral part of helping to build a strong future for NSW manufacturing.

2. Summary of Recommendations

Ai Group notes that the NSW Budget will enter 2018-19 in a strong financial position. This gives the NSW Government more leeway to address immediate concerns about business costs and/or to bring forward longer-term investments and proposals that will contribute to growth. With this context in mind, Ai Group's priorities for the 2018-19 NSW Budget include:

- **reduce business costs by removing or reducing taxes and charges that hinder or discourage businesses from growing and distort or reduce economic activity.** This includes pursuing the option of removing residential and commercial stamp duties by better utilising land tax as a source of revenue; undertaking to simplify tax scales and thresholds to avoid multiple rate scales which increases complexity; ensuring appropriate indexation of the various tax rates and thresholds to avoid bracket creep and; introducing regular and effective monitoring of the compliance costs borne by businesses to clearly identify cost impacts and priority areas for reform.
- **Drive best practice in regulatory design and implementation and reduce the considerable cost burden imposed on business and the community by inefficient, outdated and anticompetitive regulations.** The NSW framework for developing and managing regulation must recognise that the state operates within a federation and that there are great benefits from consistency of rules across jurisdictions. As such, there needs to be a focus on achieving genuine harmonisation of state based laws (or centralisation of laws to the Federal level) by developing and reviewing regulatory instruments in concert with other state and territory governments. We also believe that there is considerable merit (as recommended by the Independent Review of the NSW Regulatory Policy Framework), in the NSW Government assigning responsibility of regulatory policy to a Senior Minister to advocate regulatory policy reform within Cabinet drawing on advice and assessments from an independent body or well-resourced regulatory function.
- In the planning and execution of the state's infrastructure and investment programs, the Government should ensure that the roll-out of high-quality infrastructure projects are delivered as part of a consistent pipeline of construction activity with **infrastructure project delivery strongly focused on local capacity, capability, skills and supply chains.** Additionally, we urge the NSW Government to take a leadership role in the coordination of the pipeline of infrastructure projects across the country so that industry is better able to respond to tenders without facing significant cost and labour resource impacts. It is also important that governments work together in the **development of a new national infrastructure strategy** that: provides a clear strategic framework for planning to meet present needs and support future directions; maintains and reinforces a rational and transparent process to identify the highest-value infrastructure options; directs adequate and appropriate

investment towards those options; ensures timely delivery; and ensures efficient use of the resulting assets.

- **Regional infrastructure**, telecommunications, education and training, and business innovation systems need to be actively targeted to stimulate economic activity in the regions and support regional communities.
- **Adhere to best practice government procurement principles**, including recognising the need to consider “whole-of-life” costs that ensures appropriate consideration of through-life servicing and support which are key advantages that local suppliers offer, and which is especially needed in major projects and major technology intensive purchases. It is also incumbent on the Government to take greater responsibility in raising the core skills and competencies of public sector personnel responsible for procurement. The trend towards government outsourcing in recent decades has led to a reduction in public sector staff with the necessary skills in procurement which has adversely impacted on the standard of government procurement, including inadequacies in dealing with complex contracts. Improvements in the skills of public procurers accompanied by more time and resources directed at the outset of a project on factors such as the desired functional and performance outcomes and/or specific technical specifications can play a key role in reducing infrastructure costs.
- Ai Group also urges the NSW Government to **collaborate with other States to formulate local procurement policies that could bring mutual benefits to more Australian manufacturers**, such as assisting a manufacturer to broaden its customer base across States.
- Maintain an on-going commitment to **encouraging innovation** and economic development through sound programs and incentives that are critical to stimulating economic growth across the State. This includes increased funding for measures that improve the flow of private capital to innovative businesses and increase collaborative opportunities between businesses; maintaining a focus on building collaborative links between researchers and industry and; delivering the physical infrastructure geared towards promoting innovation such as innovation precincts and improving SME’s access to Government research facilities.
- **Continue to boost industry capabilities** by leveraging off the State’s competitive strengths and opportunities across a range of highly specialised, technologically advanced and high margin businesses of the future. This includes providing the necessary support to bridge gaps in key technical and business skills with the goal of building greater collaboration between industry and the training system; supporting the development of new innovative industries in advanced manufacturing; continuing to support the long-term development of defence industries and

capabilities; attracting investment for NSW by making more companies investment ready, lifting the adoption of ICT enabling technologies; raising the profile of manufacturing in the state by effectively marketing NSW's business capability and; assisting NSW businesses in the uptake of digital and smart manufacturing technologies building upon programs such as Industry 4.0 as well as the utilisation of demonstration programs and business toolkits.

- **Continuing to support international trade** and export development.
- **Assist NSW businesses which are struggling with sharply rising energy prices** by ensuring a commitment to capacity building and capital assistance support programs; facilitating development of gas resources as part of the larger new energy strategy and; supporting energy efficiency while avoiding duplicative energy planning requirements on large energy users.
- **Ensure a more urgent focus on building capacity by investing in skills** - especially in rebuilding the VET system, apprenticeships and STEM skills.
- **Investing in effective programs and strategies that prepare people that are entering the labour market and existing workers** to acquire the digital skills needed to take advantage of growth opportunities and adapt to the digital economy. This includes addressing digital skills gaps, language, literacy and numeracy issues, and building leadership and management capabilities.

3. The NSW Economy

NSW's economy is continuing to exhibit strength and is exceeding growth in most other states. NSW's robust economic performance reflects strong population growth, the significant upswing in publicly funded infrastructure projects and elevated residential building activity.

However, weakness in consumer spending will continue to cast a cloud over the near-term outlook while the anticipated slowdown in residential building activity in 2018-19 and the associated negative spill-over effects on employment and industry activity more broadly will weigh on state final demand.

This highlights the need for the Government to be strongly focused on the long term, by embarking on reforms that build the capacity and capability of the economy to ensure we make the most of the opportunities that lie ahead.

The NSW economy is continuing to perform solidly despite a loss of momentum from late 2016. State Final Demand grew by 3.0% p.a. over the year to December 2017, moderating from 6.1% p.a. in Q3 2016.

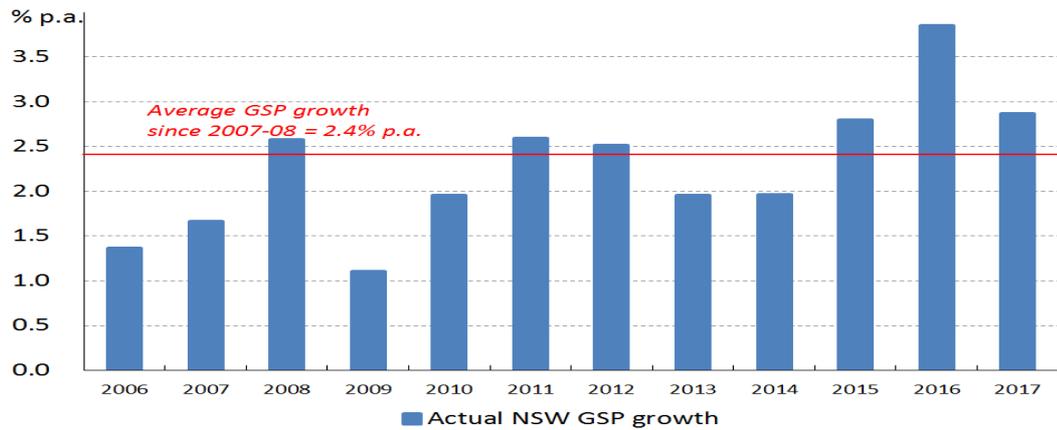
NSW is continuing to benefit from low interest rates, the relatively low Australian dollar and above-trend population growth. These factors are supporting on-going strength in residential construction and employment growth in the state. A solid and expanding pipeline of public sector capital works led by major road and rail projects is also strongly supportive of economic activity. The latest State Accounts data shows that NSW Gross State Product (GSP) grew by 2.9% in the financial year 2016-17. This was the second-highest annual growth rate of all states behind Victoria (3.3% p.a.) and exceeded Australian GDP growth of 2.0% in 2016-17 (see Table 1). It was also above the 10-year average growth rate for NSW of 2.4% (see chart 1).

Table 1: Real GSP growth and state rankings, 2015-16 and 2016-17

	2015-16		2016-17		Share of GDP (%)
	% p.a (real)	Ranking	% p.a (real)	Ranking	
NSW	3.9	1	2.9	2	32.9
Victoria	3.5	2	3.3	1	23.2
Queensland	2.6	3	1.8	4	18.6
South Australia	0.3	6	2.2	3	5.9
Western Australia	1.0	5	-2.7	6	14.1
Tasmania	1.3	4	1.1	5	1.7
Australia	2.8	-	2.0	-	100

Source: ABS Australian National Accounts, State Accounts 2016-17

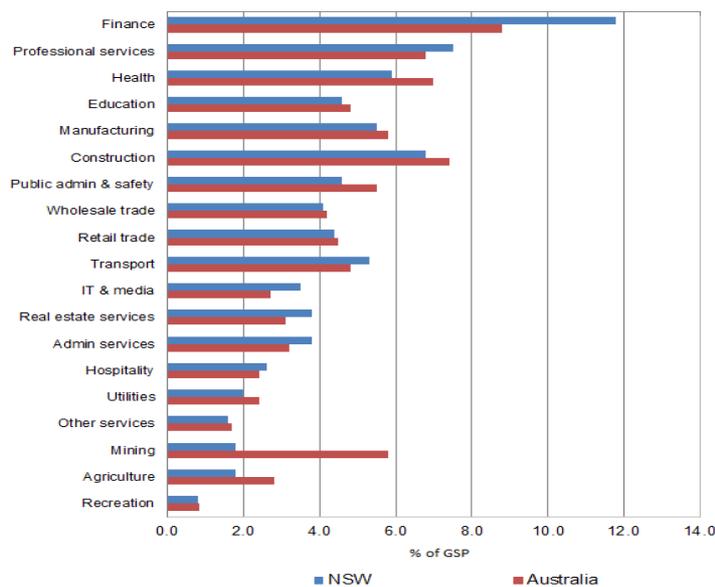
Chart 1: Real GSP growth, NSW



Source: ABS Australian National Accounts, State Accounts 2016-17

Looking at the composition and growth of industrial production, 2016-17 highlights the benefits of the breadth of NSW’s industry base and its lower exposure (relative to national output) to the downswing in mining investment (chart 2) and commodity price cycles. has benefited more directly from strong population growth (charts 3 and 4) and a consequently larger residential construction boom. The state maintains relative strengths in a range of service sectors. This includes finance (11.8% of GSP) and professional services (7.5%), as well as manufacturing (5.5%) and construction (6.8%). NSW also has a strong technologies base in advanced information and communication technologies (ICT). NSW growth in 2016-17 was driven by the professional services and finance and insurance sectors (contributing 0.7% and 0.5% points to GSP growth respectively).

