Australian Industry Group

Ai GROUP STATEMENT

Ahead of the Queensland Government's 2019-20 Budget

MAY 2019

Contents

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 Queensland 2019-20 State budget.

The Queensland Government has an important role in helping to shape and secure the state's economic future. This will largely depend on boosting the state's competitiveness and creating a climate for business success. A strong, growing and competitive state is an underpinning of broader community benefits for Queensland through more and better jobs and through expanded opportunities for the state and for Queenslanders.

Official figures show that the **Queensland economy is maintaining positive momentum as LNG exports provide a more significant contribution to growth and the state's recovery becomes more broadly based**. Economic conditions are being supported by an improvement in business equipment investment, strength in services exports and a pick-up in population growth. A competitive Australian dollar and high key Queensland commodity prices, particularly for coking coal, are further major positives for export incomes, profits and government revenue.

Despite these encouraging trends, there are risks for the Queensland economy and **considerable challenges to navigate**, including the **potential for further bouts of financial market volatility**; a **lower contribution to growth from LNG exports as output plateaus** and; **uncertainties surrounding global trade conflicts** and a **further slowdown in Chinese economic activity** which are likely to impair demand for key industrial commodities. The contribution from the residential sector is also likely to diminish through 2019 and 2020 as the construction pipeline continues to wind back and investor activity slows under the weight of tighter lending conditions.

It is also clear that many Queensland businesses across **major sectors of the economy continue to face tough and testing conditions and are concerned about a range of pressures which are hindering their ability to compete in national and global markets**. Three barriers are placing significant strain on industry: low productivity, shortages of key workforce skills and high costs. The escalation in energy costs and the rise in our relative unit labour costs have reinforced Australia's disadvantage as a high cost economy.

Consequently, Ai Group emphasises the importance of innovation, exports and regional development initiatives in providing the foundation for future growth and productivity. Queensland is well represented in the innovative, knowledge intensive and high margin businesses of the future. Through our high-quality food processing businesses and our advanced manufacturing and high technology sectors, Queensland 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.

Ai Group also urges the Queensland Government to concentrate on reducing business costs, through smarter regulation and lower compliance costs, and reducing the costs of taxation to assist current and future Queensland businesses to develop and gain market share domestically and internationally.

A key element to maximising the growth potential of Queensland is ensuring that industry is able to meet its current and future skills needs. Particular 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 declining investment in VET. 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.

Of equal importance, the Government should commit to:

- **Fast tracking high-quality infrastructure projects**. This includes finding more creative ways to fund infrastructure, such as offloading public assets that don't need public ownership and developing a better model for market-led proposals and public-private partnerships. All proposed infrastructure projects must be subject to thorough and transparent cost-benefit analysis to ensure the government gets the best possible use of taxpayer funds.
- **A stronger focus on genuine compliance cost reduction and more efficient regulation**. This includes advancing flexibility across regulatory measures to promote room for innovation and "breakthrough" improvements in industry performance while reducing costs and other burdens on industry.
- **Moving to a more efficient tax system** so that inefficiencies of taxation are kept to a minimum and that the costs of managing and complying with any given tax are not excessive relative to the revenue raised, including simplifying tax scales and thresholds and avoiding multiple rate scales which increases complexity.
- **Addressing the impact on the state from summer time zone differences** which is having a clear adverse impact on investment and business growth.
- **Adhering to fiscal settings which encourage growth** (and that will also lift state revenue) but also highly disciplined government spending to progressively bring the state out of its current "challenging" financial position. This includes outsourcing of government services to private enterprise (when this makes sense) and undertaking this in a way that ensures value for money and consistency and reliability of service while, at the same time, enabling the Government to maintain an operational oversight of service delivery standards and asset protection on behalf of the people of Queensland.

- There is also a strong case for **carefully targeting the recycling of assets** to streamline service delivery and allow for the recycling of capital to fund vital road, rail, health, utility and other social infrastructure projects, underpinned by the necessary regulation to ensure consumers are protected.

The implementation of these and other recommendations outlined in this submission will be key to further boosting the productive capacity and long-term growth of the Queensland economy, while facilitating a broad sharing of the benefits across the community.

2. Key Recommendations

Ai Group notes that economic developments in Queensland remain broadly positive. Nonetheless, the State's budget position remains challenging and there are clear downside risks to the economic outlook. This means that the Queensland Government must ensure that economic opportunities are maximized with a firm commitment to, and the timely implementation of policies to build competitiveness. With this context in mind, Ai Group's priorities for the 2019-20 Queensland Budget include:

- **Continue to support innovation and industry development** through sound programs and incentives that are critical to stimulating economic growth across the State. The importance of **digitalisation and Industry 4.0** for industry competitiveness and growing the state's economy warrants consideration for establishing a State based program targeted to assist small and medium sized businesses in the adoption of Industry 4.0 type capability.

- **Revitalise regional communities and economies** and ensure their long-term sustainability by adopting a comprehensive and pro-active regional planning approach. We look to the Cities Deal for South East Queensland as providing a foundation for further assessing its applicability to other regions of Queensland. The Government must continue its commitment by implementing proposed and announced regional infrastructure projects in a timely manner and bringing forward rigorously assessed infrastructure projects that can improve livability and encourage greater industrial development in regional locations.

- Ensure a **more urgent focus on building capacity by investing in skills**. This includes increasing investment in the development of key skills for Queensland's transforming economy; providing incentives for industry, focussing on SME's, to assist with workforce planning and re-skilling; addressing declining investment in VET in cooperation with the Commonwealth; developing measures designed to increase the level of participation in apprenticeships/traineeships; implementing measures to increase the level of STEM participation in the VET sector; increasing investment in programs that equip students with the right skills that enable them to more fully participate in the workforce.

- **Lowering business costs by reducing taxes and charges that hinder or discourage businesses from growing and distort or reduce economic activity and ensuring efficient administration of the taxation system.** This includes a commitment to genuine taxation relief and reform and ensuring that Queensland businesses are not at a competitive disadvantage with their interstate competitors. Priority recommendations include reducing, simplifying or replacing inefficient state-based charges; an on-going commitment to the progressive reduction in the payroll tax rate; 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 and; taking a leadership role in driving holistic taxation reform with a view to achieving real and meaningful harmonisation of taxes, fees and levies on business.

- **Drive best practice in regulatory design and implementation with a continued focus on reducing the cost burden imposed on business and the community by inefficient, outdated and anticompetitive regulations.** This includes 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. Queensland should also lead efforts to reduce the burden of inconsistent and duplicative reporting regimes under a range of State and Federal Government programs by advocating for, and facilitating, a single national on-line reporting portal. Of further priority, the Queensland Government should address the impact of not having Queensland's time zones aligned with the major business hubs in New South Wales and Victoria and explore options which could mitigate the concerns about daylight saving in the north and west of the state.

- The Queensland Government should **proactively participate in national efforts to address non-conforming product in the building sector** and coordinate action with other jurisdictions and industry to achieve safer outcomes for the public and a level playing field for suppliers who do the right thing.

- **In the planning of the state's infrastructure and investment programs it is vital that funding is allocated transparently towards projects that have the potential to deliver the greatest economic and social benefits for Queensland.** A key Government priority must be to facilitate the early engagement of industry and the community in shaping the future direction of investment. This will enable the early identification of opportunities, risks and issues on individual projects with proposals reflecting the needs of businesses and the people of Queensland. 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.

- **In the context of infrastructure planning** and the large number of major projects in the pipeline in Queensland, we recommend that the State Government work actively with the SEQ Council of Mayors to **properly scope the feasibility and desirability of an Olympic Games bid for Brisbane.**

- **Adhere to best practice government procurement principles**, including ensuring that whole of life project and support costs (which are key advantages that local suppliers offer) are fully factored into all tender assessments. We also urge the Government to adopt a more flexible approach on definitions of local content with "local" referring to businesses operating in Australia (i.e. not limited to a single state) and applying this broader definition for invitations to quote or tender for every procurement opportunity offered. Local content should include the local assembly of inputs made overseas when that is the most sensible option that delivers value for money for the Government and the best possible outcome for Queenslanders at the least cost.

- To **encourage effective competition in energy markets**, the Queensland Government should (alongside other Australian Governments) reorganise publicly owned generation assets over time to adhere to the ACCC's proposed 20% soft cap on generation market share, enforced through a prohibition on growth through acquisition.

- **Take steps to develop an integrated energy and industry policy** that facilitates deep upgrades by industry of production facilities (to radically enhance efficiency or switching of fuels) and brings together information on opportunities, supporting innovation and unifying finance options.

- **Address issues concerning industrial waste by adopting a broad strategy that includes:**

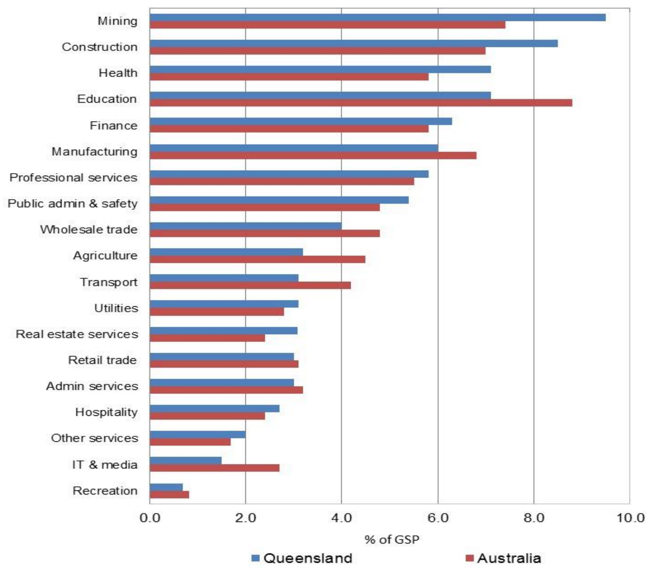
    1. Support for innovation and commercialization of technology options to close material loops and utilise waste products;
    2. A coordinated push to revise standards at all levels to encourage, rather than discouraging, the use of recycled content which performs adequately;
    3. Encouraging the use of recycled materials in government procurement where appropriate, and reduction of regulatory and institutional barriers to such usage (such as replacing materials requirements for infrastructure with performance standards);

4. Education campaigns aimed at households and workplaces to promote good recycling practices and reduce contamination through better waste separation;
5. Careful consideration of support for waste-to-energy facilities; and
6. Work with the manufacturing and construction industries, as well as the waste sector, to understand cost-effective options to support and promote the circular economy;

3. The Queensland Economy

The Queensland economy ranks as the country's third largest, accounting for around 19% of Australian economic activity in 2017-18. The composition and growth of industrial production in Queensland highlights the state's broad industrial base, but also the strength of residential and other construction activity in 2017-18 (chart 1). The Queensland economy is linked closely to global trade networks through its relatively large mining, tourism, agriculture and education sectors. The state's mining sector is its largest industry (9.5% of GSP) followed by construction (8.5%) and health services (7.1%). Queensland is somewhat under-represented in finance and professional services, which tend to cluster in Sydney (and to a lesser extent, Melbourne). Manufacturing comprises 6.0% of Queensland's GSP, which is slightly below manufacturing's share of national GDP. The dominant role of a few key sectors in the state's economy does make Queensland potentially more prone to external shocks.

Chart 1: Queensland and Australian Industry Output, share of GSP & GDP, 2017-18



Source: ABS Australian National Accounts, State Accounts 2017-18

Queensland's economy is recovering as it transitions from strong resources investment led growth towards higher export volumes and improvement across the non-mining sectors. Economic conditions are being supported by an expanding population and a lift in LNG capacity which has contributed to strong growth in gas exports. Service exports, namely tourism and education, also remain robust.