Chart 2: NSW and Australian Industry Output, share of GSP & GDP, 2016-17

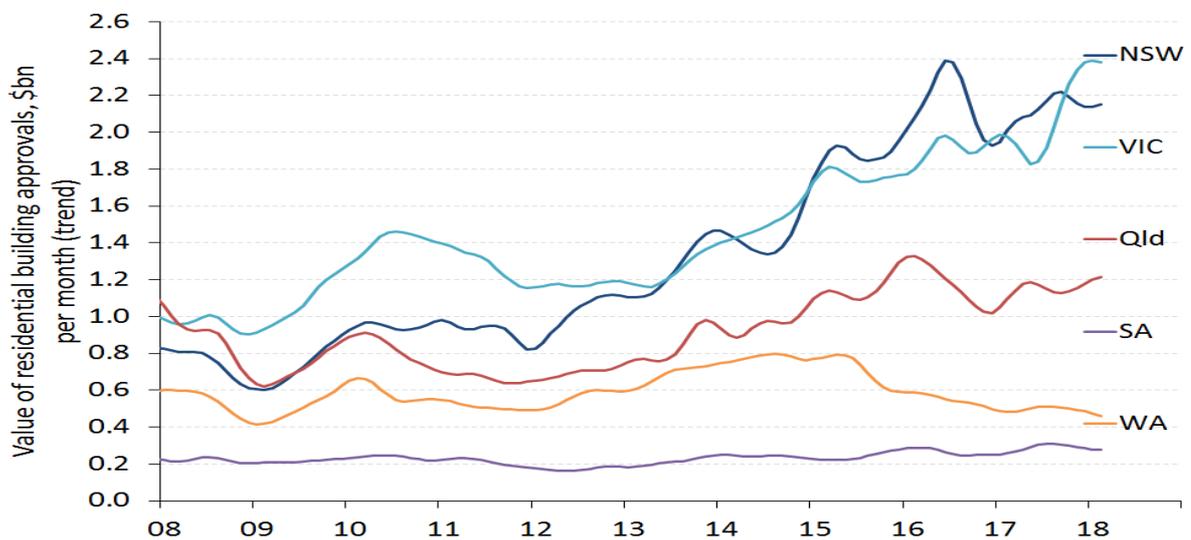


Source: ABS Australian National Accounts, State Accounts 2016-17

The housing sector remains a key area of strength for the NSW economy amid record low interest rates and strong population growth. Demand for new dwellings and other buildings is also being supported by direct foreign investment in property in NSW. Foreign property investment is estimated to be extremely high at present but could already be declining. ANZ and the Property Council of Australia estimate that 21% of new residential property sales went to foreign investors in the December quarter 2017 (down from 26% one year earlier and 31% in Sep 2016), as did 19% of tourism property sales (down from 20% one year earlier), 17% of office property sales, 14% of retail property sales and 12% of industrial property sales.¹ New dwelling investment increased at a solid rate of 8.8% in 2016-17. This followed a lift of 9.5% in 2015-16 and marked the fifth consecutive year of expanding NSW dwelling investment. On the supply side, new dwelling commencements (building activity) in NSW have held at high levels while residential approvals in February 2018 were slightly above levels of a year earlier (+0.8% p.a., trend). This solid pipeline of construction points to the continuation of a relatively high level of house and apartment building activity over 2018. The oversupply of apartment buildings is also less pronounced in Sydney than other capital cities with a level of pent-up demand existing from previous years of undersupply.

Nevertheless, approvals data suggest the peak in residential building approvals occurred in mid-2016, indicating that the dwelling construction cycle is likely to have a weaker positive impact on NSW economic growth in the year ahead.

Chart 3: Residential building approvals



Source: ABS

While private business investment fell by 0.4% (real, seasonally adjusted) in the year to June 2017, growth is poised to pick-up over the course of 2017-18 given the rise in ABS capex expectations and the substantial amount of work in the NSW infrastructure pipeline. Work yet to be done in NSW engineering construction stood at an impressive \$14.7 billion

¹ ANZ Research, ANZ-Property Council Survey, Oct 2017.

in the September quarter 2017, underpinned by a sizeable proportion of public-backed transport infrastructure projects. Support for major project activity is also expected from the telecommunications sector (in line with the roll out of the NBN and 4G network developments) while an improving business environment is helping to drive stronger privately funded commercial building activity, particularly across the offices and industrial building segments. Major projects include the ongoing Bangaroo development which will continue through to 2020 and the \$2 billion Crown casino and hotel at Bangaroo. Importantly, the lift in non-building investment is likely to cushion the impact of a moderation (albeit from a high level) in residential construction growth in the year ahead. As a result, the NSW construction industry – and its considerable local supply chain – is poised for another relatively solid year in 2018.

The NSW labour market conditions improved in 2017 after broadly stable employment in 2016. Following the creation of just 10,700 new jobs (+0.3% p.a.) in the year to December 2016 in trend terms, employment gains have since strengthened to 147,400 (+3.9% p.a.) in the year to February 2018. Moreover, the NSW trend unemployment rate as at February 2018 stood at 4.9%. This is lower than all states and below the national unemployment rate of 5.5%. The jobs upturn in 2017 was centred on healthcare, construction, retail trade, training & education and transport & warehousing which together added 143,300 jobs and accounted for 86.9% of the total rise in employment over the year to Q1 2018.

Despite the improving labour market conditions, consumer spending in NSW softened in 2016-17 with real growth at a below trend rate of 2.3%. This follows a brisk increase of 5.5% in the previous financial year. This slower consumer spending momentum reflects low wages growth, high household debt and an easing in house price growth. These influences have also curbed retail trading conditions. Annual growth in retail sales stood at 2.7% (seasonally adjusted) over the year to December 2017, down from a 3.4% annual pace in December 2016. The outlook points to consumer spending improving only gradually in 2018 as labour market conditions remain solid and wages growth picks up slowly.

The NSW Treasury's 2017-18 Half Yearly Review (released in December 2017) paints a positive outlook for the NSW economy. The NSW economy is expected to grow at an above-trend rate of 3.0% p.a. in 2017-18 before moderating only slightly to 2.75% p.a. over 2019-20 and 2020-21. Even with this moderation, the pace of NSW economic growth is forecast to remain at an above trend rate.

Nevertheless, there are a range of key risks to in 2018 and 2019 to NSW's economic, industrial and employment growth, including:

- a slower than expected recovery in non-mining business investment;
- a sharper than expected deceleration in house building activity particularly in the high-density apartment market;

- delays in construction work particularly in view of the heightened risk of a La Nina event for 2017-18 which would result in higher than usual rainfall;
- electricity costs and reliability of supply;
- gas costs and reliability of supply;
- the distribution of growth across NSW regions, sectors and communities;
- Australian dollar volatility and/or foreign investor volatility;
- inadequate skills and especially STEM skills to support innovation and competitiveness;
- access new technologies and regulatory barriers to new technologies; and
- competitive business costs and a competitive regulatory environment.

Table 2: Government and private sector forecasts for the NSW economy

<i>% change p.a.</i>	<i>2015-16 actual</i>	<i>2016-17 actual</i>	<i>2017-18 forecast</i>	<i>2018-19 forecast</i>	<i>2019-20 forecast</i>	<i>2020-21 projection</i>
NSW Treasury (Dec 2017)						
Real GSP, % p.a.	3.5	2.9	3.0	2.75	2.75	2.50
Employment, % p.a.	3.8	0.9	2.5	1.75	1.5	1.25
Unemployment rate, %	5.4	5.0	4.75	4.75	4.75	4.75
CPI, %	1.5	2.0	2.25	2.25	2.25	2.5
WPI, %	2.1	2.1	2.0	2.5	2.75	3.0
Population, % p.a.	1.4	1.7	1.6	1.4	1.4	1.4
Deloitte Access Economics (Dec 2017)						
Real GSP, % p.a.	3.5	2.9	3.1	3.2	2.8	2.6
Employment, % p.a.	3.8	0.9	2.8	1.7	1.4	1.4
Unemployment rate, %	5.4	5.0	4.6	4.5	4.7	4.7
CPI, %	1.5	2.0	2.2	2.4	2.4	2.4
WPI, %	2.1	1.9	2.2	2.4	2.6	2.9
Population, % p.a.	1.5	2.1	1.6	1.5	1.5	1.5
Industrial production, % p.a.	-1.6	0.9	3.9	1.0	1.1	1.3
NAB Economics (Oct 2017)						
Real GSP, % p.a.	3.5	2.9	3.1	2.5	na	
Unemployment rate, %	5.4	5.0	4.7	4.7	na	

Sources: Department of Treasury and Finance, *NSW Budget 2017-18*, NSW Mid-Year Review, Dec 2017; ABS; Deloitte Access Economics, *Business Outlook*, Dec 2017; NAB Economics, *States Economics Handbook: NSW*, Oct 2017.

4. The NSW Fiscal Outlook

NSW is in an enviable fiscal position. The state has maintained its triple-A credit rating courtesy of a strong economy, a low debt burden and continuing substantial investment in new and existing infrastructure projects. Fiscal projections for the state are solid and the underlying financial position of NSW has broadly improved since the most recent State Budget. The NSW Treasury's Half-Yearly Review shows a budget surplus result of \$3.3 billion in 2017-18, \$634 million higher than forecast at the time of last year's Budget with average surpluses of \$2.1 billion expected over the four years to 2020-21. At the same time, projections for general government net debt at June 2018 have improved from negative \$0.5 billion to negative \$2.9 billion, the lowest of all states and territories.

NSW businesses will be looking to the Government to continue to achieve operating surpluses and debt positions that are consistent with the State's triple-A credit rating through responsible and prudent fiscal management. This will require ensuring that recurrent spending is covered by recurrent revenue. It will equally require paying close attention to the level and balance of the State's assets and liabilities.

A failure to do so will increase pressure on the Government to find additional sources of revenue through taxes and charges. This would limit the ability of the Government to undertake critical investments and have a considerable adverse effect on business growth and employment and impose an increased cost burden on the NSW community.

A clear challenge for the Government is weakening revenue growth. NSW revenue growth is expected to moderate from an estimated 4.7% in 2016-17 (nominal growth) to an average of 1.8% p.a. over the next four years. This is due to softer growth in land transfer duty, a record low growth of 1.5% p.a. in GST revenue, a fall in Australian Government National Partnership Payments, and the conclusion of the Government's poles and wires asset recycling program.

In view of these challenges, we commend the Government's fiscal strategy directed at implementing savings and efficiency measures to help offset the lower revenue growth outlook. This includes increases to the annual efficiency dividend from agencies and controlling public sector wages growth. It will be important that the Government continues to ensure that expenses are contained. The Government must also maintain a focus on increasing productivity, improving the cost competitiveness of the NSW economy and generating stronger long term economic growth to address the need to ease fiscal pressures over time.

Over the medium and longer term, we also call on the NSW Government to:

- continue to **target to achieve operating surpluses** (adjusted to the state economic cycle and fluctuations in demand) and sustainable debt positions without resorting to higher taxes and charges.
- **ensure NSW taxes and charges are competitive** (and where possible below the average of) other states and territories. This is vital in enabling the State to grow and attract investment. This creates its own rewards in in the form of a larger tax base and a larger net revenue stream and a greater capacity to finance future public-sector services and investment.
- take advantage of its strong fiscal position and solid credit rating to **allocate sufficient funds for the continued development of the state's economic and social infrastructure**.
- **Continue to monitor and seek out efficiencies in government department program delivery.**
- **Continue to provide sufficient funding for investment in the drivers of NSW's competitiveness such as innovation, research and development, infrastructure, exports and skills.**
- **provide for improvements in the delivery of government programs and services.** This includes evaluating agencies activities for opportunities for greater exposure to competition from the private sector.

5. Taxation Reform

State Governments across the country are responsible for a sizeable portion of the government costs levied on business, through taxation and regulation. Industry understands the Government needs revenue streams to provide important public services, but it is important that only necessary regulation and the most efficient taxes are imposed.

Establishing the right tax structure is one of the most important reforms that Government can implement to promote growth, boost employment opportunities and improve international competitiveness. A central part of genuine taxation reform is to ensure consistency with the following principles:

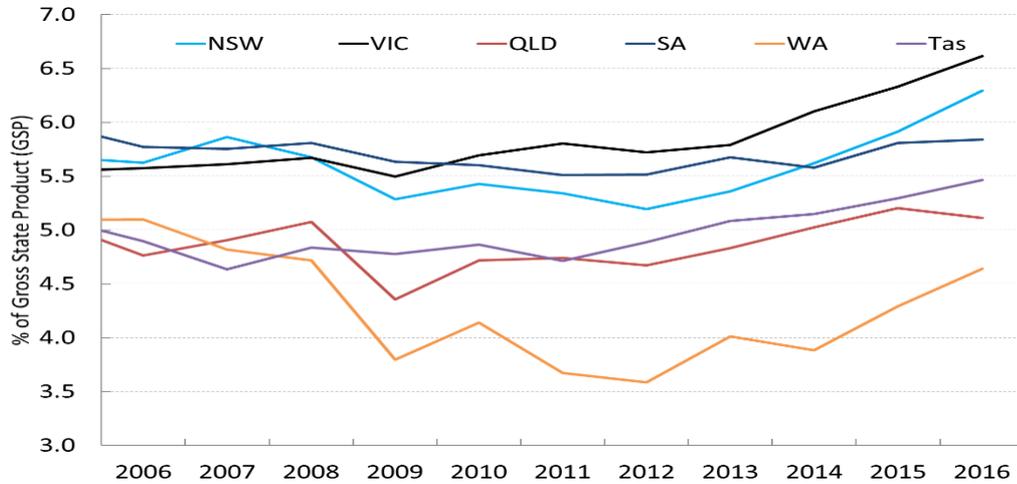
- **Reducing or removing taxes and charges that hinder or discourage businesses** from growing and distort or reduce economic activity;
- **Reducing the compliance burden** that the various state taxes and charges impose on business;
- **Ensuring that NSW businesses are not at a competitive disadvantage with their interstate counterparts**, and that businesses are encouraged to locate and invest in NSW rather than in alternative global locations;
- **Ensuring efficient administration of the tax system** so that the costs of managing and complying with any given tax are not excessive relative to the revenue raised;
- **Maintaining certainty** so that the taxation system is easily understood and that businesses can clearly determine or anticipate how taxes are paid, and the amount of tax liability.
- **Simplifying tax scales and thresholds** and avoiding multiple rate scales which increases complexity;
- **Ensuring appropriate indexation of the various tax rates and thresholds** to avoid bracket creep and;
- **Ensuring that taxes raised are commensurate with the revenue required** to support fiscally responsible Government expenditure.

State-based taxes

Relative state taxation competitiveness across states is an important issue for Australian industry as it can have a major influence on a range of business decisions from employment and investment to location. Australian Bureau of Statistics data highlights that NSW had the second-highest tax-to-gross state product ratio in 2015-16 (Chart 7), a position that the state held over the previous two years. This takes in account all state and local taxes including payroll tax, land tax, land transfer duty, insurance duty and motor vehicle duty. It

demonstrates that NSW is a relatively heavy taxing state (particularly in comparison with Queensland and Western Australia) with NSW businesses suffering a disadvantage against competitors operating in other states.

Chart 3: State and Local Government Taxes as a share of GDP



With respect to specific taxes in 2015-16, NSW was the highest taxing state (on a per GSP basis) in relation to payroll tax, the second highest in relation to land tax and the third highest in relation to motor vehicle taxes. NSW was also equal to Victoria in taking the most stamp duty as a share of their GSP, reflecting robust housing market conditions in both states.

Chart 2: Payroll tax revenue as a share of GSP

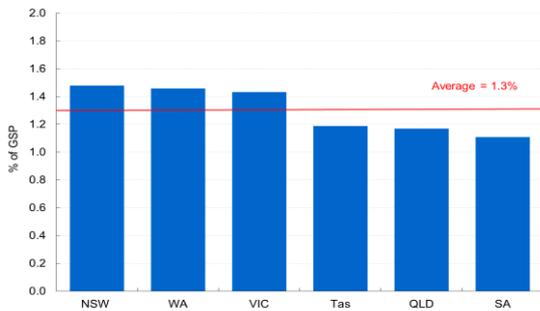


Chart 3: Land tax revenue as a share of GSP

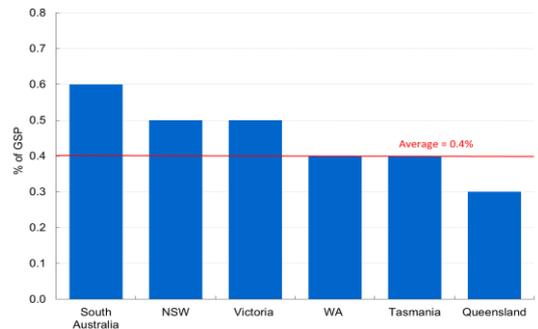


Chart 4: MV tax revenue as a share of GSP

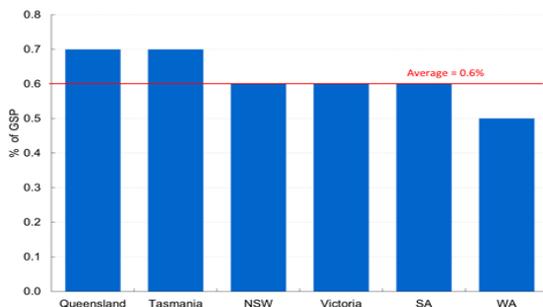
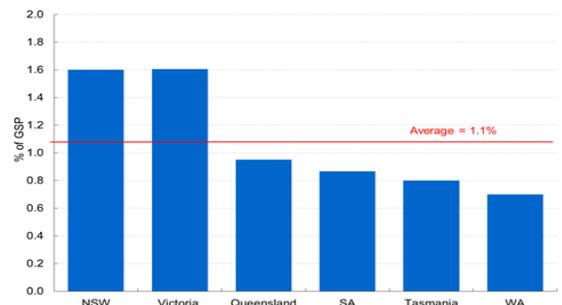


Chart 5: Stamp duty revenue as a share of GSP



Sources: ABS, 5220.0 Australian National Accounts: State Accounts, 2015-16; ABS, 5506.0 Tax Revenue Australia, 2015-16

The NSW Government has taken steps to reduce the costs of doing business in NSW by removing some inefficient state-based insurance duties for small businesses with less than \$2m in annual aggregate turnover. From 1 January 2018, these businesses have been exempt from insurance duty on their premiums for commercial vehicle insurance, professional indemnity insurance and public liability insurance. However, it clear that more needs to be done to improve the competitiveness of the NSW tax system and ensure that the overall burden is as low as possible and that revenue is raised in the most efficient manner.

The State's longer-term challenges associated with ageing of the population and the expected decline in workforce participation mean that the longer NSW postpones genuine and comprehensive tax reform, the more difficult will be the task of promoting long-term economic growth across all sectors for the wellbeing of the local community.

As far a fiscal circumstances permit, the Government should act to **substantially improve the competitiveness of the state's payroll tax regime**. This requires an on-going commitment to the progressive reduction in the payroll tax rate. As a long-term policy goal, Ai Group continues to support the recommendations of the Henry Tax Review (Australia's Future Tax System, 2010), that included the abolition of payroll tax, within the context of a wider program of national taxation reform.

The NSW government should also implement reform of NSW property taxes by **pursuing the option of removing residential and commercial stamp duties** by more fully utilising the existing local government land rate system or by reforming the state government land tax base. Stamp duties are inefficient transaction based taxes that distort economic activity. There would be substantial gains for the economy by broadening the land tax base through the imposition of an annual charge on the unimproved capital value of land rather than the turnover tax levied on the full property sale price. We would also urge that land tax rates be lowered, particularly for higher property values as part of a broadening of the tax base. This would ensure the state has a more efficient and reliable revenue source.

A broadening of the land tax base would also provide the Government with more scope to take further action to **abolish or at least reduce the inefficient "nuisance taxes"** that are a large source of direct state revenue. This includes motor vehicle and insurance stamp duties and other levies and licence fees.

State Governments can also perform a vital task in addressing Australia's system of inefficient state taxes (despite the issues of Commonwealth-State financial arrangements) by collectively working towards real and meaningful harmonisation of taxes, fees and levies on business (such as stamp duties, land tax and motor vehicle duty). This is critical to minimising the complexity and reducing the compliance costs for businesses operating across multiple jurisdictions.

Other key priorities for reform of taxation arrangements that affect business include introduce regular and **effective monitoring of the compliance costs borne by businesses, to clearly identify cost impacts and priority areas for reform.** The Government should also **move the administration, collection and monitoring of all taxes, fees and levies on business to online and digital systems to reduce compliance costs and requirements.**

6. Reducing Red Tape

Ai Group acknowledges the progress that has been made in regulatory reform in NSW. However, it is clear there is a major concern among Ai Group members with respect to the considerable cost burden and impediments to doing business imposed by inefficient, outdated and anti-competitive regulations. There are also widespread concerns with respect to the complexity of regulation, time delays, lack of information, over-regulation and the approaches of regulators not closely engaged in the experiences of those that they regulate, all factors which can raise costs, inhibit activity and diminish the efficacy of regulation. This assessment has been expressed repeatedly by respondents to Ai Group's own surveys and is corroborated by international comparisons. The 2015-16 World Economic Forum *Global Competitiveness Report* ranked Australia 80th (out of 140 countries), well down from the 60th ranking of five years earlier in 2010-11. Inefficient government bureaucracy and complexity of tax regulations also ranked in the top five most problematic factors for doing business.

We therefore welcome the NSW Government's commitment to undertaking a comprehensive review of the NSW regulatory policy framework with a view to raising the quality of NSW regulation and achieving better regulatory outcomes for the community.

The **Independent Review of the NSW Regulatory Policy Framework** is an important contribution to addressing the underlying causes of regulatory stress imposed on business and the community. We particularly endorse the recommendations aimed at delivering greater transparency and accountability in regulatory decision making, underpinned by a statutory framework that is based on the principle of regulatory stewardship. The adoption of an approach whereby regulations are subject to proactive monitoring and reviews by responsible department and agencies should help to ensure that both existing and new regulations are well targeted and proportionate so that costs are minimised for both business and the community.

The proposal to assign responsibility of regulatory policy to a Senior Minister to advocate regulatory policy reform within Cabinet, drawing on advice and assessments from an independent body or well-resourced regulatory function, is also supported. This would assist in raising the level of Ministerial oversight and provide a clear signal to businesses and the community that the NSW Government is committed to better regulatory outcomes. An independent body with a central regulatory review role should also ensure that the best policy options are considered by Government. It should also serve to improve the coordination of the regulatory reform across departments and agencies, while promoting increased transparency and a higher level of accountability in the reform process.

Other Recommendations for Reform

We also believe that there are range of other specific areas, which if addressed, could provide significant spin-offs in improving business efficiency and productivity at a relatively low cost to the State Government. These include:

Regulatory Harmonisation

Any new framework for developing and managing regulation should explicitly recognise that the state operates within a federation and there is great benefit from consistency in rules and regulations across jurisdictions that are not always captured in intrajurisdictional analyses. As stated in other submissions to the NSW Government, there needs to be a focus on developing and reviewing regulatory instruments in concert with other state and territory governments to achieve genuine harmonisation of state based laws (or centralisation of laws to the Federal level) particularly where the businesses regulated operate or are managed across state borders. This would ensure increased certainty and consistency in the standards applying to industry, and reduce the compliance costs for businesses operating across multiple jurisdictions, but also enhance the effectiveness of the body of national regulation in a particular area.

Inconsistent reporting regimes add to the red tape burdens on industry. Businesses operating in NSW report energy, emissions and other information under a range of state and Federal programs. Many with operations in multiple states face a number of inconsistent and duplicative reporting regimes. NSW should lead efforts to reduce the burden of inconsistent and duplicative reporting, particularly by advocating for, and facilitating, a single national online reporting portal.

We commend the Government for their continuing support for the harmonized WHS laws. NSW plays an important leadership role in maintaining the integrity of the national WHS regime.