Nevertheless, headwinds to growth persist. Consumer spending and dwelling investment remain under pressure in response to low real income growth and falling house prices. The Government's budget position also remains challenging. Despite a positive revenue outlook in the short term in line with the economic structural changes underway, significant fiscal challenges continue to confront the Government due to due to anticipated reductions in receipts (particularly GST) from the Federal Government and increases to borrowings associated with budgeted capital expenditure on infrastructure projects.

Queensland Gross State Product grew by 3.4% in 2017-18, following growth of 2.0% in 2016-17. (table 1). This was the second-highest annual growth rate of all states and above Australian GDP growth of 2.8% in 2017-18 (see Table 1). It was also the State's strongest growth result since 2011-12 and reflected broad-based improvement across a range of industry sectors, indicative of a strengthening in underlying conditions. Key sectors, including mining, utilities, transport, professional services and manufacturing all performed solidly during the year.

Table 1: Real GSP growth and state rankings, 2016-17 and 2017-18

	2016-17		2017-18		
	% p.a (real)	**Ranking**	**% p.a (real)**	**Ranking**	**Share of GDP (%)**
NSW	3.1	2	2.6	4	*32.8*
Victoria	4.0	1	3.5	1	*23.2*
Queensland	2.0	4	3.4	2	*18.6*
South Australia	2.4	3	2.0	5	*5.9*
Western Australia	-1.8	6	1.9	6	*14.2*
Tasmania	1.5	5	3.3	3	*1.7*
Australia	**2.3**	**-**	**2.8**	**-**	*100*

Source: ABS

Looking at the composition of Queensland's growth, State Final Demand (SFD) - which measures total spending by households, business and governments, but excludes exports and imports – lifted to a solid (and above national average) 3.9% p.a. pace in Q1 2018 (seasonally adjusted, current prices). Annual SFD growth has since moderated to 2.1% p.a. in Q4 2018 amid a softening in household spending growth and declines in housing investment. This suggests that whilst State demand is continuing to expand, a softening in conditions is likely in the short to medium term.

Strong gains in private business investment in Queensland in 2017 and the first half of 2018 (peaking at +12.1% p.a. in Q1 2018) have since given way to a marginal growth of 0.4% p.a. in Q4 2018. Although equipment investment remains robust in Q4 2018 (+11.8% p.a.), engineering infrastructure investment lifted only slightly (+1.6% p.a.) largely due to the winding back in mining investment amid the completion of the state's major LNG projects. However, engineering construction continues to be supported by solid renewables project activity and an expanding investment pipeline, including the Clarke Creek Wind and Solar Farm and the Bulli Creek Solar Farm. The Queensland Government's capital spending program, including funding commitments to complete the Cross River Rail project and additional investment directed at the M1 Motorway and Bruce Highway Upgrade are also key positives for prospective investment activity.

Non-dwelling construction investment fell by 9.4% p.a.in Q4 reflecting a downward trend in the value of approvals in 2018. However, conditions are mixed with large tourism and retail developments dominating project activity while the forward pipeline will be boosted by the $583 million redevelopment of the Lindeman Island resort.

Household consumption in Queensland continues to fare reasonably well, increasing by 2.1% p.a. in the year to Q4 2018. However, growth has softened from the 3.2% annual pace recorded in Q1 2018 amid the headwinds of soft consumer sentiment, weak wages growth and high household indebtedness.

Following three years of growth in dwelling investment through to 2016, particularly units and apartments, the residential sector is now detracting from Queensland's economic growth. New dwelling investment has fallen by 12.2% since peaking in Q3 2016. This is in line with a winding back in the construction pipeline with residential building approvals continuing to trend lower in 2018 and into 2019 amid an over supplied apartment market, particularly in the suburbs in South East Queensland. This indicates that the current weakening in the state's residential building sector is likely to gain further traction over the year ahead, particularly given the pressures from tighter lending standards, reduced investor activity, falling prices and slower jobs growth.

However, this weakening is expected to be cushioned to some extent by population growth with Queensland's annual population growth rate sitting at 1.7% in Q3 2018, the second highest (behind Victoria) of all states and territories. Net interstate migration has also lifted in recent years reflecting improved housing affordability compared with NSW and Victoria with this trend likely to continue over the year ahead.

On the labour market, Queensland is experiencing an employment recovery as the state continues its transition post the mining boom to broader based growth. In the year to April 2019, Queensland added 40,300 new jobs (trend data). However, the pace of employment growth is slowing with the annual rate at 1.6% (trend) in the year to April, down from 3.6%

in the previous 12 months (+85,500 new jobs). In addition, strong population growth and a relatively high labour force participation rate has seen the state's unemployment rate continue to hold at around 6%. In April 2019, Queensland's unemployment rate stood at 5.9% (trend) - well above the national rate of 5.1%.

To date in 2019-20, there is evidence that the Queensland economy is continuing to exhibit positive momentum as increased LNG capacity drives solid growth in export volumes, and the relatively low Australian dollar supports sustained growth in tourism and revenue from international education. In its Mid-Year Fiscal and Economic Review, the Queensland Treasury forecast that real state output (GSP) would ease slightly to 2.75% p.a. in 2019-20, in line with the RBA's projection for national real GDP growth. Economic growth is also benefitting from higher government recurrent spending due to growth in state government programs (including the NDIS, healthcare and education programs) and a total capital program of $45.8 billion over the four years to 2021-22.

Nevertheless, the outlook for the Queensland economy is not without its challenges. Despite positive headline figures and a healthy overall growth outlook, many local businesses continue to face tough and testing conditions and are concerned about a range of pressures which are hindering their ability to compete in national and global markets. These pressures include slow productivity growth, a high burden of regulation, and inadequate skills, especially STEM skills to support innovation and competitiveness. A growing number of industrial and commercial businesses also have urgent concerns about the steeply rising price of electricity and gas and the increasing challenges to reliable supply.

Added to this, there are a range of key risks to Queensland's growth in the short to medium term. These include:

- a continued slowing in world growth and/or a sharper than expected deceleration in the Chinese economy, either of which could reduce international student numbers, international tourist numbers, foreign housing investor numbers and export earnings;
- ongoing uncertainties surrounding global trade tensions which could impair demand for key industrial commodities;
- persistent slow wages growth and high household debt levels which could further undermine household spending growth;
- more subdued residential construction activity in the medium-term;
- energy costs and reliability of supply;
- inadequate skills, especially STEM skills to support innovation and competitiveness;
- access to new technologies and regulatory barriers to new technologies; and

- competitive business costs and a competitive regulatory environment.

In view of these circumstances, the challenge for the Queensland Government will be to use the 2019-20 State Budget to address the short-term difficulties faced by many local businesses. At the same time the Government must ensure a focus on delivering the reforms that will build the capacity and capability of the economy to ensure we make the most of the opportunities that lie ahead.

4. Queensland Fiscal Outlook

Queensland's State budget position remains challenging. The 2018-19 Mid-Year Fiscal and Economic Review showed that the State recorded a strong operating surplus of $1.7 billion in 2017-18, driven by short-term factors including higher coal prices and royalties, increased Commonwealth Government grants due to a larger pool of GST revenue and increased dividends from Government owned corporations. However, in 2018-19 the net operating balance is forecast to fall to $148 million and thereafter average $245 million per year in each of the three years to 2021-22. This **weaker fiscal outlook over the forward estimates is largely due to anticipated significant reductions in receipts (particularly GST) from the Federal Government, estimated at $772 million across the period 2018-19 to 2021-22.**

While revenue to the Queensland Government is expected to grow by an average of 1.7% p.a. over the four years to 2021-22, this will be outstripped by average expenses growth of 2.5%. This in-balance will drive higher debt and put at risk the State's ability to regain its AAA credit rating.

This underlines the need for high accountability through disciplined financial management. Accordingly, a key priority for the 2019/20 Budget will be to pay close attention to the level and balance of the State's assets and liabilities and ensure growth in general government expenses are contained. This is not inconsistent with the need to continue to implement policies supportive of economic growth– it does imply however, that **expenditures will need to be carefully targeted to achieve high growth, competitive outcomes**.

A failure to control expenditure would threaten the sustainability of public finances over the longer term and potentially damage the economy's competitiveness should there be a resort to higher taxes and charges. It could also limit the ability of the Government to undertake critical investments thereby adversely effecting business growth and employment and imposing an increased cost burden on the Queensland community.

The Government should remain committed to paying down debt and improving the State's fiscal position, however, this should be balanced against the need for much needed investments in productivity lifting infrastructure and skills. Surpluses should be large enough to protect the state from economic shocks but not too large as to imply taxes are too high or funds are not being sufficiently directed to the pursuit of productivity boosting State investments.

In maintaining sustainable public finances, the Government medium term fiscal targets should be to:

- **Continue to target to achieve operating surpluses** (adjusted to the state economic cycle and fluctuations in demand) and reduce public debt.
- **Adhere to fiscal settings which encourage growth** (and that will also lift state revenue) but also highly disciplined government spending to progressively bring the state out of its current "challenging" financial position
- **Ensure its financial targets are met over the forward estimates**.
- **Restore Queensland's triple-A credit rating** to provide a positive signal to investors and the wider business community on Queensland's risk profile and commitment to fiscal prudence.
- **Maintain Queensland's tax competitiveness**.
- **Undertake regular cross-agency reviews of spending priorities.**
- **Continue to monitor and seek out efficiencies in government department program delivery.** This includes evaluating agencies activities for opportunities for greater exposure to competition from the private sector.
- **Provide sufficient funding for investment in the drivers of Queensland's competitiveness** such as innovation, research and development, infrastructure, exports and skills.

5. Reducing the costs of doing business

5.1 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 that the Government needs revenue streams to fund the provision of essential public services, but it is important that only necessary regulation and the most efficient taxes are imposed**. The prosperity of the Queensland economy is dependent on the Government committing to improving the competitiveness of Queensland businesses through sensible and sustainable reductions in business costs**.

- This will mean reducing, simplifying or replacing inefficient state-based charges to ensure that the State's tax system has minimum impact on business and promotes long-term economic growth across all sectors of the economy. There must also be a reduction in unnecessary red tape, to make it easier for businesses to establish and grow in Queensland and employ. Where possible, different regulatory regimes in different states should be replaced with nationally-consistent laws to reduce compliance costs for businesses.
- The Government should also provide clarity around the future direction of taxation and commit to ensuring that state-based taxes do not increase as a share of GSP over the forward estimates.
- A key area of state taxation reform centres on the need 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.
- We encourage the Queensland Government to investigate alternative ways to finance the removal of the most inefficient state taxes. One option is to remove 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 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 recommend 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 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.
- A review should be undertaken of current exemptions and concessions that apply to taxes with a view to reducing complexity and adopting consistent approaches across states. This is needed to minimise the administration and tax compliance costs imposed on businesses and the economic distortions that can be created.
- State Governments can 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. **We urge the Queensland Government to take a leadership role in driving holistic taxation reform with a view to achieving real and meaningful harmonisation of taxes, fees and levies on business** (such as stamp duties, land tax and motor vehicle duty) operating across multiple jurisdictions.

5.2 Regulatory reform

- Queensland businesses are part of the global economy and must be internationally competitive to survive. Success in the reform of government regulation will be critical in creating the circumstances conducive to shaping a more competitive Queensland and generating higher growth, stronger investment and increased employment opportunities.

- The Government has correctly recognised that regulation is an issue and has taken specific action to support small businesses by establishing the Better Regulation Taskforce to identify opportunities to reform Government regulations of concern to Queensland businesses.

- Ai Group continues to urge the Queensland Government to **address the impact on the state from summer time zone differences**. A first task should be to undertake a full economic and social assessment of the impact of not having Queensland's time zones aligned with the major business hubs in New South Wales and Victoria. There is also a need to focus on exploring options which could mitigate the concerns about daylight saving in the north and west of the state. A recent national survey by the Australian Industry Group of more than 200 businesses found that an overwhelming **85% of businesses were opposed to Queensland's current position against daylight saving.** Almost one in three businesses said that the daylight-saving issue had a "significant impact" on their business and **close to one in ten (9 per cent) of businesses that already operated in Queensland were less likely to further invest locally because of the daylight-saving differences**. A similar proportion of companies operating in Brisbane said they were less likely to employ people in their Queensland offices due to this issue. For businesses not operating in Queensland, almost 17 per cent were less likely to invest in the State due to time zone issues.