Best Practice Regulation

We would encourage the NSW Government to work closely with the Federal Government with a view to adopting the Productivity Commission's regulatory reform recommendations arising from the Commission's study on Regulator Engagement with Small Business (September 2013). These recommendations are in accordance with Ai Group's long held position that a commitment to best practice regulation is essential for all government departments and that regulations should be transparent; accountable; proportionate; consistent and; properly targeted. Aligned to this, there is considerable merit in ensuring that NSW regulators at all levels of government with regulatory agencies undergo regular 'health checks' to ensure these agencies are efficiently implementing regulations and not imposing an additional and unnecessary burden on businesses.

Greater Consistency in Regulatory Processes at the Local Government Level

There is also a strong case for encouraging greater consistency amongst local government regulatory processes to reduce compliance costs for businesses, particularly in the areas of planning and approvals. To progress reforms at the local government level, we would recommend regulatory instruments are developed and reviewed in concert with other state councils in order to achieve uniformity in approach across Australia. This could be achieved through state based regulation review units (or equivalent) working with local councils to develop common guidelines, performance criteria or blueprints for business regulation.

We further recommend the establishment of an on-line platform that details all local government regulatory instruments, procedures and costs. This would provide industry and regulators with a highly visible comparison of the cost of doing business across local government jurisdictions.

Streamlining Compliance and Improving Payment Mechanisms

In recognition of cash-flow difficulties faces by many small and medium sized businesses, we would recommend that businesses are given the option of paying taxes, premiums and charges on an instalment basis where practicable. We would also encourage that regulatory agencies work together to develop and implement a broadly-based master licence for business, subsuming all commonly required licences and permissions in one instrument. A focus on effectively communicating with businesses through tools to assist with compliance and providing appropriate technical resources for briefing industry on regulatory changes is also required.

7. Infrastructure Investment

Ai Group commends the Government's recognition of the importance of efficient infrastructure development to NSW's long-term economic performance through its strong commitment to maintaining a substantial level of infrastructure investment throughout NSW.

The significance of the Government's infrastructure spend was highlighted in the NSW Government's 2017-18 Budget with its provision of \$73 billion in capital expenditure over the four years to 2020-21 directed at new and existing projects and spread across hospitals, schools, water supply social housing, rail and roads. The pivotal challenge for the Government will be in ensuring that these high-quality infrastructure projects are delivered as part of a consistent pipeline of construction activity with project delivery strongly focussed on local capacity, capability, skills and supply chains.

A consistent pipeline of projects which smooths investment cycles is also a means of avoiding a surplus of projects entering the market at any given time. This helps to minimise infrastructure or capacity constraints and enables major projects to be funded and developed in a timely manner. A more even spread of projects can also assist in maximizing the benefits of increased investment and employment generation during periods when it is most needed.

In this respect, we welcome the formation of the Construction Industry Leadership Forum, comprising leaders from industry and the Victorian and NSW public sectors to drive improved collaboration and action around procurement and delivery of major government infrastructure projects. Given the expanding pipeline of publicly funded infrastructure investment, improvements to the coordination of the pipeline of infrastructure projects across the country will be critical in enabling industry to effectively respond to tenders without facing significant cost and labour resource impacts that result in more expensive projects. It is also important that governments work together in the development of a new national infrastructure strategy that: provides a clear strategic framework for planning to meet present needs and support future directions; maintains and reinforces a rational and transparent process to identify the highest-value infrastructure options; directs adequate and appropriate investment towards those options; ensures timely delivery; and ensures efficient use of the resulting assets.

Related to infrastructure planning, stronger regional development plans need to be addressed with projects identified and progressed at rates consistent with the roll-out of metropolitan projects. This is needed to encourage business and jobs growth to spread out from the Sydney city centre and metropolitan areas. Regional infrastructure, telecommunications, education and training, and business innovation systems need to be actively targeted to stimulate economic activity in the regions and support regional communities. It will also be critical to provide the necessary public and freight transport

infrastructure needed at Badgerys Creek Airport to realize the economic and social benefits for the Greater Western Sydney area. An integrated freight and logistics hub would be the key to meeting medium to long-term demand for freight services for Badgerys Creek Airport. This will enable businesses to access transport related efficiency and competitive gains and support opportunities for on-going economic and employment growth in Western Sydney and more broadly across the state.

All proposed infrastructure projects should also be subject to thorough and transparent cost-benefit analysis to ensure the government gets the best possible use of taxpayer funds. A clear and transparent process also helps to foster public support for infrastructure projects and avoid costly delays in construction. It also creates confidence among investors ensuring that lower-cost financing and a deep pool of investment funds exists for future projects. NSW businesses are also strongly supportive of:

- Regular updates and early alerts on the level of priority attached to major infrastructure projects and the anticipated funding arrangements to provide greater certainty and direction for project proponents (to make informed decisions about their investments) and greater clarity for businesses and residents impacted by proposed developments.
- the further development of structured public-private partnership policies that can lower the risks faced by private investors thus attracting more private sector investments while reducing upfront costs to the public.
- a consistent approach in the development and management of infrastructure proposals across the government sector to enable business to efficiently deploy both capital and resources with confidence as to the Government's expectations and within a regime of rational commercial terms and risk profiles that attach to each project.
- Ensuring the early engagement of the private sector in projects so that opportunities, risks and issues on individual projects are identified and communicated before requiring the submission of tenders or expressions of interest
- Working in partnership with the private sector in developing and implementing best practice principles within its own infrastructure delivery responsibilities. This is an obligation that will be central to private sector commitment to, and investment in, NSW infrastructure projects for the longer term.
- Establishing and formalising a community and business consultation process, where robust debates on the prioritisation of NSW infrastructure projects could be conducted.
- Transport infrastructure reform to help address congestion: for example, better provision of real-time information by governments about transport options and network conditions; investment in new and smarter transport infrastructure to keep up with population pressures; and pricing reform to improve utilisation and efficiency in the use of transport infrastructure.

8. Government Procurement

Ai Group believes that more attention needs to be focused on the performance of State Government purchasing agencies and their contribution to industry development and to improving the contribution of Australia's manufacturing industry to the nation's economic performance and well-being.

In this respect, it is vital that NSW Government procurement policy is focused on ensuring that capacity and capability is developed in domestic supply chains so that full opportunity is taken up by domestic businesses that can plan for and compete for procurement work in projects. Emphasis on local capacity, capability, skills and supply chains must be maintained and strengthened. This should include an emphasis on using public infrastructure contracts to build competitive capacity and capabilities in regional areas wherever possible. Ai Group is not advocating that favoritism be shown to local suppliers, but rather that they be given equal access to tender, and that full, fair and equitable consideration is given to local tenders or quotations received.

It is also important that the Government is flexible on definitions of local content. For example, local content could be the local assembly of inputs made overseas when that is the most sensible option that delivers value for money for the Government. Local should also refer to businesses operating in Australia and not limited to a single state.

Ai Group welcomes the NSW Government's procurement reform initiatives focused on introducing greater innovation into government procurement to stimulate the NSW economy. There has been important progress in various key areas, including the reduced registration time for businesses supplying to the Government; the adoption of outcomes-based procurement; simplified procurement processes for small and medium enterprises; the transition from fixed term panel contracts to "always open" pre-qualification schemes; providing simpler contracts and reducing the requirements to register for government business and; reform of the ICT procurement strategy to enhance competition in ICT supply to government, including a flexible principles-based policy framework which replaced a more complex and prescriptive procurement approach.

We also welcome the NSW Government's suite of reforms to steel procurement by mandating the new Australian Steel Standard (AS/NZS 5131) in all new Government infrastructure tenders from 1 October 2017. This is critical to ensuring the integrity and safety of public infrastructure as well as ensuring full and fair access for local producers to development projects.

The report tabled from the Inquiry into the *Procurement of Government Infrastructure Projects* by Alister Henskens SC MP (February 2017) is also an important contribution to adding value to the procurement of government infrastructure with a view to achieving improvements in innovation, efficiency and fairness in procurement. In ensuring that public money is spent efficiently and effectively, State Government purchasing agencies must give

potential suppliers a reasonable opportunity for competition and to provide fair and equitable consideration of each tender or quotation received. We strongly support the Inquiry's recommendations to:

- **Establish a centre of procurement excellence** with a view to improving the skills and capacity of the NSW Government; maintaining best practice in procurement processes and; adopting consistent procurement practices across Government. This accords with Ai Group's long held position on the need to improve the skills and capacity of government purchasing officers and decision makers. Taking the appropriate steps to increase core skills and competence is important for building private sector confidence in the tender and operational processes. Skills development should also have a focus on ensuring that public sector agencies are aware of Australian industry capabilities and recognise the holistic benefits of local procurement for both the community and the NSW government.
- **Continue to promote unsolicited proposals as a means of developing and delivering innovative ideas.** Ai Group supports the market-led unsolicited bid process as a means of maximising the development of new assets and encouraging industry to submit innovative solutions to meet NSW infrastructure and service needs. However, we believe that there are opportunities to enhance the engagement of industry in the market-led unsolicited bid process. This could take the form of clearer rules of engagement such as ensuring that proponents know exactly how "value for money" is defined and interpreted and a clearer understanding of the relative importance attached to each of the assessment criteria. We would also recommend that there be a tightening of the guidelines relating to the protection of confidentiality and intellectual property rights.
- **Provide a consistent and transparent pipeline of infrastructure projects in order to minimise bid costs and increase contestability in procurement.** In this regard we would recommend that the Government work more cooperatively with industry in the coordination of infrastructure projects. This will assist in avoiding infrastructure or construction capacity constraints and enable major projects to be funded and developed in a timely manner.
- **Review all procurement contracts and adopt the use of standardised contracts where practical.** SME's and new entrants in particular are disadvantaged by overly complex contract documentation. The NSW Government should commit to well-designed procurement guidelines, incorporating simple standardised contract requirements and clear tender specifications and evaluation procedures. Overly complex contract documentation and requirements also arise when the government seeks to transfer risk to the supplier whenever problems emerge. This increases the cost of tendering to prohibitive levels, particularly for smaller suppliers. On

commercial feasibility grounds, product liability and professional indemnity insurance limits in contracts need to be reduced.

- **Develop clear principles in the NSW Public Private Partnerships Guidelines for the allocation of project risk.** This will improve clarity regarding the allocation of risk which is essential for engaging the private sector in the PPP process. A model should be adopted that reduces operational risk (including equity risk) to contractors and places responsibility for risk on the appropriate entities rather than those who are least able to resist it.
- **Eliminate unnecessary information requirements during bidding stages.** We would argue for the adjustment of assessment processes to place greater reliance on third party accreditation and reduce reliance on the provision of comprehensive material at the bid stage to reduce procurement costs. We would also recommend streamlining the tender process by adopting a two-stage process for the tendering of major projects. This entails preferred tenders being selected at the first-stage, based on lesser documentation requirements. More detailed evaluations and negotiations are undertaken with a smaller number of preferred tenderers at the second-stage.

There are a range of other opportunities for improving the management of the NSW Government tender process, including:

- **Value for money:** A major distortion that frustrates and impedes the full and fair participation of Australian suppliers is an undue emphasis on price at the front-end of procurement processes at the exclusion of “whole-of-life” considerations. Procurement decisions should take account of factors such as maintenance and through-life support which are key advantages that local suppliers are able to offer. This encompasses supply risks, quality risks and reliability that may affect production delivery times and/or these future costs. In many cases a holistic assessment of these costs will show that for local businesses these total costs could be lower than for overseas-based businesses because services could be rendered more quickly, more reliably and replacement parts delivered more promptly. From a purely budgetary perspective, the NSW Government must be careful to avoid short-term fiscal savings that might increase its long-term costs or reduce its long-term revenue sources. Savings measures that simply postpone expenditure from one year to another (for example, by making a saving on an initial purchase price at the expense of higher future replacement, or maintenance costs) are largely illusory. In many cases, discounted current spending simply means higher costs at a later date and an adverse long-term budgetary impact.
- **The selection and retention by Government of experienced and appropriately skilled project development and procurement personnel** to ensure private sector confidence in the tender and operational processes. The trend towards government

outsourcing in recent decades has led to a reduction in public sector staff with the necessary skills in procurement which has adversely impacted on the standard of government procurement. This is highlighted by commonly cited industry dissatisfaction in relation to:

- poor specifications, lack of detail, incorrect information;
- poorly prepared plans and variations to plans;
- increased risk to businesses;
- disputes as to the extent of work being carried out;
- time delays;
- poor quality contractual terms and;
- inadequacies in managing complex contracts.

It is incumbent on the Government to take greater responsibility for addressing this erosion of the skills base by raising the core skills and competencies of public sector personnel responsible for procurement. This includes the skills necessary for front end procurement documentation through to tendering and selecting the most appropriate procurement mechanisms, particularly for larger and more complex procurement contracts.

In the delivery of infrastructure projects, inefficient government procurement practices due to a lack of experienced and sufficiently competent personnel and inadequate scoping practices is recognised as a leading contributor to major pressure points that can occur throughout an entire project cycle due to cost overruns, delayed completion and disputes. Improvements in the skills of public procurers accompanied by more time and resources directed at the outset of a project on factors such as the desired functional and performance outcomes and/or specific technical specifications can play a key role in reducing infrastructure costs.

- Minimising risks to successful projects by **ensuring approvals processes are more certain, and the conditions streamlined before the construction contract is executed.**
- **Supporting industry through effective planning and communication:** It is important that Australian industry is not constrained in its ability to respond to Government tenders by unreasonable mandatory requirements, a limited time to tender or a lack of information. Large government purchasing activities and major project plans should be developed in a transparent way to ensure local industry is able to invest sufficiently to participate in major tenders.

- **Engagement of the private sector at early stages of planning for projects** to ensure that opportunities, risks and issues on individual projects are identified and communicated before requiring the submission of tenders or expressions of interest. This enables contractors to more effectively understand projects and assess the likely cost of tendering and their chances of being a successful tenderer.

Ai Group also urges the NSW Government to collaborate with other States to formulate local procurement policies that could bring mutual benefits to more Australian manufacturers, such as assisting a manufacturer to broaden its customer base across States.

We would also recommend establishing a process of identification and on-going monitoring of the proportion of Government purchasing accessed locally as opposed to imported sources. This should be published as part of annual reporting requirements of the Department of Trade & Investment.

As a further means of supporting local participation, we believe that the State Government should **make greater use of the Industry Capability Network (ICN)** in helping to build Government knowledge of local industry capabilities and sourcing opportunities through:

- **identifying import replacement opportunities** in purchases of all Government agencies;
- **assisting in the formulation of Government procurement documentation** by reviewing and advising on local industry capabilities and skills to ensure that requirements and/or specifications do not unnecessarily preclude local businesses from bidding;
- **conducting pre-tender briefings** for Government purchasing agencies on local sourcing opportunities and;
- **acting as an intermediary between Government and local industry** following the awarding of a contract, to provide feedback on strengths and weaknesses of tender documents, capabilities and other areas that may enhance future submissions.

9. Encouraging innovation in NSW industry

The NSW Government has a key role to play in supporting innovation by providing funding support for research and development; effectively integrated STEM into school programs; better developing STEM skills in the VET sector and existing workplaces; delivering policies that encourage innovation and; ensuring that the regulatory environment is supportive of regulation and is consistently applied.

We welcome the Government's commitment to various initiatives aimed at accelerating innovation, higher value-adding and international competitiveness, including the:

- R&D and innovative funding (Tech Vouchers, Minimum Viable Product and Collaborative Solutions) programs,
- the Supply Chain Accelerator Pilot Program, the five industry-led Knowledge Hubs which provide an important platform for increased industry-research interaction;
- the establishment of the Sydney Startup Hub to grow the size and strength of the city's innovation and entrepreneurial ecosystem;
- The Sydney School of Entrepreneurship and its focus on growing the startup sector by providing the facilities and resources to support young entrepreneurs across the state's 11 universities and TAFE NSW;
- the changes to NSW government procurement that will better enable agencies to trial innovative products and services offered by startups.
- establishment of a whole-of-government Data Analytics Centre (DAC).
- The development of Knowledge Hubs to create successful innovation, collaboration and knowledge transfer through industry-led collaborative partnerships centred around NSW industry sectors.

Ai Group calls upon the state Government to continue to support industry, innovation and economic development by building on the existing range of government innovation programs and establishing a policy environment that generates a culture of innovation. In this respect, we highlight the following specific priorities for innovation:

- Provide a stable, workable and predictable policy environment that incentivizes investment in innovation and encourages intellectual property (IP) and its flow-on benefits to fully captured to maximize the creation of jobs and wealth in the state.
- Ensure that state research priorities are clearly articulated and that there is a strategic long-term view to pursuing and implementing these priorities.
- Maintain a focus on building collaborative links between researchers and industry, and in doing so ensure that opportunities for collaboration are open and accessible to all sizes of businesses from all sectors with an emphasis placed on the generation of commercial outcomes.
- Improve workforce STEM skills and innovative capability.

- Increase funding for measures that improve the flow of private capital to innovative businesses and increase collaborative opportunities between businesses.
- Deliver the physical infrastructure geared towards promoting innovation such as innovation precincts and improving SME's access to Government research facilities.
- Establishing Government education programs that assist SMEs, particularly in regional areas, in taking advantage of broadband and other advances in ICT (including the upskilling of employees) could make a valuable contribution to NSW's future global competitiveness.

Ai Group also believes that significant benefits could be achieved through the following initiatives:

- Payroll-tax holidays for start-ups and new businesses.
- Regionally-based incentives to support growth in designated areas, such as tax holidays, or assistance and incentives to set up new businesses.
- Incentives to develop greenfield land, such as expedited planning processes.

With a firm eye on the digital world and its potentially disruptive implications for the future of industry across NSW, we also urge the NSW Government to review its regulatory arrangements across the board. The Government should aim to reduce or remove regulatory barriers to innovation and new technologies across all sectors, including (but not limited to) energy, transport, engineering, food development, robotics, digital technologies and telecommunications.

This is becoming increasingly urgent with the advent of Technology 4.0 and the plethora of digital technologies, applications and systems that are becoming available. This includes for example:

- regulatory arrangements for digital technologies, IP and applications;
- regulatory arrangements for robotics and artificial intelligence in the workplace;
- regulatory arrangements for driverless cars and other driverless transport for freight and/or passengers on NSW roads;
- development of use of 'Big Data' to create an innovative economy.

We note in the NSW Government's Draft Future Transport Strategy 2056, that the Government has recognized that it has an important role in ensuring policy and regulatory frameworks are in place to support new transport service operators and commend the Government's future direction commitment to *“review regulation governing road, rail and bus operations to provide new regulation that can pre-empt or respond quickly to market disruptions.”*

Strengthen NSW Businesses Capabilities in ICT

ICT is vital in facilitating innovation, productivity growth and increased interaction of NSW industry in the global economy. We see an important role for the NSW Government and other stakeholders in strengthening NSW businesses capabilities in the information economy. There are particular challenges for SME's in adopting and realising the opportunities that ICT developments provide as a driver of productivity gains.

The NBN will accelerate the development and uptake of flow-on information technologies. While the benefits of the NBN to households, health and education providers have been strongly promoted, less attention has been paid to the needs of, and opportunities for, business users. Government education programs that assist SMEs, particularly in regional areas, in taking advantage of broadband and other advances in ICT (including the upskilling of employees) could make a valuable contribution to NSW's future global competitiveness.

Train Businesses to Manage Cyber-Security Risks

Widespread take-up of the full range of broadband applications will also require greater knowledge of cyber-security risks and ways to manage these risks. These risks are continually growing and evolving. Despite this, use of and investment in cyber security technology is a relatively low priority for many businesses. The results of Ai Group's 2017 Business Beyond Broadband Survey revealed that 78% of businesses nationally did not use cyber security technology and just 13% saw cyber security as a barrier to new digital investments. The future blueprint for a broadband enabled society should include initiatives to help industry and the population at large understand cyber-security risks and how they can protect themselves on-line.

Ensure A Coordinated Approach to ICT and Innovation Initiatives

There are also potential synergies between the Government's ICT strategy, its plan to transform White Bay Power Station precinct into a technology innovation hub and establish a Sydney Startup Hub and the various smart cities initiatives in NSW. A coordinated approach to these various activities will increase the potential benefits derived.

10. Industry and economic development

Strong economic growth necessitates that the NSW Government continuing to support industry and economic development. This particularly requires a commitment to manufacturing industry in NSW, along with the necessary support and development to exploit the state's skills and capabilities across a wide range of highly specialised, and technologically advanced sectors. This includes pharmaceuticals, scientific and medical equipment, environmental technology as well as highly processed foods, beverages and confectionary.

The Australian Industry Group through its pre-budget submissions and other policy documents has consistently emphasised the importance of building stronger growth as a basis for industry and community prosperity. NSW manufacturing is a key contributor to the state's growth of 5.5% (state final demand) in 2016/17. Within the manufacturing industry, businesses are increasingly adding value by engaging not only in production, but an array of services including research and development, prototyping, design, maintenance and logistics. This shift to services provision is helping to drive innovation and competitiveness, particularly where it is combined with retained manufacturing capability.

In this context, it is important that the NSW Government maintains a strong commitment in to key initiatives directed at achieving industry growth and competitiveness and creating a climate for business success. We commend the NSW Government's Jobs NSW strategy aimed at driving initiatives to boost employment growth through supporting NSW exporters and regional businesses, developing start-ups by doing more to leverage the use of incubators and accelerators, piloting cluster programs and addressing gaps in the venture capital market.

It is also important that the NSW Government maintains a strong commitment to other key initiatives directed achieving industry growth and competitiveness and creating a climate for business success, including:

- The Youth Employment program within Smart, Skilled and Hired to assist young people in four pilot regions gain employment by connecting them to training, mentoring and work experience;
- The Business Connect program, enabling funding of more than 60 business advisors across NSW to help in the establishment and growth of small businesses;
- The Export Capability Building Program providing support for NSW businesses seeking to initiate export activities and those looking to further develop and maximise long-term export gains;

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- The Resources for Regions program and its focus on delivering improved local infrastructure to mining-affected communities to improve economic growth and productivity in NSW and;
 - The Job Action Plan that provides NSW businesses with a payroll tax relief when employing new workers in new eligible employment.

The 2018/19 Budget also offers an opportunity for the NSW Government to build on these foundations by allocating funding for well-targeted programs to improve the capacity and capability of the NSW industrial supplier base, with an emphasis on:

- programs aimed at bridging gaps in key technical and business skills with the goal of building greater collaboration between industry and the training system;
- programs aimed at attracting investment for NSW by making more companies investment ready, promote innovation and by raising the profile of manufacturing in the state by effectively marketing NSW's business capability.
- programs aimed at building supply chain capability such as workshops to share examples of best practice across sectors on supply chain competitive issues or matching buyers and sellers through targeted "Meet the Buyer" events.
- programs aimed at supporting the development of new innovative industries in advanced manufacturing.
- programs aimed at lifting the adoption of ICT enabling technologies.