- Ai Group welcomes the Government's progress made against the former RTRAC's 14 priority recommendations under the broad themes of reducing regulatory creep; improving regulator engagement; and improving regulatory processes. We also welcome the progress underway in the development of a revised regulatory framework based on the best practice principles recommended by the Queensland Productivity Commission and the Business Impact Statement Tool which will guide

Government on the impacts of proposed regulations. We look forward to continued momentum for reform in these areas.

- The development of best practice regulatory framework that is focused on timely monitoring and reviews by responsible agencies as well as greater focus on ensuring the level of regulation is proportionate to the "risk" that the regulated activity represents 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.

- As part of this best practice framework, we would also recommend that Queensland 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.

- Aligned to this is the need for whole of government initiatives to reduce the amount of duplication of information required across agencies and the introduction of agency plans to simplify and modernize existing regulations and processes.

- We also call for a stronger focus on genuine compliance cost reduction and more efficient regulation. This includes further advancing flexibility across regulatory measures, including consideration of earned autonomy in regulation for high compliance performers; negotiated rule making based on a process of consensus building (between industry and regulatory agencies) for draft regulations and; establishing government project teams which focus on identifying and reducing red tape compliance costs in target sectors or industries.

- In support of a more structured approach to regulatory reform we believe there is merit in **assigning responsibility of regulatory policy to a Senior Minister to advocate regulatory policy reform within Cabinet.** This would assist in raising the level of Ministerial oversight and strongly reinforce to businesses and the community that the Queensland Government is committed to better regulatory outcomes. The Minister, with support from an independent body would also be responsible for improving the coordination of the regulatory reform across departments and agencies, while promoting increased transparency and a higher level of accountability in the reform process.

- Of further importance is the need to develop and review 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 not only increase 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.

- Businesses operating in Queensland 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. Queensland should **lead efforts to reduce the burden of inconsistent and duplicative reporting, particularly by advocating for, and facilitating, a single national online reporting portal**.

- In recognition of cash-flow difficulties faces by many small and medium sized businesses, we recommend that businesses are given the option of paying taxes, premiums and charges on an instalment basis where practicable. Regulatory agencies should 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.

- The digitisation of the government agencies is also creating opportunities to streamline the way they collect and make use of existing data from businesses and reduce compliance and regulatory costs for businesses and governments. As the Queensland Government continues to build its capability and strengthens its whole-of-government digital strategy, the Government should be ready to increase and redirect investment accordingly.

5.3 Standards and Regulation

- Australia does not have adequate laws and enforcement in place to ensure that products sold to industry and the public meet applicable standards and are fit for purpose. This has been a source of increasing disquiet, particularly given high profile failures in relation to the construction sector.

- **The Queensland Government should proactively participate in national efforts to address nonconforming product in the building sector** and coordinate action with other jurisdictions and industry to achieve safer outcomes for the public and a level playing field for suppliers who do the right thing. There has also been a tendency for government to move away from the use of Australian standards. While international consistency and efficiency have value, international standards development processes do not necessarily offer Australians an adequate voice or reflect local conditions and needs. **Caution is needed**.

6. Infrastructure Investment

- The Queensland Government is playing a critical role in the planning and facilitation of the State's infrastructure network. Ai Group welcomes initiatives to boost infrastructure development, including the State Infrastructure Plan and the establishment of Building Australia to provide independent advice on the development and delivery of infrastructure proposals. This is helping in providing greater certainty to business and ensuring better value for taxpayers' money. Building Australia's publishing of an Infrastructure Priority List is also significant in providing increased visibility to the process of addressing the considerable infrastructure challenges faced by Queensland.

- It is recognized that the Queensland Government is making important inroads in addressing Queensland's infrastructure short-fall with last year's State Budget providing for $6.8 billion in infrastructure spending (purchases of non-financial assets by the general government sector plus finance leases) in 2018-19 and $29.1 billion over the four years to 2021-22. This funding was spread across the key areas of transport, energy infrastructure, health and education, as well as continuing to progress the planning, procurement and development of the high priority Cross River Rail project. These projects will be critical in building Queensland's productive capacity, reducing the costs of doing business, improving livability for all Queensland communities and addressing the social needs of the state's growing population.

- While Ai Group supports these projects, it is **vital that funding is allocated transparently towards projects that have the potential to deliver the greatest economic and social benefits for Queensland.** All proposed infrastructure projects must be subject to thorough and transparent cost-benefit analysis to ensure the government gets the best possible use of taxpayer funds. It also involves establishing a detailed and deliverable long-term infrastructure program, incorporating a time frame of at least 10-15 years. A longer-term planning approach will enable the private sector and it supply chain to better harness the skills and resources needed to deliver more cost and operationally effective outcomes for the State.

- All proposed infrastructure projects must be subject to thorough and transparent cost-benefit analysis to ensure the government gets the best possible use of taxpayer funds.

- It is essential that project planning transcends the short-term political agenda with the Government needing to play a key role in facilitating the engagement of industry and the community in shaping the future direction of investment. This will enable the early identification of opportunities, risks and issues on individual projects with proposals reflecting the needs of businesses and the people of Queensland.

- Regular updates and early alerts on the level of priority attached to major infrastructure projects and the anticipated funding arrangements are also required 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.

- Given the solid and near-historical high national pipeline of publicly funded infrastructure investment, improvements to the coordination 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.

- There should be a focus on smoothing investment cycles as 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.

- To enhance certainty in the planning and delivery of infrastructure, we also that the Government consider:
    - **utilizing non-funding levers available**, including continuing to fast track development approvals; reducing delays and uncertainty in zoning, assessments and planning approvals and; reducing the regulatory and cost burden on industry by improving government tender processes;
    - **Clear and consistent application of land use and development policies** with industry regularly informed on the status of its policies and strategies. This will help in providing industry with the certainty necessary to support its investment decisions.
    - Adopting 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 and within a

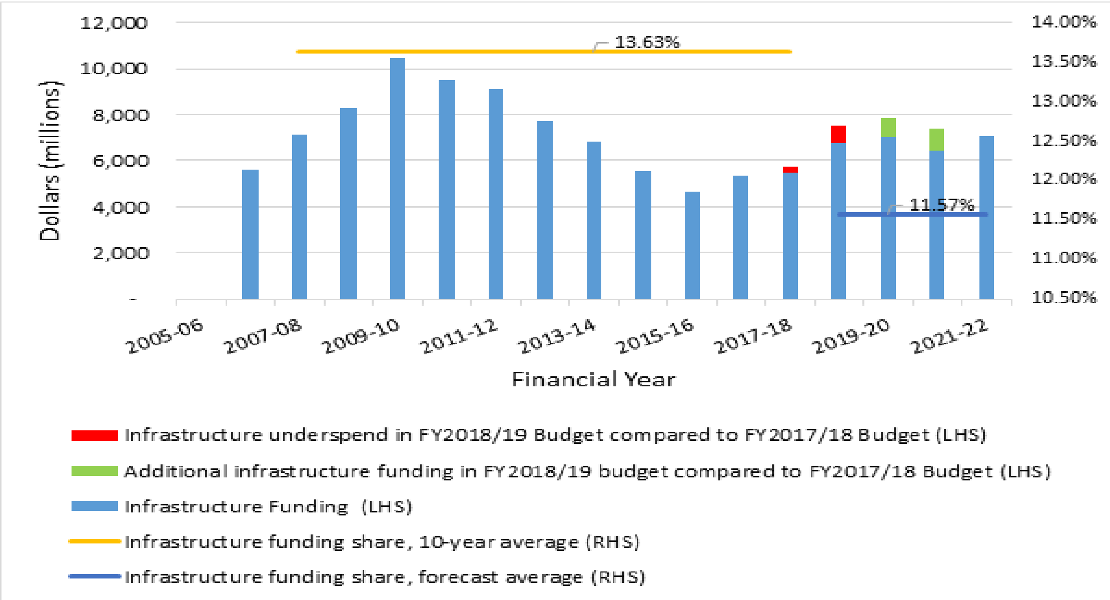
regime of rational commercial terms and risk profiles that attach to each project.

- Conducting **regular audits to identify emerging capacity constraints and gaps in infrastructure provision.**

- The need to deliver the State's infrastructure in a fiscally responsible manner means that much more must be done by government to urgently identify funding sources to drive a pipeline of future productivity lifting infrastructure projects.

- Despite an improving trend in State Government infrastructure expenditure and higher borrowings directed at financing investments, average infrastructure spending as a share of total government expenditure over the period 2018-19 to 2021-22 at 11.57%, is still well below the 10-year average of 13.6% (see chart 2).

Chart 2: Queensland Government Infrastructure Spending: Share of Expenditure



Source: Infrastructure Partnerships Australia

- It highlights the need for improved access to private funding as well pro-actively seeking Federal funding to ensure that critical infrastructure is progressed in a timely manner. One means of achieving this is through 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. The Government should also look to:

  - encouraging **greater private sector involvement in the provision of traditional government services and programs**. This needs to be undertaken in a way that ensures value for money and consistency and reliability of service while, at the same time, enabling the Government to maintain an operational oversight of service delivery standards and asset

protection on behalf of the people of Queensland. Outsourcing of services also enables the Government to focus on its core activities.
  - selling and leasing public sector assets to streamline service delivery and allow for the recycling of capital to fund vital road, rail, health, utility and other social infrastructure projects, underpinned by appropriate regulation to ensure consumers are protected. Governments elsewhere in Australia, particularly NSW and Victoria, have been able to boost their investment in productivity enhancing infrastructure by the reform and lease of state-owned assets.
  - examining the role of **congestion charging on Queensland's toll road network.** This form of user pay road funding model is a positive option for addressing traffic congestion issues while also helping to fund the delivery of infrastructure projects in the medium term.
  - recovering the cost of public infrastructure investment by capturing some or all gains in land value that result from infrastructure investment through **adoption of the land value capture financing approach**.

Efficient land use planning processes are also critical for supporting industry growth, job creation and the State's growing population. In this regard the Queensland Government should ensure:

- **Clear and consistent application of land use and development policies** with industry regularly informed on the status of its policies and strategies. This will help in providing industry with the certainty necessary to support its investment decisions;

- **A fully integrated approach across all levels of government in the identification of new growth areas**; delivery of new transport infrastructure; the use and release of land and; decisions regarding the provision of supporting infrastructure. This must be underpinned by timely and uniform implementation of the legislation and planning policies on a whole of government basis so as to get things done.

A further priority is the need for greater connectivity between modes of transport across the State, including appropriate road and rail infrastructure for freight linking the major ports and improved connections between airports and land-based transportation to support trade and development in Queensland.

8.1 Brisbane Olympic Games - 2032

- In the context of infrastructure planning and the large number of major projects in the pipeline in Queensland, we recommend that the State Government work actively with the SEQ Council of Mayors to properly scope the feasibility and desirability of an Olympic Games bid for Brisbane.

- The hosting of the 2014 G20 summit started a conversation around Brisbane's ability to be a serious player in the Asia Pacific, and a place where globally-significant events can happen. Hosting an Olympic Games would certainly consolidate that positioning in the region.

- The timing is also good. There are around 14 major infrastructure projects that would be completed by 2032, including the iconic Queens Wharf, so it would be timely to showcase the rejuvenated region to the world.

- At this stage, we would recommend that the Queensland Government undertake a comprehensive cost-benefit analysis to determine the economic costs and benefits of investments required in hosting the Olympic Games. The comparative costs and benefits of creating a cluster of regular significant Asia-Pacific events should also be assessed as this is an alternative option that also warrants consideration.

7. Procurement Policy

- Ai Group welcomes the Government's commitment to a procurement policy that increases opportunities for local businesses to compete for Queensland Government contracts. We also welcome the focus on ensuring that the Government's procurement activities are underpinned by a commitment to the procurement principles of integrity and probity within a governance framework that focuses on ensuring value for money outcomes and the efficient use of Government funds.

- Ai Group agrees that is critically important to take account of the wider value to the Queensland economy of purchasing locally. Ai Group members are acutely aware of the benefits that can accrue to individual companies from Government contracts such as on-going jobs creation, reducing unemployment, the development of new technologies and products and increasing opportunities for skills development.

- However, **it is important that the Government is flexible on definitions of local content**. For example, local should refer to businesses operating in Australia and not be limited to a single state with this broader definition applied for invitations to quote or tender for every procurement opportunity offered. Increasingly there are few businesses that just operate in a single state. A large proportion of our members, even those that meet the definition of a small business, are spread across multiple jurisdictions.

- **Local content could also be the local assembly of inputs made overseas when that is the most sensible option that delivers value for money for the Government**. The most effective role that the Government can play in supporting local involvement by small business in its contracts is to facilitate, rather than mandate, local and small business engagement. This can be achieved through measures such as improving the flow of information on tender opportunities, ensuring transparency in the use of Government funds, or making greater use of the Queensland Industry Capability Network in identifying import replacement opportunities in purchases of all Government agencies.

- In supporting local industry and small business, it is also important that costs are evaluated carefully, consistent with ensuring that value for money considerations guide procurement decision making.
- In particular, **"whole of life" costs project and support costs must be fully factored into costings.** This approach looks beyond up-front purchase prices and brings to bear a more transparent, broader cost-benefit equation or value model that considers whole-of-life costs.
- It takes account of maintenance and through-life support which are key advantages that local suppliers are able to offer. It also 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, including small businesses, these total costs are lower than for overseas-based businesses because services are capable of being rendered more quickly, more reliably and replacement parts delivered more promptly.

Other specific measures to consider

- **Review all procurement contracts and adopt the use of standardised contracts where practical**. Complex contract conditions and overly prescriptive tender specifications can make it difficult for local industry to compete for Government work, particularly SME's and new entrants. For mainstream contracting, standardised templates and Requests for Tenders (RFT's) need to be simpler and more easily understood by industry. This could involve adopting a common form of contract encapsulating general terms and conditions for all Queensland departments, agencies and service providers.
- **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.

- **Identify the proposed risk allocation at the earliest possible stage in the tender process**. A concern of the construction industry is that significant time and resources can be devoted to the evaluation of a project, even before proceeding through the Expression of Interest (EOI) and Request for Tender (RFT) phases. Furthermore, the proposed risk allocation is not always evident during the EOI phase, and may not be immediately apparent at the start of the RFT phase.

- **Select and retain experienced and appropriately skilled project development and procurement personnel** to ensure private sector confidence in the tender and operational processes. 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. 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.

- **Improve the ability of small businesses to access "clustering**". The size of government contracts often requires a large corporation or a consortium of corporations to handle the scale of work. There needs to be better mechanisms for small business to access "clustering" that might allow businesses to jointly bid on projects and improve the competitiveness of the local manufacturers against large overseas businesses that can offer a "one-shop" solution and greater capacity to deliver on major projects.

- **Better utilise industry groups to help communicate the availability of government work** and inform members of any opportunity to form clusters to tender for larger work programs. This needs to be done with sufficient notice for businesses to do the necessary research.

- **Streamline 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.

- **Contribute to the bid costs incurred by unsuccessful tenderers** and ensure compensation for the intellectual property developed through innovation in design, systems and processes that lead to more efficient or cost-effective infrastructure outcomes.

Industry and Economic Development

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. This includes leveraging off the State's skills and capabilities across a range of innovative, knowledge intensive and high margin businesses of the future.

We therefore commend the government's 'Advance Queensland' agenda aimed at supporting local businesses and at harnessing innovation in a rapidly changing global economy through key initiatives such as the Advance Queensland Acceleration package, the Biofutures Roadmap and Action Plan and the Platform Technology Program. This is consistent with other business assistance initiatives, including the Advanced Manufacturing Roadmap and Action Plan designed to position Queensland as a leader in advanced manufacturing technologies products, systems and services; the Made in Queensland Manufacturing Program aimed at protecting traditional manufacturing jobs and lifting international competitiveness and; the tasking of the Queensland Productivity Commission to examine ways to boost the sector.

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

- The **Manufacturing Ministerial Committee (MMC)** and its focus on providing high-level advice on strategic matters in relation to building and promoting industry and manufacturing in Queensland.
- The **Industry and Advanced Manufacturing Advisory Group (IMAG),** helping to position Queensland manufacturing businesses to capitalize on domestic and overseas opportunities by guiding policy directions in trade, innovation and technology, local content, business costs and regulation.
- The development and implementation of the **10-year road maps for advanced manufacturing** and other priority sectors with global growth potential as part of the Queensland Government's Advance Queensland program.
- The **Regional Back to Work Program**, providing job opportunities for long term unemployed or young unemployed jobseekers in regional Queensland, and assisting businesses to expand.
- The **Skilling Queenslanders for Work** initiative that helps to improve job prospects for Queenslanders and boost local economies and business growth prospects.
- The **Powering Queensland Plan** to provide a road map for exerting downward pressure on electricity prices and securing sustainable energy supply.

Other specific initiatives to assist in lifting the growth potential of Queensland businesses include:

- **Digitalisation and Industry 4.0** are rapidly transforming practices across businesses and industries. Federal initiatives in this space, including through the Entrepreneurs' Programme, are useful and the Queensland Government should collaborate with them where possible. Regular discussion of the future of industry between government and a wide array of stakeholders is essential to spur, inform and improve high quality industry policy. The Industry 4.0 Advanced Manufacturing Forum, chaired by Ai Group and bringing together stakeholders from industry, academia, unions and key institutions, is playing a valuable role and State Governments should engage with it, as does the Federal Government.

- Funding 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. 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.

- 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 programs that assist SME's in taking advantage of broadband and other advances in ICTs** (including the upskilling of employees) could make a valuable contribution to Queensland's future global competitiveness by helping to ensure potential benefits are maximised.

- 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.

- **Rebalancing export support programs to provide effective support for small businesses that develop and export intellectual property and services**. The ongoing "information revolution" and the development of the National Broadband

Network provide the context in which Queensland is developing its presence in knowledge, services and digital technologies that do not fit comfortably in the established "product" oriented export facilitation programs. A vibrant, export-oriented industry focused on advancing and exploiting the information revolution would help in creating a more balanced portfolio of economic activity in Queensland and become a major earner and attractor of high value knowledge workers to Queensland.

8. Regional Development

- Regional Queensland is an important contributor to the state's economy, providing jobs and contributing significantly to industry exports and economic growth. However, each region faces its own distinct needs and challenges highlighted by the continued disparity in conditions across regions and industries. While South-East Queensland, for instance, with its larger population base and more diverse economy is steadily recovering and the coal producing areas have benefitted from higher coal prices and a revival in activity, other regions are struggling.

8.1 Addressing the planning challenges facing our regions

- Given the critical role of the regions in driving state economic growth and the need to ensure their long-term sustainability, a comprehensive and pro-active planning approach to revitalising regional communities and economies is needed.

- We therefore welcome the Queensland Government's initiative to pursue a national **Cities Deal for South-East Queensland (SEQ)** - bringing together the three levels of government and the community to help align infrastructure planning strategies for the region over the long term. This approach provides the opportunity to move beyond the political cycle to deliver jobs, economic growth and the creation of productive and livable cities. We look to the Cities Deal for SEQ as providing a foundation for further assessment of its applicability to other regions of Queensland.

- The Cities Deal will play a vital role in assisting SEQ to build on its advantages and strengths as well as encouraging the spread of business and jobs growth and supporting SEQ communities.

- A key priority must be to actively target regional infrastructure – including modes of fast transport, telecommunications, education and training, and business innovation systems to improve livability for all Queensland regional communities and encourage growth in business activity into the regions.

- The Queensland Government will need to play a key role in facilitating the early engagement of industry and the community in shaping the future direction of investment. This will enable the early identification of opportunities, risks and issues on individual projects with proposals reflecting the needs of businesses and the people of SEQ.

- Also, of importance will be the need for clear and consistent application of land use and development policies with industry and the community regularly informed on the status of its policies and strategies. This will help in providing all stakeholders with greater certainty, including the necessary certainty for industry to support its investment decisions.

8.2 Infrastructure priorities

- The Queensland Government has demonstrated a commitment to increasing funding for regional infrastructure with its budgeted capital program for regional Queensland rising to $5,597 million in 2018-19 from $4,811 million in 2017-18. 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.

- It is important that the Government continue its commitment by implementing proposed and announced regional infrastructure projects in a timely manner and bringing forward rigorously assessed infrastructure projects that can improve livability and encourage greater industrial development in regional locations.

- The Government needs to concentrate efforts on **sensible investment prioritization for all regions in Queensland 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.

- A further priority is the need for greater connectivity between modes of transport across the State, including appropriate road and rail infrastructure linking the major ports and improved connections between airports and land-based transportation to support trade and development in Queensland.

8.3 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.

- It is important that resources are directed towards the VET sector and other providers of vocational education and training 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 Queensland Government should address the need for increased investment in VET** in cooperation with the Commonwealth to ensure a sector funded to meet emerging vocational skill needs of industry.

- 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. Queensland Government agencies should continue to include a target for employing apprentices and trainees in major building and civil engineering construction contracts over $100 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.

9. Encouraging Innovation in Queensland Industry

- Innovation is the foundation of improvements in our competitiveness and living standards. It involves bringing new or refined good or services to market; introducing new ways of producing, distributing and marketing goods and services; and putting in place more responsive and more effective approaches to doing business.

- Ai Group believes that every sector has the capacity to both innovate and benefit from innovation and should be encouraged to do so. There is a tendency for those considering innovation to look to high-tech sectors. Such an approach risks overlooking areas in which we have specific strengths such as food, mining and biotechnology as well as opportunities in sectors that are the traditional stalwarts of the Australian economy.

- Ai Group acknowledges and appreciates the industry support measures introduced by the Queensland Government including the suite of programs under the Advance Queensland Acceleration package. These programs play a vital role in helping to ensure Queenslanders have the skills for future workplace demand (such as computer coding, robotics); provide support for businesses to innovate and grow; facilitate collaboration between industries and universities; and support graduates, new businesses and scientists in working together and networking globally.

- We also welcome the Government's initiative of embarking on a comprehensive review into the state's innovation system and its draft innovation strategy that will guide future innovation policy and action in Queensland.
- In recognition of rapid technological advances and the potentially disruptive implications of digitisation for the future of industry across Queensland, we would urge the Government to 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 the 'sharing' and 'gig' economies;
    - 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 Queensland's public roads and;
    - development of use of 'Big Data' to create an innovative economy.
- A strong growing and innovative state means that all people of Queensland benefit through both jobs and the opportunities and the creation of new and improved services. In this respect, we also 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.
Ensure that innovation policy is founded on initiatives which 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.

- Ai Group believes that there are opportunities for further significant benefits through the following initiatives:

  Assisting SME's to develop design led innovation capabilities has the strong potential to increase the speed of innovation along with lifting competitiveness within the small business sector. SMEs can face difficulties in acquiring the skills and capabilities to assist them with identifying niche opportunities, developing ways to exploit them and become more innovative. It would also assist in driving upgrades in technical, design, cost and quality capabilities to meet customers' supply needs.

  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.

  Promote innovation through taxation measures and other incentives. We would encourage for instance the consideration of such measures as 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 and; incentives to develop greenfield land, such as expedited planning processes.