Specific Initiatives

Specific initiatives to assist in addressing these issues could include:

- the introduction of an **innovation 'Start-Up' program** for those businesses with no prior experience in R&D, but with an interest in starting an R&D project. These businesses often find it difficult to compete with larger and more experienced businesses for government funding which acts as a barrier to involvement. Under such a program, grants could be provided to companies (on a competitive basis) on a matching dollar for dollar basis, and be used for a broad range of purposes such as purchasing specialist equipment to undertake proposed R&D, to engage a consultant to assist in R&D activity, to employ a scientist or engineer to undertake R&D, or to engage the expertise of a university, CSIRO or another research centre.
- Assistance for businesses in developing a path for the adoption **Industry 4.0 type capability** to exploit the benefits of digital manufacturing and better integrated supply chains based on stronger data flows. Specifically, this could take the form of Industry 4.0 education/demonstration programs and the development of toolkits

that help in the uptake of digital and smart manufacturing systems. Small and medium sized enterprises, in particular, are often constrained in their growth by lack of technology capability and access to finance. Ai Group therefore recommends the establishment of a State based program targeted to assist small and medium sized businesses in the adoption of Industry 4.0 type capability. Funding could be directed to companies on a dollar for dollar basis up to a maximum \$50,000.

- Assistance in the **identification of new market opportunities**, including niche markets and understanding how to best access these opportunities. A comprehensive data and information base that identifies gaps and opportunities that businesses could seek to exploit in international value chains could be one useful initiative. SMEs can lack the skills and capabilities to assist them with identifying niche opportunities, developing ways to exploit them and to be more innovative. Assisting the manufacturing sector to develop design led innovation capabilities may increase the speed of innovation along with increased competitiveness within this sector.
- Take a pro-active approach to **connecting manufacturing businesses with opportunities in government procurement**. Local business success in securing government contracts includes the direct benefits of increased employment and diverse spin-offs to industry and the state's economy that can arise from the development of new technologies, new products, and new skills which can have flow-on benefits extending far beyond the initial contract.
- Take the lead in drawing on appropriate models in other States and overseas jurisdictions. For instance, Ai Group believes that there would be merit in establishing a **manufacturing advisory group** to act as an industry expertise resource for Government in guiding policy directions based on the Queensland Government's Industry and Manufacturing Advisory Group (IMAG). The IMAG helps position Queensland manufacturing businesses to maximise domestic and international opportunities with a focus on changing demand and emerging opportunities; productivity and competitiveness; innovation and technology; and local content, business costs and regulation. The IMAG also has a strong focus in assisting the Queensland Government in the development of initiatives aimed at growing advanced manufacturing as a critical driver of productivity and innovation in the economy. The Queensland Minister for State Development chairs the group, which includes business leaders, union representatives and a peak industry body representative.

11. REGIONAL DEVELOPMENT

Regional NSW is an important contributor to the state's economy, providing jobs and contributing significantly to industry exports and economic growth. Broadly, each region is different and has different needs. However, the regions do share common concerns. Issues such as the need for flexible delivery of quality vocational education, cross border regulation streamlining and infrastructure needs that differ from major cities.

We commend the NSW Government's first Economic Development Strategy for Regional NSW and its focus on the aims of promoting regional competitiveness; driving regional employment and business growth and; investing in economic infrastructure and connectivity. Actions in support of this strategy will be critical in terms of regional economic growth, productivity and improvements in quality of life.

Infrastructure

The NSW Government has demonstrated a commitment to increasing funding for regional infrastructure. However, a common theme shared by all regions is that better regional industry consultation will greatly improve the prioritization and delivery of infrastructure, and ensure Government funds are directed to those projects which will deliver the greatest benefit.

The NSW Government needs to concentrate efforts on sensible investment prioritization for all regions in NSW based around the objectives of cost benefit analysis and opportunity cost evaluation. Sensible investment in both new and existing infrastructure has a range of benefits including improving the region's and state's future economic capacity and meeting the needs of our growing population.

Regional infrastructure should also be identified and prioritized in a transparent way and be accompanied by detailed plans. This is central to private sector commitment to, and investment in NSW regional infrastructure projects. It also helps businesses in their long-term investment decisions.

In supporting the economic performance of regional NSW, major investment in the transport network linking the regions with Sydney and interstate destinations must be a priority. This needs to be complimented with public transport investment directed at improving the internal connectivity of the regions so as to minimize the cost of congestion and maximise economic productivity.

The NSW Government has correctly identified in its Draft Greater Newcastle Metropolitan Plan, the need to support the anticipated growth in passenger flights at Newcastle Airport with improved public transport connections between the airport and Newcastle City Centre. Ai Group recommends that priority consideration should be given to the inclusion of a light rail line from the Newcastle City Centre to the Airport with eventual extension to

Port Stephens. There would also be considerable merit in including light rail connections to Heatherbrae and Tomago given the limitations of the Port Stephens Road which operates as the only access road to the airport. We recommend that surveying of the light rail route commence in 2018 and that lands be set aside for future development with a firm timeline to ensure the project is delivered in an orderly and transparent manner.

Support for the formation of industry clusters

The collaboration of related or complimentary businesses in the same geographic area can lead to a range of benefits such as access to a larger pool of skilled labour, improved supply chains and opportunities for knowledge sharing. Clusters also have the potential to generate more sustained success for businesses in global markets and the overall economic development of a region. The HunterNet is an example of successful regional industry 'cluster' of small and medium-sized manufacturing, engineering and consulting companies located in the Hunter and Central Coast Regions of NSW. It provides member companies with the opportunities to tap into activities that in the past would have been out of reach of many smaller companies, such as networking, joint marketing initiatives and trade missions. The HunterNet markets the combined capability of its members which provides opportunities for its members to collaborate as a supply chain of products and services and bid jointly for major project work.

The NSW Government should **explore opportunities for establishing a grants program to support regional cluster initiative programs that would direct financial and other assistance to individual cluster initiatives.**

Regional Skills Development

Ensuring there is an appropriate level of skill development in the regions is critical to supporting regional industry and business and to maintaining viable communities in those regions.

NSW TAFE is the main provider of education and training in the VET sector for the regions, particularly in remote regions and where thin markets exist. Other providers of vocational education and training are the private RTOs, the schools sector and the adult community education (ACE) sector. It is important that resources are directed towards these providers and that they work in close collaboration with each other to achieve the best outcomes, particularly when resources in terms of capital infrastructure and qualified teachers and trainers are stretched or non-existent.

The regions have traditionally had a strong reliance on public utilities to provide apprenticeship opportunities for the local youth. State Government departments and authorities should be encouraged to employ apprentices and trainees to support local employment. NSW Government agencies should continue to include a target for employing apprentices and trainees in all construction contracts over \$10 million. The state

government should also ensure that the target is enforced and that policy initiatives are in place to ensure that apprenticeships are made available to those in areas of high unemployment, young women and indigenous youth.

Further, regional skills plans should be forward thinking and be looking to meet the state's various supply needs over the next decade and beyond, exploring a wide range of options for encouraging individuals and businesses to invest in those skills.

Western Sydney Aerospace Precinct

In support of NSW Defence industry growth, and as outlined in our February 2018 submission in response to the Legislative Council Standing Committee on State Development - *Discussion Paper on Defence Industry in NSW (November 2017)*, Ai Group believes that an aerospace precinct at the Western Sydney airport presents a once in a lifetime opportunity to integrate defence industry strategy with broader capability enhancement and global engagement in advanced manufacturing and related sectors.

It also provides the focus and time to investigate, build or reshape the full collaborative infrastructure that will optimise economic, employment and community outcomes, including:

- broadly based educational and research facilities that promote integration across relevant disciplines as well as primary/secondary, vocational and higher education streams;
- the planning and delivery of hard transport, energy, communications and social/community infrastructure;
- commercial clusters that foster product, process and business model innovation and;
- capability in emerging requirements in cybersecurity, employment practices and international engagement.

Please refer to Ai Group's submission to the Legislative Council Standing Committee on State Development for additional views on opportunities to grow the Defence industry in NSW, and build on the capabilities and regional strengths that exist in Western Sydney, Illawarra/Shoalhaven and Albury.

12. Energy and the Environment

Energy costs are a top-tier concern for ever more NSW businesses with dramatic increases in wholesale electricity and gas prices hammering industry across Eastern Australia. This situation presents a serious economic threat, particularly to a manufacturing sector that is otherwise well placed for growth.

The Government has sensibly announced strategies to respond to these pressures, including plans to encourage new energy and to save energy and money. It is critical that these strategies be enacted and that industry be front and centre in their scope of action. While the most intensive energy users tend to have a strong focus on efficiency, many other businesses lack the internal capability, information or experience to identify their opportunities, or the available capital to pursue them. There is a clear role for capacity building and capital assistance in helping the State's industries make the transition to a higher-price environment.

New investment in energy resources is also essential to deliver improvements on price, reliability and emissions, but deep national policy uncertainty is holding back investment beyond the current national Renewable Energy Target. NSW can play its part in delivering confidence for new investment by helping to bed down the agreed Finkel Review reforms, and pursuing cross-jurisdiction political consensus around emissions reduction policy for the electricity sector and measures to ensure reliability in a system growing more dependent on variable renewables. The Commonwealth's proposed National Energy Guarantee is a potentially workable model and more work is needed to flesh it out.

In terms of new energy, also the subject of a significant foreshadowed financial commitment, NSW can play a valuable role in bringing new sources of low cost energy, storage and systemic flexibility to market. However, the largest and most available source of flexibility and stability for the electricity system is currently gas fired generation. Gas supply is under intensifying strain as the expansion of LNG exports from Queensland transforms the eastern Australian market.

While Ai Group takes seriously the concerns that many parts of the community have expressed about coal seam gas and fracking, NSW needs to be part of the solution to gas supply. The regulatory reforms that have been made to ensure community confidence while providing for case-by-case assessment of gas production projects are a good start and the Narrabri project shows welcome signs of life. Reforms to royalty arrangements to give local landowners and communities a more direct stake in development would also be wise. It will take time for any NSW gas development to help the current crisis, but that is all the more reason to start now.

Ai Group's key recommendations are as follows:

- Support energy efficiency while avoiding duplicative energy planning requirements on large energy users.

- Ensure a commitment to capacity building and capital assistance support programs to assist businesses make the transition to a higher price energy pricing environment.
- Ensure efficiency policy supports small and medium business energy users.
- Facilitate development of gas resources as part of the larger new energy strategy.

13. Skills, education and training reform

Ai Group has identified a number of skills, education and training issues that must be addressed within this year’s budget as a matter of urgency. These are discussed in detail below.

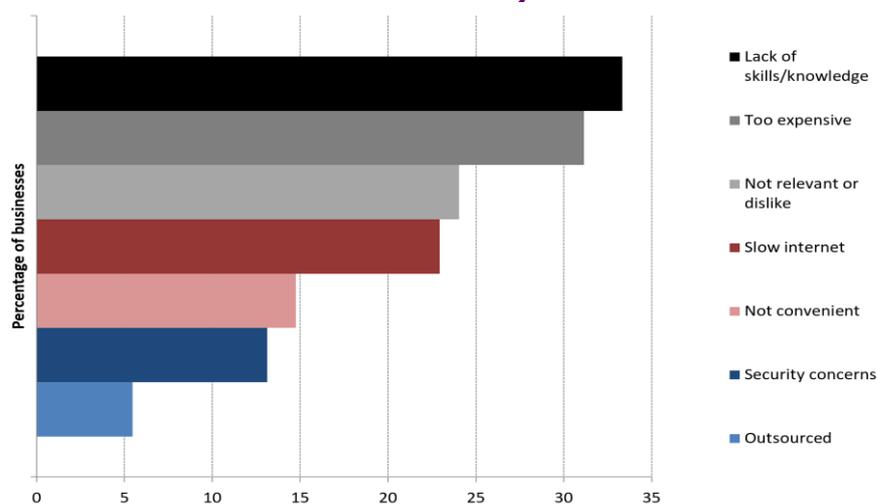
Skills gaps arising from digital transformation

The transformation of the workplace and disruption caused by digital technologies is having a widespread effect on skills needs and creating skills shortages. Changes to skill requirements in industry are occurring at all levels of the workforce. The workforce needs to be able to operate with emerging new technologies and systems and engage in more complex work and relationships in environments that are constantly changing.