  Rebalance export support programs to provide effective support for small businesses that develop and export intellectual property and services. The ongoing "information revolution" and the development of the National Broadband Network provide the context in which Queensland is already developing world-leading knowledge, services and technologies that do not fit comfortably in the established "product" oriented export facilitation programs. A vibrant, export oriented industry focused on advancing and exploiting the information revolution would help in creating a more balanced portfolio of economic activity in Queensland and become a major earner and attractor of high value knowledge workers to Queensland.

  Work closely with industry associations and businesses to influence the development of regulation and legislation with a view to incentivising innovation through an increased understanding of the specific challenges to innovation from conception to commercialisation.

Driving innovation through procurement policy. Ensuring that government procurement opportunities have significant flexibility and focus on project objectives instead of prescriptive specifications have the potential to provide businesses, large and small, with the opportunity to offer innovative products or processes. That is, procurement can provide a 'demand-led' model of research and development, and enables the government, that is the customer, with direct input at the development stage of a new product or service rather than waiting until it reaches the market. This brings benefits to both businesses and governments.

The NSW Government's Procurement Innovation Stream is an effective means of allowing accredited Government agencies to trial innovative products and services offered by SME's. Agencies can engage a small or medium sized enterprise through direct negotiation on short term contracts valued up to $1 million (including GST) to do proof-of-concept testing or outcomes-based trials, subject to meeting various conditions, including that the supplier agrees that the agency can publish a report on the outcome of any trials. We believe that that the WA Government should give consideration to establishing similar procurement arrangements to build the capacity of local SME's businesses to have a greater role in the delivery of Government services and deliver more value for the State from government tendering.

10. Putting Downward Pressure on Energy Costs

10.1 Energy

Ai Group's national policy priorities include the development of a new energy advantage for Australian industry. This is something that the Federal and State Governments all have roles in. Notwithstanding that Queensland currently has the lowest wholesale electricity prices in the National Electricity Market, price pressures are keenly felt by Queensland electricity and gas users. The elements we advocate for a new energy advantage include:

Radically improve the productivity of energy use and supply

Low unit prices for energy made relatively low energy productivity affordable. An oversupplied electricity system made it possible to ignore the potential of demand-side resources. This is no longer the case.

Improved practices and technologies can help most energy users cut bills through greater efficiency or fuel switching. A major national effort should modernise standards, finance retrofits in all sectors (including in rental properties; nearly a third of Australians rent), spread awareness of leading practice and fund research and demonstration that advances it.

Demand response can substitute for high-cost low-utilisation assets when demand surges or other supply slumps. Standards should encourage demand response capability in energy intensive appliances, smart meters should be rolled out proactively rather than incrementally; time-of-use and maximum demand-based price structures should be the default with an opt-out; and a rule change is needed to encourage and reward demand response in the National Electricity Market.

Steps are required to be taken to develop an integrated energy and industry policy that facilitates deep upgrades by industry of production facilities (to radically enhance efficiency or switching of fuels) and brings together information on opportunities, supporting innovation and unifying finance options.

Reduce the cost and risk of energy investment

We have strong energy resources of all sorts, and global technology improvements are sharply reducing renewables costs. However, finance, construction and regulatory costs could still make Australia uncompetitive, particularly given the capital-intensive and low operating cost nature of wind and solar power. Steps needed include:

- Most urgently, reducing uncertainty by cementing durable long-term energy and climate policy. The wide range of possible structures and tempos for future climate policy makes any energy project much more risky than its fundamentals would otherwise suggest.
- Growing construction sector productivity and achieving a productive workplace relations climate in construction. Higher performance here would help underpin more energy projects and cut their costs, making it more likely that Australia can sustain and expand energy intensive industries like aluminium, and develop new ones like hydrogen production. The benefits for high-quality jobs across Australia need to be achieved.
- Ensure that planning and regulatory processes meet community expectations and address substantive concerns with energy developments (for instance around water impacts or rival land uses) while facilitating responsible, timely and efficient development.

Encourage effective competition

Maintaining or increasing competition in every segment of our energy markets can help sustain lower costs for energy users. Conversely, concentrated market power or malfunctioning competition will bring harm. Specific measures include:

The ACCC's electricity market review made a host of recommendations, all of which require detailed consideration and response. The proposed 20% soft cap on generation market share, enforced through a prohibition on growth through acquisition, is particularly important. **The Queensland Government and other Australian Governments should reorganise publicly owned generation assets over time to adhere to this cap**.

Facilitation through relevant market rules and regulatory systems of new entrants in energy markets, including demand response aggregators, new gas producers, gas importers, bioenergy and waste-to-energy, distributed energy, hydrogen production from electrolysis and from fossil fuels with carbon capture and storage, and virtual power plants.

Specific gas market measures to manage the immense impact of Eastern Australian LNG exports without threatening the well-functioning Western market and emerging resource development in the Northern Territory. These include a national interest test for new or expanded LNG capacity; having in place rigorous export control powers in the event of an acute threat to domestic gas use; continued monitoring of the gas market and regular reporting by the ACCC; and continued implementation of Gas Market Reform Group recommendations.

Plan for the likely

Policy should be tested against expected trends. Relative cost trends suggest that Australian electricity generation will be increasingly dominated by renewables in volume terms. If this is correct it entails substantial corresponding growth in flexible resources to complement variable supply; major new large-scale infrastructure and smarter distribution networks; and a host of market and regulatory reforms to facilitate change.

The linkage of the Eastern Australian domestic gas market to international markets through LNG exports, and the commitment or depletion of gas resources with low production costs, suggest that wholesale gas prices will remain substantially above historical levels. If this is correct, in addition to the efforts outlined above to keep prices as low as sustainable, we will need widespread energy efficiency and fuel switching, along with efforts to shrink the role of gas in setting electricity prices.

Be open to surprise

Policy should be dynamic in the face of unexpected developments. Energy has seen major technological and market upheaval in recent years and more may come. Fossil generators with improved flexibility or efficiency, carbon capture and storage options, biomass or nuclear energy might prove more viable than they appear today. Energy markets and policies should be technology neutral where practical.

That means incentivising desired outcomes (on price, reliability, or emissions) rather than specifying technologies which must be deployed at scale. With respect to innovation, commercialisation and supporting infrastructure, the approach should be to spread bets and put many plausible technologies in a position to compete on their merits.

10.2 Waste Policy

Waste reduction, materials efficiency and the 'circular economy' present important opportunities over the long term, while Australia also faces an ongoing crisis as our waste and recycling systems are roiled by China's clampdown on the contaminated plastics we previously exported for processing. Ambitious National Waste Policy targets for improved waste outcomes need to be supported by effective policies and investments, including:

- Support for innovation and commercialisation of technology options to close materials loops and utilise waste products, and improved technologies for automated waste sorting;
- A coordinated push to revise standards at all levels to encourage, rather than discouraging, the use of recycled content which performs adequately;
- Encouragement of the use of recycled materials in government procurement, and reduction of regulatory and institutional barriers to such usage (such as replacing materials requirements for infrastructure with performance standards;
- Adopting effective and efficient measures to address waste-related externalities.
- Work with the manufacturing and construction industries, as well as the waste sector, to understand cost-effective options to support and promote the circular economy.
- Education campaigns aimed at households and workplaces to promote good recycling practices and reduce contamination through better waste separation;

11. 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.

11.1 Strategy to meet emerging skill needs

Automation is disrupting the skills that education and training systems strive to supply. It is leading to reallocations of employment between roles, tasks, sectors and regions. 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.

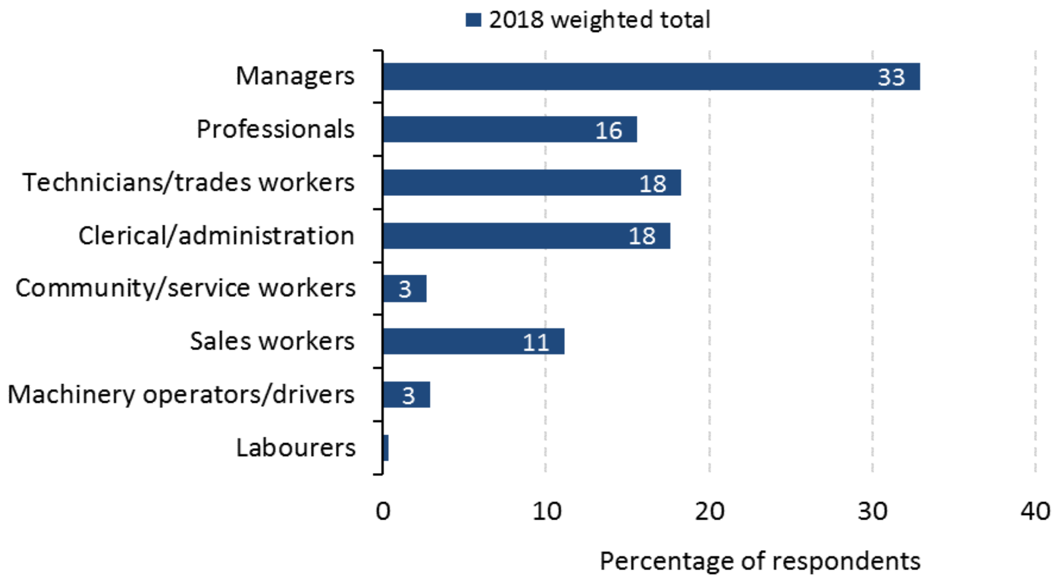
As automation is increasingly adopted by industry, it is recognised that capital deepening and increased competitiveness can be achieved by not only replacing workers with machines, but by building innovative capital – developing well-educated and well-skilled workers. For innovation to occur, physical capital must be complemented by qualified workers.[1]

Labour demand is shifting towards higher level and more cognitive skills for which many workers are not adequately trained and this is contributing to the hollowing out of middle level skill jobs. It is demanding, as a threshold requirement, that all workers have mastered enduring concepts of digital literacy to adjust to new ICT.[2] OECD research has found 38 per cent of Australian adults only have basic ICT skills that allow them to browse and email.[3] More advanced digital workers need to evaluate, configure and use complex digital systems and yet more advanced skills are needed to build digital technologies.[4]

Ai Group's 2018 workforce development needs survey asked employers about the priorities in their workforce for digital technology training and development, and changes anticipated or caused by its rollout.[5] Managers are the largest priority (33 per cent), followed by technicians and trades workers and administration staff (both 18 per cent). Professionals were rated next at 16 per cent.

[1] European Commission, The Future of Work: empowering people, Social Agenda No. 53, November 2018, http://europa.eu/!Qb38gF
[2] Hajkowicz, S, Reeson, A, Rudd, L, Bratanova, A, Hodgers, L, Mason, C, & Boughen, N, Tomorrow's Digitally Enabled Workforce, Commonwealth Scientific and Industrial Research Organisation, 2016
[3] OECD, Survey of Adult Skills First Results: Country Note Australia, 2016
[4] Digital Skills for Tomorrow's World, UK Digital Skills Taskforce, 2014
[5] Australian Industry Group, Skilling: a National Imperative, 2018

Chart 3: Priority for digital technology training and development



Source: Australian Industry Group, Skilling: A National Imperative, 2018

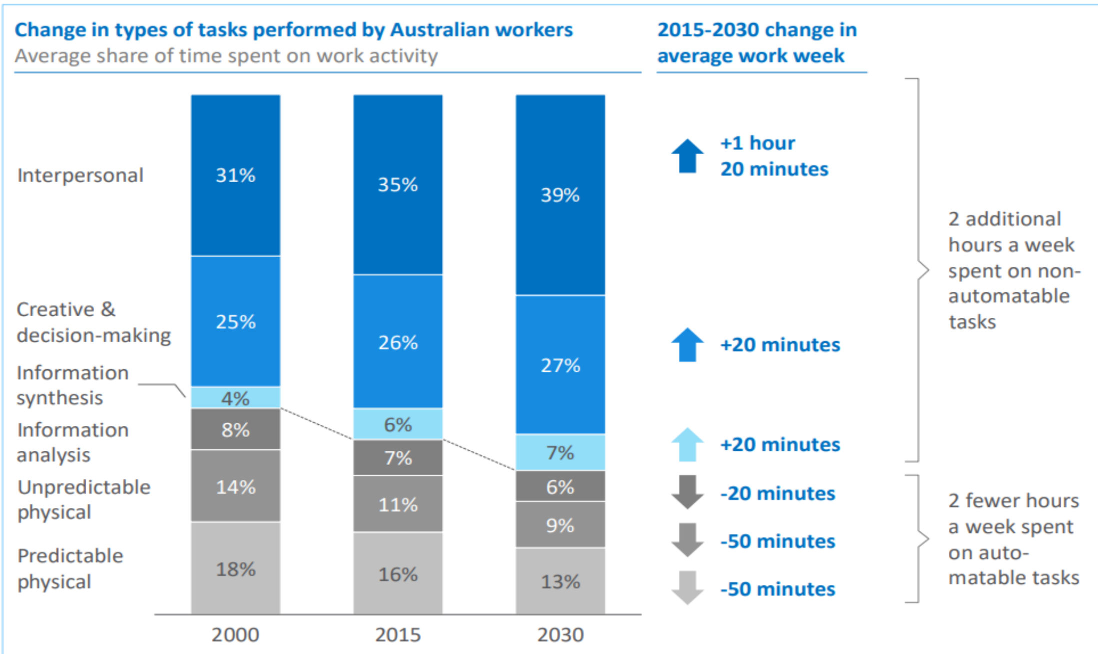
The new workplace increasingly relies on a more complex operational and organisational structure relating to decision making, coordination, control and support services. This means there are significantly higher demands placed on all members of the workforce in terms of managing complexity and higher levels of abstraction and problem solving. Employees are needing to act more often on their own initiative and be able to organise their own work.[6] Enterprise skills (such as advanced reasoning, design thinking and social interaction) need to be coupled with technical skills to build a broader set of capabilities for application in different environments.

AlphaBeta research has found task level changes have meant less time spent on routine and manual tasks and more time on interpersonal, creative and decision-making tasks.[7] The research also uncovered new tasks altered by technology changes and process improvements.

[6] Key Issues for Digital Transformation in the G20, OECD, 2017

[7] Mapping Australian workforce change, AlphaBeta, 2018

Chart 4: Change in types of tasks performed by Australian workers



Source: Mapping Australian workforce change, AlphaBeta, 2018.

The Queensland Government's response to Jobs Queensland's *Advancing Manufacturing Skills: A Skills, Training and Workforce Development Strategy for the Manufacturing Industry in Queensland*[8] noted that the Manufacturing Skills Implementation Plan will include advocacy for the development of training products supporting Industry 4.0 skills and will "support the development of industry related foundation and employability skills for the manufacturing workforce". The response also "recognises that there is a growing trend toward the requirement for soft skills in advanced manufacturing".

Data from Ai Group's Business Prospects 2019 survey of CEOs reveals that skills shortages were the principal factor inhibiting business growth, increasing from 5 per cent in 2016 to 21 per cent in 2018.[9] Skills shortages remain a persistent problem for industry. Ai Group's 2018 Workforce Development Needs Survey found that that 75 per cent of the surveyed employers reported skills shortages in the previous 12 months, up from 49 per cent in 2016.[10]

The major areas of shortage identified by 52.2 per cent of employers are technicians and trade workers. This data is confirmed in Queensland by an analysis of the job vacancies filled. Technicians and Trades Workers are regularly the most difficult vacancies to fill

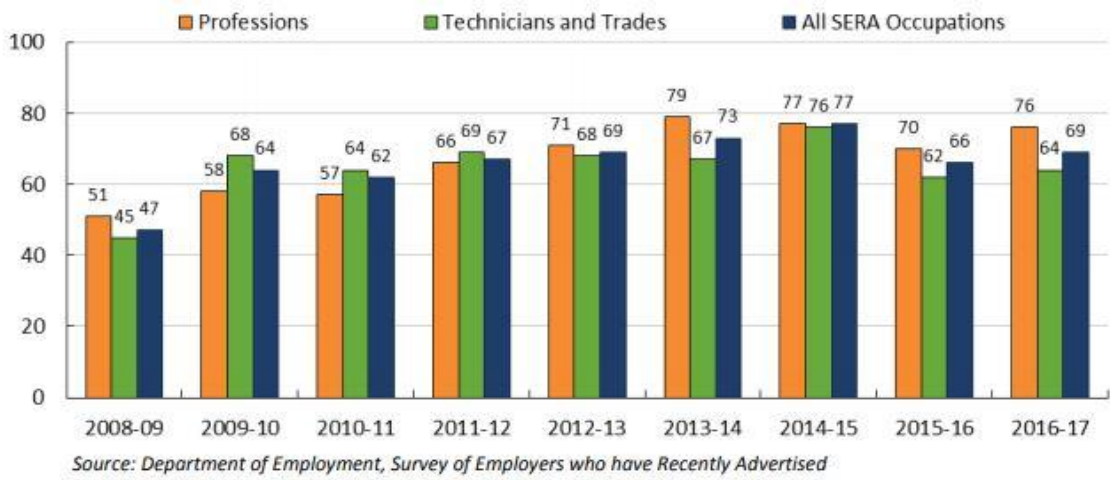
[8] Queensland Government response to Jobs Queensland's Advancing Manufacturing Skills: A Skills, Training and Workforce Development Strategy for the Manufacturing Industry in Queensland, Queensland Government, July 2018 https://www.statedevelopment.qld.gov.au/jobs-queensland-skills-strategy/industry-development/jobs-queensland-skills-strategy.html

[9] National CEO Survey: Business Prospects for 2019, Australian Industry Group, January 2019.

[10] Workforce Development Needs Survey, Australian Industry Group, 2018.

including in the most recent data year 2016 – 17 when only 64 per cent of the vacancies were filled.[11]

Chart 5: Proportion of vacancies by occupation groups, Queensland, 2008-09 to 2016-17



Recommendations:

Consistent with the Manufacturing Skills Implementation Plan, increase investment in the development of key categories of skills for the transforming economy in Queensland.

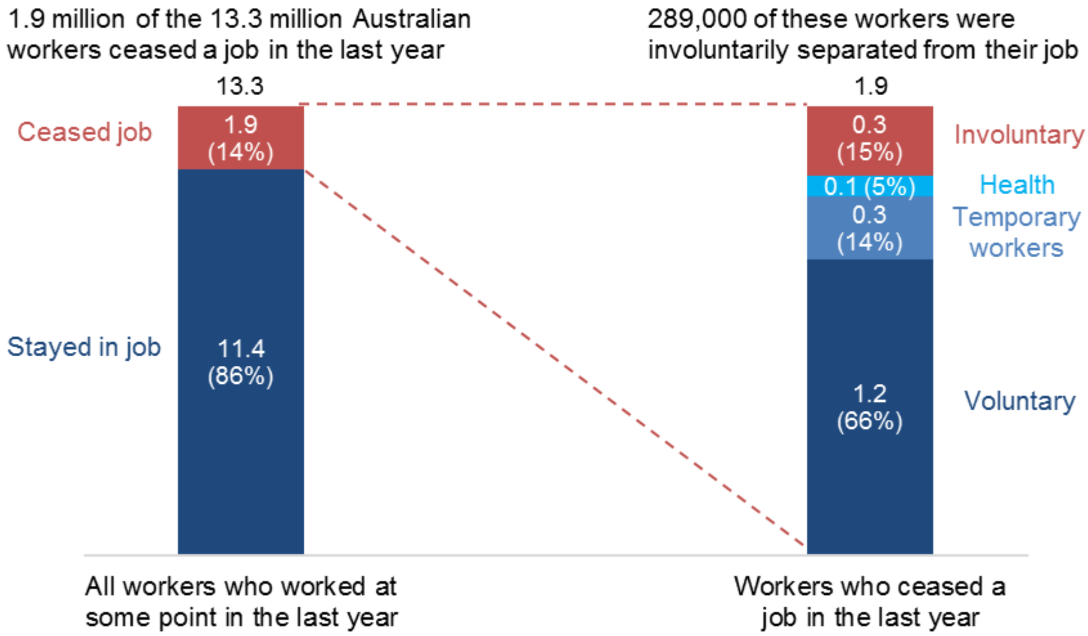
Develop a greater emphasis on training provision targeted to identified skills shortages, especially in technician and trade worker occupations.

10.2 Investment in continuous learning by existing workers

With technological change affecting nearly all industries different skills and new practices need to be adopted by existing workers throughout their working lives. Workers more capable of undertaking productive and engaged roles are better able to contribute to innovation in the workplace, while displaced workers represent a clear social and economic cost to Australia. In the twelve months to February 2018, 289,000 or 15 per cent of workers who changed jobs, did so involuntarily.

[11] Skill Shortage Research, Time Series data – Queensland, 2016 – 17, Australian Government, Department of Employment.

Chart 6: Australian workers who changed jobs in the last 12 months, Feb 2018



Note: Voluntary reasons include retiring, returning to studies, to obtain a better job, family reasons, starting a new business, unsatisfactory work arrangements and other voluntary reasons. Involuntary includes those who were retrenched or dismissed. Temporary is seasonal or temporary work and health related reasons are due to own illness or injury.

Source: ABS, Participation, Job Search and Mobility, February 2018.

Australia needs more than the current one-fifth of workers aged 15 – 64 years to be studying.[12] Linking lifelong learning to workforce productivity is now essential. A 2014 UNESCO statement makes the direct link between lifelong learning and economic growth and prosperity.[13] Without efforts by government, education and training sectors and industry to normalise cultures of continuous learning in the workplace the Australian economy will not prosper to the extent that is necessary for our future.

Because of constant change workers will need to increasingly take ownership of their own learning and have the opportunity to undertake training and development as they move through their working lives. A 2018 Deloitte study found that study-interested workers prefer education and training linked closely to their job and industry.[14]

The acquisition of new skills by existing workers and the refreshing of existing skills needs to be available in a range of environments (virtual, physical) and through access to bite size training. The introduction of micro-credentials by education institutions to meet on-demand learning must increase. The growing emphasis by education and training sectors now on developing capabilities in enquiry, agility, adaptability, creativity and problem-

[12]ABS, Education and Work, Australia, Cat. No. 6227.0, May 2018
[13] UNESCO, Education Strategy, 2014
[14] Higher Education for a changing world, Deloitte, 2018

solving will assist future workers in gaining a robust base to build skills through their working lives.

In terms of re-skilling, Ai Group's research shows that employers are currently prioritising managers for digital technology training and changes anticipated or caused by its rollout.

However, re-skilling extends beyond digital skills development in order to equip workers with the broader capabilities required in more autonomous workplaces. The digital economy requires a cultural change in the way work is done and managed. In the past, much of the role of a senior manager was tied up in expertise and knowledge. Now that is becoming less important and instead it is the ability to locate knowledge, assess how valid it is and then put it to use in collaboration with other people.

Businesses will need to assess their own capabilities and train when necessary using education and training partners, supervisors, managers and leaders. These companies will develop employees more capable of taking control of their roles, needing less supervision and better able to contribute to innovation in the workplace. However, support is needed for industry to develop digital strategies and workforce plans, assess existing workers' capabilities and train where necessary.

Recommendations:

Review funding policies to allow suitably qualified workers access subsidised training to upskill in short-form training such as skill sets.