Workers need higher level skills and the capacity to be transferred between functions and processes. Industry increasingly needs workers who have the relevant specialist technical (STEM) skills, foundational skills including digital literacy and, importantly, new boundary-crossing capabilities in creativity, problem solving, advanced reasoning, complex judgement, social interaction and emotional intelligence. Further, capable leadership and management is needed to drive the effective utilisation of these skills and significant organisational change.

The Ai Group’s recent Business Beyond Broadband report found a lack of skills to be the highest barrier to investment in digital technology. Only 15 per cent of businesses believe they have a high level of digital skills. While it was positive that businesses were generally digitally upskilling their workforce through training or recruitment, almost 20 per cent of businesses expected to do nothing to improve skills.²

Chart 6: Barriers to business investment in digital technology (% of businesses)



² Ai Group, “Business beyond broadband: Are Australian businesses ready for the Fourth Industrial Revolution? (May 2017).

Source: Ai Group, "Business beyond broadband: Are Australian businesses ready for the Fourth Industrial Revolution?" (May 2017).

Digital transformation is also leading to a significant shift in the skill composition of the workforce. There has been a range of reports highlighting the rapid and extensive change in this area. The CSIRO's latest report on megatrends for Australia's future workforce in the next 20 years highlights the need for a paradigm shift of mindsets for workers, employers, education sectors and governments to accommodate for the predicted jobs of the future.

A 2015 CEDA report notes that the share of high-skill jobs is significantly increasing while the share of low-skilled jobs is decreasing.³ Similarly the OECD has reported on the long-term movement away from low -skilled occupations to higher skilled occupations in the context of the expanding knowledge economy.⁴ The Foundation For Young Australian research has characterised this as a growth in 'high skill' and 'high touch' occupations and a decline in lower skill occupations.⁵

All of these changes in the nature of work are producing skill needs in a number of categories that must be better integrated into school, VET and higher education curricula/standards as well as teaching, training and learning strategies. These broad categories fundamental for work into the future include:

- **Digital Literacy**

Evidence suggests that despite an increasing diffusion of digital technologies in business, a large proportion of people do not effectively use digital technologies at work or do not have adequate ICT skills.

- **STEM skills**

Another key component of the future workforce will be the acquisition of Science, Technology, Engineering and Mathematics (STEM) skills. A number of reports have highlighted the importance of STEM skills to the economy and that these skills are needed for the fastest growing occupations.⁶ According to Ai Group's Workforce Development Needs Surveys⁷, employers continue to experience difficulties recruiting STEM qualified workers. One fifth reported they had difficulty recruiting professionals with STEM. The later section on STEM further discusses the problems and recommendations to secure a base in these skills.

³ Committee for Economic Development of Australia, Australia's future workforce?, 2015.

⁴ OECD Skills Outlook 2013.

⁵ The New Basics: Big data reveals the skills young people need for the New Work Order, Foundation For Young Australians, 2016.

⁶ See for example Strengthening School -Industry STEM Skills Partnerships, Australian Industry Group, June 2017; STEM Country Comparisons, Australian Council of Learned Academies, May 2013; The Case for STEM Education, R. Byee, NSTA Press, 2013; and Science, Technology, Engineering and Mathematics: Australia's Future, Office of the Chief Scientist, September 2014.

⁷ The Australian Industry Group, Workforce Development Needs Survey 2012 and 2014.

- **Boundary-crossing skills**

Workers must increasingly develop the boundary-crossing skills of communication, leadership, problem solving and design thinking. These are generic skills that can be coupled with technical capability to build a broader set of capabilities for application in different environments⁸. Fostering innovation begins with building the necessary foundation and generic skills needed by the workforce. These enterprise-focussed skills are not just for entrepreneurs, they are skills required in all jobs.

- **Management capabilities**

The Ai Group's 2016 Workforce Development Needs Survey found that over 50 per cent of employers believe a lack of leadership and management was having a high impact on business. Managers who are decision-makers adept at dealing with uncertainty and constantly changing landscapes are needed in a networked-knowledge economy.⁹ To understand and recognise the upcoming changes in digitalisation and automation, leaders need to identify where their own organisation will be transformed and then put in place plans to migrate to new business processes enabled by digitalisation.¹⁰

Leadership and management capability must enable companies to steer the interconnectivity between systems, machines and people – across companies, countries and value networks. Managers need to develop the digital strategies required, develop workforces with proficiency in problem solving in technology rich environments and ensure workers continue to utilise their information processing skills.

There is a requirement for an increase investment in the development of key categories of skills for the transforming economy through education and training sectors in NSW.

Existing worker up-skilling

Whilst there needs to be an expansion of digital literacy across all education sectors and flowing into the future workforce, a crucial contributor to industry's success will be the re-skilling of Australia's existing workers to possess the digital skills needed for today's jobs.

The more rapid changes in the economy mean individuals will need regular upskilling throughout their working lives. Companies must up-skill existing workers in order to take advantage of growth opportunities and adapt to the digital economy. By assessing their own capability and training when necessary using trainers, supervisors, managers and leaders, companies will develop employees more capable of taking control of their roles, needing less supervision and being more engaged.

⁸ Position Paper on the New Skills Agenda for Europe, CEEMET, 2017

⁹ The Future of Manufacturing Education Initiative, Final Report, Australian Business Deans Council, 2014.

¹⁰ Chui, Maniyika and Meremadi, Where machines could replace humans – and where they can't (yet), McKinsey Quarterly, 2016

Support is needed for industry to assess existing workers' digital capabilities and train where necessary, resulting in employees who are more capable of undertaking productive and engaged roles and able to better contribute to innovation in the workplace. Management development to build the capabilities described above is crucial. And learning must continue throughout a career in order to acquire new capabilities as the unknown new technologies and roles emerge.

The Ai Group's Business Beyond Broadband report found that businesses are prepared to digitally upskill their workforce through training or recruitment. A minority will be outsourcing digital functions. Alarming, 17 per cent of businesses plan to do nothing to improve technology skills because employee skills, costs, perceived lack of relevance and slow internet capacity inhibited them from investing.

A successful model for supporting companies to develop and implement training in line with new directions and strategies involves the assistance of skills advisers, such as those that operated under the Australian Government's Industry Skills Fund. The Fund included subsidies for existing workers to undertake training. The introduction of any similar schemes proposed in NSW, in particular for SMEs, that deliver expert advice and information on workforce development planning and skills opportunities, including addressing digital skill needs, language, literacy and numeracy issues, leadership and management challenges and other unmet demand for training to assist company growth, would assist the NSW business sector with digital transformation.

Investment in Australia's VET system

Australia's and NSW's VET systems must be viewed as skills engine rooms for industry's workforce. It is therefore deeply concerning that the funding of the VET system continues to be inadequate, in terms of both the level and composition of its funding.

Firstly, the levels of total VET funding are not sufficient to meet existing and future skills needs of the workforce. The level is too low in absolute terms and relative to the funding arrangements in both the higher education and school sectors (see Chart 11). The most recent national analysis of VET demand was undertaken by the former Australian Workplace Productivity Authority in 2011.¹¹ This report recommended a 3 per cent p.a. increase to 2020 to meet the demand for VET qualifications required by the workforce. Current VET funding levels are well short of this. Further, there is an increasing gap in the public expenditure for VET compared to other sectors of education.

More recent research by the Mitchell Institute shows there has been a much lower rate of growth in VET spending compared with other education sectors. Expenditure on VET has grown much more slowly, by around 15 per cent in total until 2012-13, before experiencing

¹¹ Skills for prosperity: a roadmap for vocational education and training, Skills Australia, 2011.

a sharp decline in 2014. This left total VET expenditure in 2013-14 only around 5 per cent higher than 2003-4 levels.¹²

This lack of VET funding and the growing gap between VET and the higher education sector makes any movement towards a national tertiary system more difficult.

The second problem is the composition of public funding for VET, or more precisely, the shared contributions of the Commonwealth and the States/Territories. The funding by the jurisdictions is falling in absolute terms and also relative to Commonwealth expenditure. The relative funding shares between the Commonwealth and the jurisdictions vary significantly. These differences have been aggravated by the introduction of differential student training entitlement funding models by all states and territories. The jurisdictions have used in-built flexibility parameters resulting in differences in the eligibility requirements, the courses eligible for an entitlement, course subsidy levels, the quality requirements of providers, and the information provided to students.¹³

A recent finance report from the NCVET highlights a continuing decline in government expenditure across Australia which amounts to a 15 per cent decrease between 2012 and 2016.¹⁴ NSW declines in expenditure contributed to the overall decline during this period.

The shared funding arrangements are impacting on the effectiveness of the VET system. Different mixes of Commonwealth and States and Territories funding and different ways of funding each VET system are causing confused messages for employers engaging with the system, particularly those operating nationally. In some instances, within individual state systems the needs of industry, businesses and students have not been met.

The Ai Group believes that genuine national funding of tertiary education including VET must be established. By addressing and clarifying the excessively complex and duplicative Commonwealth and State/Territory roles and responsibilities in the training system, a genuinely national training system may be possible.

Further challenges exist for the VET sector. As with other education sectors, it is under pressure to develop people with higher order STEM skills and boundary-crossing skills for the digital economy. The current training product reform initiatives by the Department of Education and Training that are reviewing competency definitions, skill sets and common units promise to improve the quality of VET provision and are welcomed. Similarly cross sector projects underway through the training product development system should help to address needs.

A 2017 NCVET report has found that the VET system contains a significant amount of digital training content, although much of this is elective rather than part of the core.¹⁵ The

¹² VET funding in Australia, Peter Noonan, March 2016, Mitchell Policy Paper 2016.

¹³ Kaye Bowman and Suzy McKenna, NCVET, Jurisdictional approaches to student entitlements: commonalities and differences, 2016

¹⁴ Financial information 2016, NCVET, November 2017.

training is also geared towards the development of lower levels of skills. This is counter to the growing evidence of the increasing need for higher-order skills in data analytics, cyber security, social media and mobile-related digital skills. The Ai Group is piloting a higher level skills approach in our Australian Government-funded partnership project with Siemens and Swinburne University on the Industry 4.0 Higher Apprenticeships Project.

The sector is also potentially a rich source of applied research and collaboration with industry. The sector needs to be further included in the government's innovation initiatives – a recommendation included in the House of Representatives report of its Inquiry into innovation and creativity.¹⁶ A 2017 NCVER paper and practical guides provide directions by addressing the potential and exploring the capabilities that are needed and how RTOs and practitioners can build off their existing connections and skills.¹⁷

Finally, industry requires a steady supply of VET graduates to the workforce and has indicated difficulty in recruiting trades and technician workers. It needs to be assured that students are best suited to the level and emphasis of the programs they are undertaking, and that they have the opportunity to undertake courses that are most relevant to them, thereby creating the best talent pipeline for the workforce.

We therefore urge the NSW Government to address declining investment in VET in cooperation with the Commonwealth to ensure a sector funded to meet emerging vocational skill needs of industry.

Reform of the apprenticeship system

NCVER data consistently show that the apprenticeship system is underperforming. The most recent data from the NCVER indicates that there were 268 600 apprentices and trainees in-training nationally as at 30 June 2017. This represents a fall of 4.7 per cent compared to the June 2016 level. Commencements fell by 5.3 per cent during the period. In NSW, as at 30 June 2017, apprentices in training fell by 1.1 per cent compared to 30 June 2016.