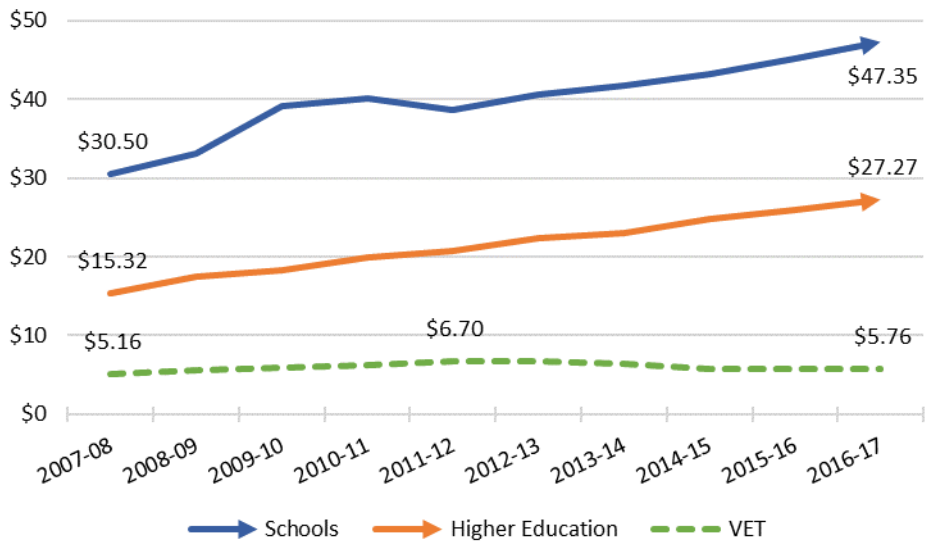
Provide incentives for industry, focussing on SMEs, to assist with workforce planning to continue re-skilling its transitioning workforce.

10.3 Investment in Australia's VET system

The VET system must be viewed as the skills engine room for the nation's industry workforce. It is concerning that the funding of VET continues to be inadequate in terms of both the level and composition of its funding.

The national level of VET funding is insufficient to meet existing and future skills needs of the workforce. Nationally, there has been a significantly lower rate of government investment in the VET sector compared with the higher education and schools sectors. Observing the ten-year trend, national expenditure on VET had grown by 29.9 per cent over the five years from 2007-08 to its peak in 2011-12, before experiencing a 14 per cent decline to 2016-17.

Chart 7: Expenditure on education by sector, 2007-08 to 2016-17 ($b)

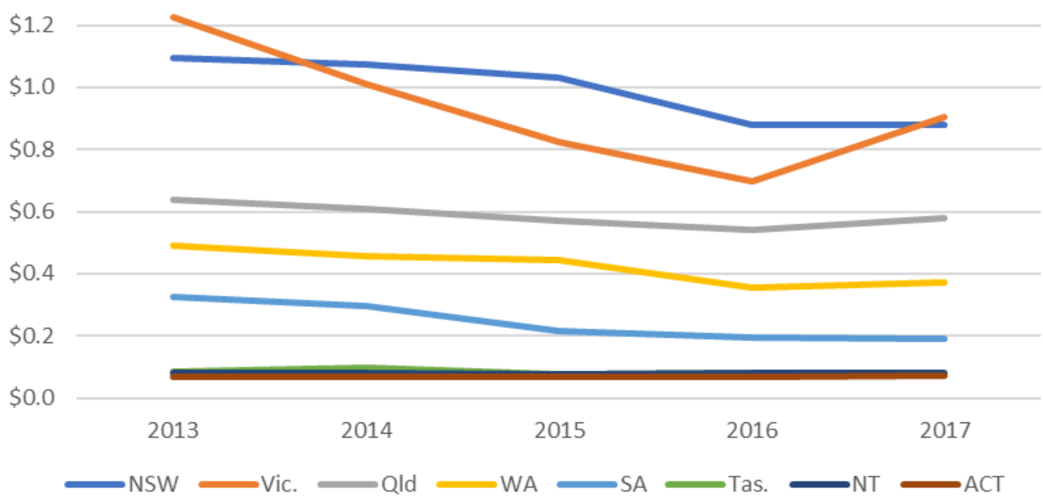


Source: ABS, Government Finance Statistics, Education, Australia, 2016-17

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.

Queensland's decreases in expenditure contributed to the overall decline during this period. The chart below shows the expenditure by each state on VET over the five years to 2017. Queensland's contribution declined by $60 million, or 9.4 per cent over this period.

Chart 8: State Government expenditure on VET ($b) 2007 – 2017



Source NCVER Financial information 2017

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, State and Territory roles and responsibilities in the training system, a genuinely national training system may be possible.

Recommendation:

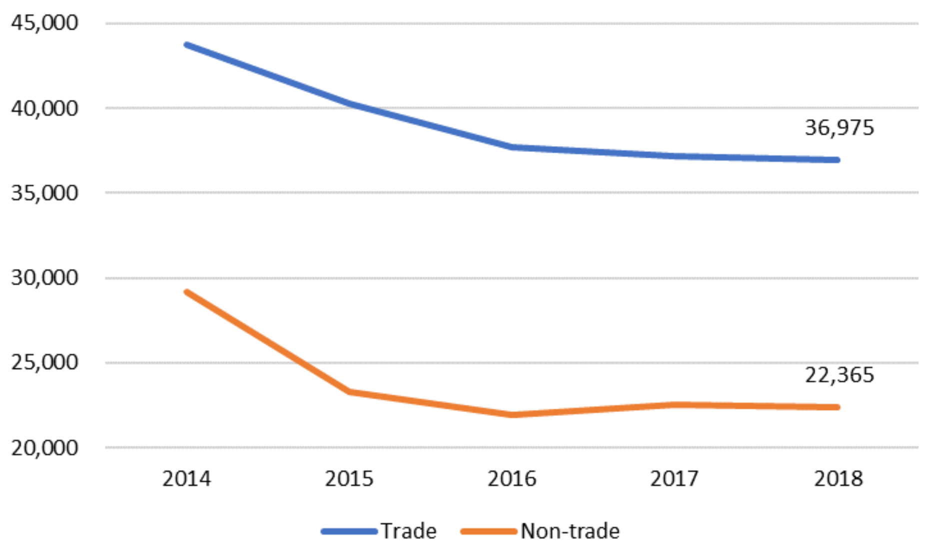
The Queensland Government should address declining investment in VET in cooperation with the Commonwealth to ensure a sector funded to meet emerging vocational skill needs of industry.

10.4 Reform of the apprenticeship system

The level of apprenticeship commencements is an ongoing concern for the nation's industry sector. The most recent data from the NCVER indicates that there were 267, 385 apprentices and trainees in-training nationally as at 30 September 2018. This represents a fall of 0.6 per cent compared to the September 2017 level. Commencements fell by 1.6 per cent over the twelve months.

In Queensland, as at 30 September 2018, apprentices in training fell by 0.6 per cent to 59,345 compared to 30 September 2017. What appears to be developing is a new and lower plateau of participation.

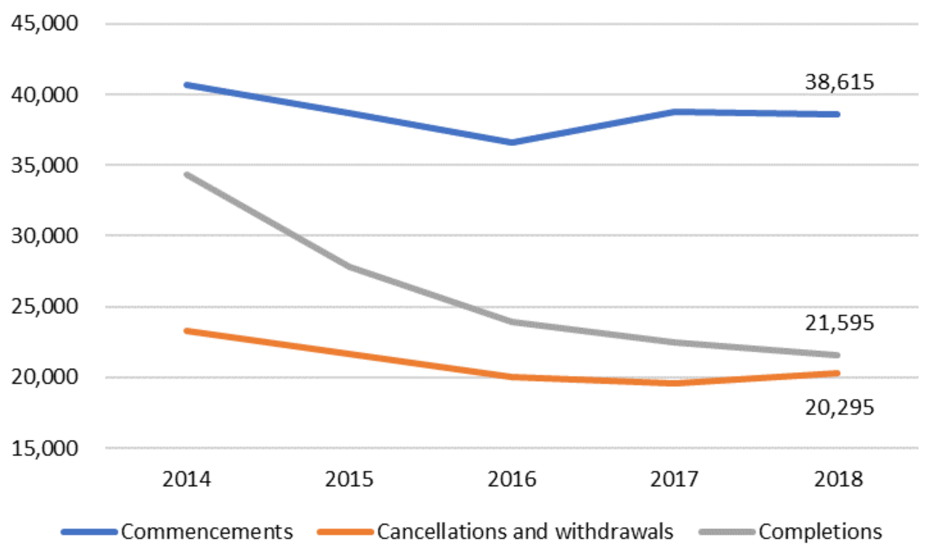
Chart 9: Queensland apprentices in-training 2014 – September 2018



Source: Apprentices and trainees 2018, September quarter, NCVER

Nationally, the data is showing that the gradual decline in apprenticeships in trade occupations since 2014 may be showing signs of improvement in some states. In Queensland commencements in trade occupations rose 0.4 per cent in the 12 months to September 2018. The data also shows that the steep decline in non-trade occupations, mainly traineeships, continues to decline and will plateau at a new level well below what was recorded before 2012.

Chart 10: Queensland apprentices – Commencements, Cancellations/ Withdrawals, Completions, 2014 – September 2018



Source: Apprentices and trainees 2018, September quarter, NCVER

When viewed over the past four years, the data shows some concerning trends. In Queensland, the numbers in training in trade occupations have declined by 15.5 per cent since 2014, and in non-trade occupations by 23.3 per cent. The numbers completing an apprenticeship/traineeship have declined by 42.8 per cent for trade occupations since 2014, and 32.7 per cent for non-trade occupations.

There is an urgent need to stimulate and support this vital training pathway and address the worsening completion rate. In the Ai Group survey of workforce development needs in 2018, 35 per cent of all employers intended to increase apprentices and trainee numbers over the next twelve months, up from 22 per cent in 2016.[15]

Most employers that take on apprentices operate small businesses. These employers need to be supported to help their apprentices complete. They need help to improve their recruitment practices and help to improve how they manage their apprentice after they commence, including understanding their obligations.

Professional development workshops for apprentice supervisors have been trialled at different times with positive results; however, they have not always reached those

[15] Workforce Development Needs Survey, Ai Group, 2018.

employers who need help the most. Encouragement for employers, especially new employers, to participate in a workshops should be considered.

Group training organisations (GTOs) can assist small businesses employ and support apprentices. Collectively, group training is the largest employer of apprentices in Australia, employing almost 25,000 apprentices and trainees across the country and more than 4,000 in Queensland. GTOs have been operating for nearly 40 years and provide important support for SMEs. GTOs will rotate apprentices to different work sites so they gain broad exposure to skills that smaller companies can't offer, and they can guarantee continuity of employment for apprentices and trainees when companies operating on short-term projects cannot. GTOs also provide mentoring support and specialise in helping disadvantaged people into apprenticeships and traineeships.

Recommendations:

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.

Encourage new employers of apprentices or employers seeking to lift their apprentice completion rates to participate in a workshop for apprentice supervisors.

Provide targeted funding of GTOs to support their activities to help disadvantaged groups, and to help SMEs participate in the apprenticeship system, similar to the previous Joint Group Training Program.