What appears to be developing in NSW is a new and lower plateau of participation. However, disaggregation of the data for Australia to December 2016 reveals a more nuanced situation. Training rates in many of the key industrial trades increased from 2015 to 2016. This reflects infrastructure and related projects, i.e. construction-based trades. However, printing, hairdressing and TCF continue to decline. This does not lift the overall

¹⁵ Developing appropriate workforce skills for Australia's emerging digital economy: working paper, NCVER, 2017.

¹⁶ Inquiry into innovation and creativity: workforce for the new economy, House of Representatives Standing Committee on Employment, Education and Training, May 2017.

¹⁷ Beddie, F and Simon, L, VET applied research: driving VET's role in the innovation system, NCVER, September 2017.

quantum of apprentices in training, however, it does demonstrate improvement in some key areas. This analysis demonstrates the need for targeted government invention.

There is an urgent need to stimulate and support this vital training pathway. In the Ai Group survey of workforce development needs in 2016, only 21% of all employers intended to increase apprentices and trainee numbers over the next twelve months.¹⁸

A contributing factor to this general concern is the data released about VET in Schools participation for 2016 across Australia. In 2016 there were 52,600 VET in Schools students in NSW, a decrease of 2.8 per cent on 2015. Of particular concern is the state of NSW school-based apprentices and trainees which made up only 4.2 per cent of all NSW VET in Schools students in 2016.

Table 3: State and Territory summaries of school-based apprentices and trainees, 2012 -16

	2012	2013	2014	2015	2016	2015-16
	('000)	('000)	('000)	('000)	('000)	% change
School-based apprentices and trainees						
New South Wales	2.3	2.5	2.8	2.2	2.2	1.0
Victoria	4.2	3.6	3.9	3.6	3.3	-7.7
Queensland	13.2	13.1	11.7	11.1	8.7	-21.4
South Australia	0.9	0.9	0.3	1.1	1.3	12.9
Western Australia	1.2	1.1	1.2	1.2	0.8	-36.7
Tasmania	0.7	0.6	0.7	0.6	0.6	-8.6
Northern Territory	0.1	-	0.2	0.2	0.1	-44.7
Australian Capital Territory	0.4	0.3	0.2	0.1	0.2	**
Total school-based apprentices and trainees	23.0	22.1	21.0	20.1	17.2	-14.4

Source: VET in Schools 2016, NCVET

There needs to be a sponsored review of these arrangements to determine the reasons for the under-utilisation of this pathway and develop strategies to assist schools and industries to more actively participate.

To facilitate greater industry involvement in apprenticeship arrangements the current regime of employer incentives needs to be reviewed and rationalised. In particular, there needs to be a focus on employer incentives for first time participants in the arrangements. European research suggests that direct subsidies are effective in encouraging companies to start training rather than for companies which are already training.¹⁹

Collaboration by NSW in the roll-out of the Skilling Australians Fund has the potential to make a difference in the number of apprenticeships.²⁰ The potential of this initiative would be significantly enhanced by working directly with industry which would also increase the likelihood of national approaches.

¹⁸ Workforce Development Needs Survey, Ai Group, 2016.

¹⁹ The effectiveness and cost-benefits of apprenticeships: results of the quantitative analysis, European Commission, September 2013.

²⁰ <https://www.education.gov.au/skilling-australians-fund>

A national body is needed to manage the implementation of these measures including overseeing national consistency and ensuring programs and arrangements meet current and future workforce needs. Confronted with similar apprenticeship issues, the UK has established an independent and employer-led body, the Institute for Apprenticeships, to regulate the quality of apprenticeships in the context of anticipated rapid expansion of the program.²¹ It is timely for Australia to review the governance arrangements for apprenticeships with a view to providing a genuinely national approach. Our recommended priority actions for reforming the apprenticeship system are summarised as follows:

- **Implement further measures to ensure programs and arrangements meet current and emerging occupational needs.**
- **In consultation with industry, develop measures designed to increase the level of participation in apprenticeships/traineeships.**
- **Facilitate direct industry and employer engagement through the Skilling Australians Fund.**
- **Develop strategies to facilitate greater participation by schools and industry in school-based apprenticeships.**

STEM skills in NSW's education system

Some progress has taken place towards STEM capabilities, especially in the school sector, through the establishment of the STEM Partnership Forum as recommended in the Education Council's National STEM School Education Strategy.²² The Ai Group research project Strengthening School-Industry STEM Skills Partnerships, produced a number of models and recommendations that need to be promoted nationally to encourage further participation.²³

However, there are still gaps in the national approach to STEM skills. The initiatives released to date do not constitute an overall national strategy. In particular, there is little focus on measures to support and expand the STEM-qualified workforce and no reference to the importance of Vocational Education and Training (VET) sector in this policy area.

Ai Group's long-standing concerns about the state of STEM skills and the impact on the economy are well documented.²⁴ A major focus needs to be on growing the STEM workforce.

²¹ <https://apprenticeships.blog.gov.uk/2017/11/23/the-institute-for-apprenticeships-breaking-the-chain/>

²² *National STEM School Education Strategy*, Education Council, December 2015.

²³ *Strengthening School – Industry STEM Skills Partnerships*, Final Project Report, Australian Industry Group, June 2017.

²⁴ *Progressing STEM Skills in Australia*, Australian Industry Group, February 2015.

While longer-term solutions to the STEM skills shortfall properly concentrate on the school sector, there is much to be done to reduce short-term pressure on current shortages. In addition, support for existing workers to retrain in STEM areas would also assist to meet the relatively short-term needs of the economy.

Strategies are also required to meet the particular needs of SMEs given their prominence in the economy. Government could support these companies via networks or clusters and engagement with group training companies. Support for sectoral and supply-chain companies working with larger companies also warrants consideration.

The Industry Growth Centres initiative has significant potential to promote and implement STEM skills. All six of the Centres announced to date overlap with STEM skill areas. The centres are tasked with improving the management and workforce skills of key growth centres.²⁵ The long-term strategies to be developed by each of these centres needs to focus on the development of workforce STEM skills. There has been research by NCVER about the readiness of five of these growth industries to meet the demand for skills. Among a number of findings to overcoming limitations this research found there is a requirement to have

“a priority focus on STEM, including the development of workplace skills in STEM undergraduate or research degrees and opportunities for continuing professional development in STEM disciplines.”²⁶

To address this issue the Ai Group supports the call for an overall national STEM skills strategy. A multi-pronged approach is needed to address school, university, VET and industry involvement. Sufficient resourcing is required to develop a co-ordinated and systemic response to the issue with specific action taken to:

- **Operationalise elements of the developing national STEM skills strategy in conjunction with industry to expand the STEM-qualified workforce.**
- **Utilise the findings and recommendations of the Strengthening School – Industry STEM Skills Partnerships Project to encourage increased participation.**
- **Implement measures to increase the level of STEM participation in the VET sector, especially through apprenticeships and traineeships relevant to STEM skills.**
- **Develop specific measures to expand the STEM workforce in SMEs through cluster/network models.**

²⁵ www.business.gov.au/advice-and-support/IndustryGrowthCentres

²⁶ Francesca Beddie et al; *Readiness to meet demand for skills: a study of five growth industries*, NCVER, 2014.

Developing Australia's workplace literacy and numeracy capabilities

Ai Group research confirms that the low levels of workplace literacy and numeracy are a major concern to employers. The most recent survey indicates that over 87 per cent of employers reported low levels of literacy and numeracy having an impact on their business.²⁷

This has a negative impact on productivity, labour mobility and the capacity of the economy to achieve the higher levels of skills needed for the increasingly knowledge-based economy. There remains an urgent need to address the language, literacy and numeracy needs of the Australian workforce.

The Ai Group has conducted a return on investment to employers' program with very positive results.²⁸ In addition to the benefits for participating employees, there is also now a firm business case for employer investment in workforce literacy and numeracy. There needs to be a program within which they can invest.

A literacy and numeracy strategy needs support especially for workplaces. A key component of this is the development and implementation of a new co-contribution program specifically for workplaces. Such a program would be based on tight outcomes for both individual participants and employers. The use of the Australian Core Skills Framework could be mandatory to measure individual improvement and return on investment measures could be utilised to demonstrate benefits to the employer including direct linkages to productivity. The program could also be nationally accredited through the use of the Foundation Skills Training Package adapted to suit particular workplace needs. The Ai Group conducted a small pilot study with three workplaces during 2016 based on these approaches with significant success.²⁹ The Ai Group urges the NSW Government to consider the adoption of a similar program to lift the literacy and numeracy skills of the current workforce.

Challenges to higher education

The Ai Group recognises the importance of a well-placed higher education sector to drive a successful business sector. As industry meets the challenges of new business models, new ways of working, and new technology, there continue to be questions around the ability of university graduates recruited to meet these challenges. Data from members gathered through Ai Group's 2016 Workforce Development Needs Survey found their highest levels

²⁷ Workforce Development Needs Survey 2016, Ai Group, December 2016.

²⁸ *Investing in Workforce Literacy Pays*, Australian Industry Group, August 2015.

²⁹ *Foundation Skills Pilot Program Success*, Australian Industry Group, July 2017.

of dissatisfaction focussed on graduates' levels of team work, self-management and problem solving.³⁰

The 2017 Graduate Outcomes data show that short term employment outcomes have declined in recent years with graduates taking longer to find full-time work. 31

Graduates need to be sophisticatedly technically proficient no matter what discipline, with higher level cognitive skills dominated by STEM. However higher level soft (or employability) skills are needing to be more closely integrated within an individual's technical specialisation. This is because changes being driven by automation are about new processes for the way we do things. Problem solving, creativity, communication, collaboration, adaptability and initiative will all increasingly need to be part of an individual's package.

Employability skills are built over time³² through a number of complementary activities.³³ In today's world all graduates are better prepared to contribute productively in the workplace if they have had opportunities to integrate theoretical knowledge with practice. The benefits of it have been well documented and researched.³⁴ Initiatives in work integrated learning (WIL) are bringing about broad collaboration between industry and universities, with many innovative arrangements for cooperation – not only around WIL but for research and development.

Goodwill exists across the education and business sectors to expose students to authentic work environments. It is noted that all universities now include a major strategy to drive employability through WIL. Ai Group is working to build the frameworks that allow increased connections between industry and universities through our representation on national multi-sector strategy groups and projects; through a graduate employment service to help companies find and mentor suitable graduate; and by providing a guide for employers.

A further challenge to higher education, brought about by rapidly changing jobs and new business structures concerns the relevance of degrees, in their current form, into the future. Anecdotal evidence suggests that businesses are increasingly demanding shorter, sharper education and training. Micro-credentialing is gaining steam as a way to quickly build capabilities. Current delivery models are also facing complex challenges as the use of 'nano-learning', that is, two to ten-minute blocks of quick learning, grows. Educational content needs to be delivered faster, more cheaply and on demand, with new learning

³⁰ *Workforce Development Needs Survey Report*, Australian Industry Group, December 2016.

³¹ Graduate Outcomes Survey – Longitudinal, QILT, Department of Education and Training.

³² Yorke and Knight, 2006.

³³ Jackson, 2015

³⁴ Jackson, Ferns, Rowbottom and McLaren, Working together to achieve better WIL outcomes, 2015; PhillipsKPA, Engaging employers in work integrated learning, 2014; NCVER, Work integrated learning in STEM disciplines: employer perspectives, 2015; OECD Workshop, Engaging employers in skills development for the 21st century, 2016.

experiences – ensuring more focus is on questioning, exploration and authentic environments. Whilst the qualitative experience of higher learning must not be lost, a balance needs to be met between the traditional degree program and the demands for ‘stacked’ learning to cater for both new learners and those in the workforce needing to constantly update their skills. **Ai Group calls for industry support through programs that model innovative ways of connecting between industry and higher education providers, with the view to establishing new models of learning. We also believe there is a strong need to implement incentives to assist companies provide opportunities for students to experience the workforce and make meaning of their learning.**