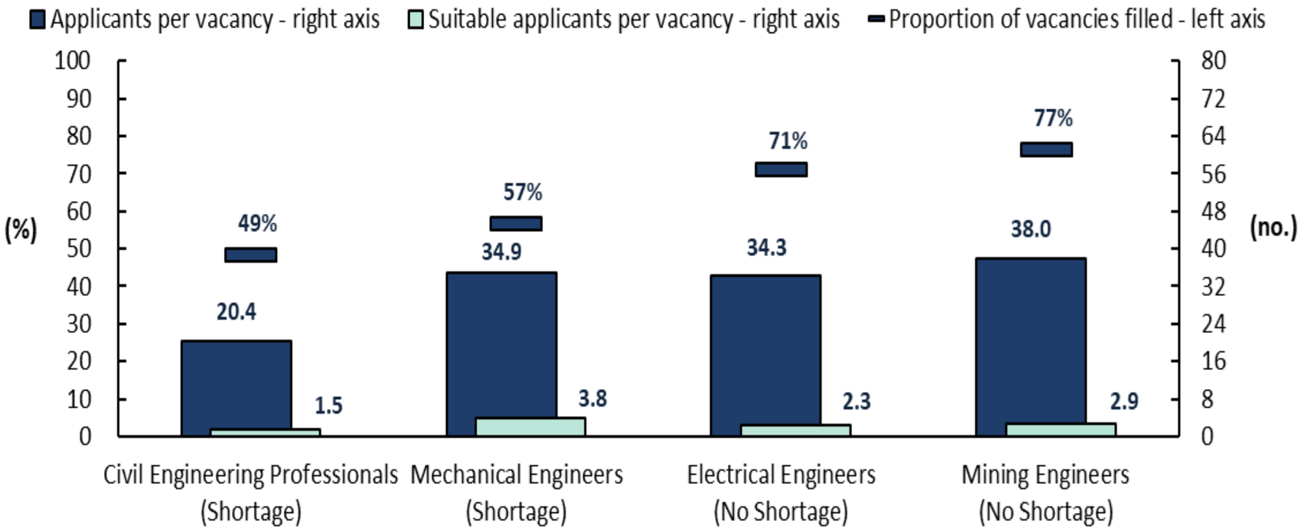
10.5 Developing Science, Technology, Engineering and Maths (STEM) capabilities

Ai Group's long-standing concerns about the state of STEM skills and the impact on the economy are well documented.[16] A major focus needs to be on growing the STEM workforce, especially in areas of the economy where there are critical skills shortages.

To illustrate current challenges in the engineering profession, a STEM field, only 59 per cent of job vacancies in engineering were filled in 2017-18, with over 80 per cent of candidates considered not suitably qualified for advertised positions. Employers cited a lack of experience and employability skills as a challenge to filling vacancies.[17]

[16] Progressing STEM Skills in Australia, Australian Industry Group, February 2015.
[17] Australian Government, Engineering Professions Australia 2017-18, Department of Jobs and Small Business https://docs.jobs.gov.au/documents/engineering-professions-australia

Chart 11: Proportion of vacancies filled, average number of applicants, suitable applicants per vacancy, and national rating, Engineering Professions, Australia, 2017-18



Source: Australian Government, Engineering Professions Australia 2017-18, Department of Jobs and Small Business.

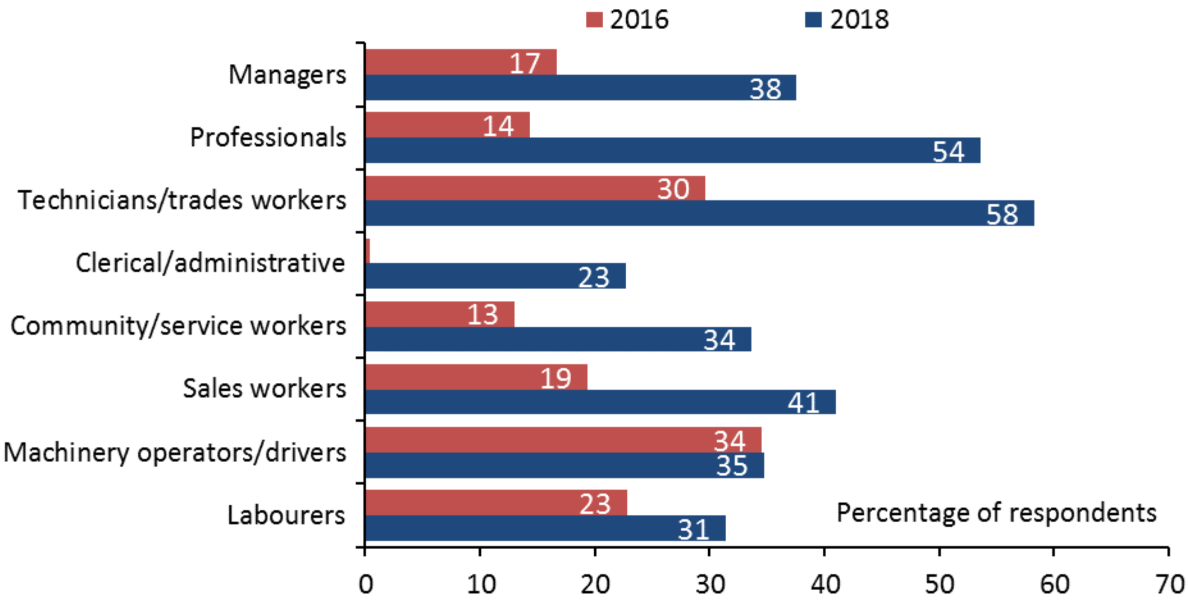
Skilled technicians are the most pressing area of shortage for companies rather than graduates, as the most recent Ai Group workforce development survey reveals. The latest data indicates that 58 per cent of employers anticipated difficulties recruiting technicians and trade workers with STEM skills.

There is ongoing concern about the state of STEM education in schools given the declining participation rates and student achievement in maths and science, and the way STEM subjects are integrated into the curriculum and are delivered by teachers, many of whom lack proficiency and qualifications in those subject areas.

Some progress has taken place in the school sector, through the STEM Partnership Forum, as recommended in the Education Council's National STEM School Education Strategy.[18] The Ai Group contributed to the Forum through its research project *Strengthening School-Industry STEM Skills Partnerships*, which produced a number of models and recommendations that need to be promoted to encourage further participation.[19] The Forum's April 2018 final report, *Optimising STEM Industry-School Partnerships*, includes a number of valuable recommendations involving industry partnerships.[20]

[18] National STEM School Education Strategy, Education Council, December 2015.
[19] Ai Group, Strengthening School – Industry STEM Skills Partnerships, Final Project Report, 2017.
[20] Optimising STEM Industry-School Partnerships: Inspiring Australia's Next Generation, STEM Partnerships Forum, Education Council, April 2018.

Chart 12: Employers reporting difficulties recruiting people with STEM skills, 2018



Source: Australian Industry Group, Workforce Development Needs Survey, 2018

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.

There remains a need for an overarching national STEM skills strategy. The Queensland government can take a leadership role, in the development of this strategy in conjunction with industry. 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.

Initiatives to enhance the VET sector's role in filling STEM skills gaps, including high level apprenticeships and traineeships such as Ai Group's Industry 4.0 Higher Apprenticeships Program should be prioritised for funding by government.

Recommendations:

Support the development of a national STEM skills strategy in conjunction with industry to expand the STEM-qualified workforce.

Implement measures to increase the level of STEM participation in the VET sector, especially through apprenticeships and traineeships relevant to STEM skills.

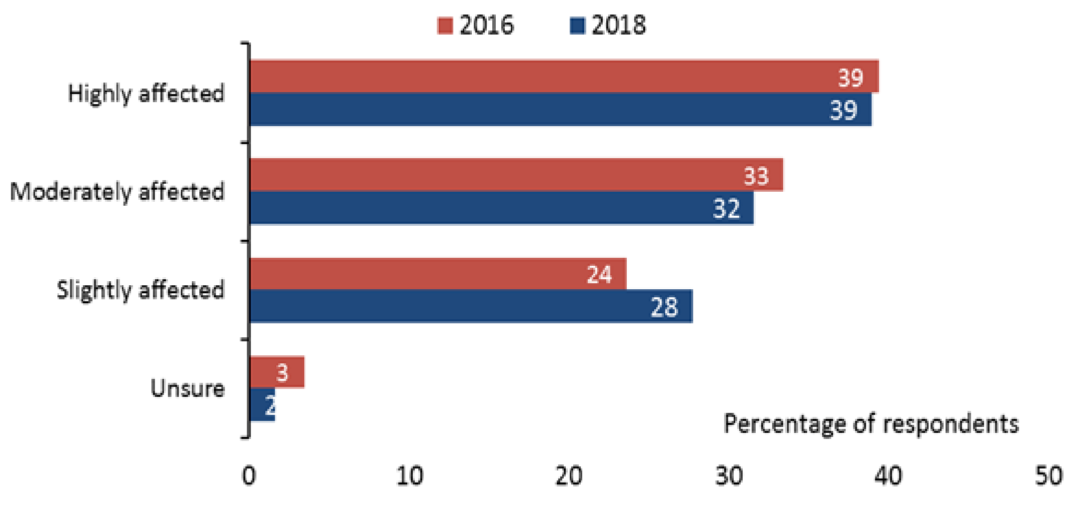
Develop specific measures to expand the STEM workforce in SMEs through cluster/network models.

10.6 Developing Australia's workplace literacy and numeracy capabilities

Poor literacy and numeracy have 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.

Ai Group research reveals that low levels of workplace literacy and numeracy are a major concern to employers. The most recent survey indicates that 99 per cent of employers reported that low levels of literacy and numeracy have an impact on their business.[21]

Chart 13: Businesses affected by low levels of language, literacy and numeracy



Source: Australian Industry Group, Workforce Development Needs Survey, 2018

The OECD's most recent survey of adult skills, measuring literacy and numeracy in Australia's adult population, found that 12.6 per cent of adults score at the lowest levels in literacy and 20.1 per cent score low in numeracy.[22] An individual with poorly developed literacy and numeracy skills is at greater risk of disengaging from learning and fully participating in the workforce.

[21] Ai Group, Skilling: a National Imperative, 2018
[22] Education GPS, OECD, 11/14/2018, 3:06:42 PM http://gpseducation.oecd.org

The Ai Group conducted a return on investment to employers participating in a literacy and numeracy support program with very positive results.[23] 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 need to be programs 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 by using 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.[24] This combination of measures could be implemented through a larger pilot program in concert with industry.

It is encouraging that the recent review of the Foundation Skills Training Package has recognised that literacy and numeracy now involves digital literacy skills, with relevant units in the process of being added to the Package.

Recommendations:

A foundation skills strategy needs to be developed with a sufficient budget to support workforce literacy and numeracy programs.

The Queensland Government should commence discussions with industry and other appropriate stakeholders about the development of a new workplace LLN program.

10.7 Towards a better-connected tertiary education system

Australia is experiencing a significant movement towards universal participation in tertiary education, which includes both the higher education and VET sector. School completion, while necessary, is no longer considered sufficient for effective participation in the economy and society. Between 2005 and 2015 the proportion of the workforce holding a bachelor degree or higher qualification increased from 23 to 31 per cent while the holding of VET qualifications increased from 26 to 32 per cent. In the same decade to 2015 the

[23] Investing in Workforce Literacy Pays, Australian Industry Group, August 2015.
[24] Foundation Skills Pilot Program Success, Australian Industry Group, July 2017.

proportion of the workforce without post-school qualifications fell from 42 to 32 per cent.[25] Tertiary education is vitally important for the development of the highly skilled workforce the economy needs.

In recent years there has been a significant shift by young people into higher education rather than VET. Participation has been growing significantly in higher education for both the 15 – 19 year-old students and the 20 – 24 years of age students, especially since 2008. In the VET sector both of these age cohorts grew until around 2012, but they have been in decline since thus creating a significant imbalance.[26] This development of a binary system is characterised by seriously unbalanced participation between the sectors. While recognising the distinct features of each sector, more needs to be done to make overall provision more coherent and connected.

There is a lack of overall policy direction and governance of the system. Consideration needs to be given to the formation of a central and independent coordinating agency to provide common approaches across the sectors and levels of government. For policy coherence an independent co-ordinating agency is required to engage in consistent, continuous and longer-term strategy development led by a board comprised of representatives from key industry and societal sectors to ensure the articulation of views needed for the effective development and monitoring of a national tertiary education strategy.

An independent co-ordinating agency and any resulting national strategy requires the inclusion of both higher and vocational education. The Queensland Government can help promote the establishment of such an agency.

While more effective methods of governance require more than addressing funding levels, a more equitable funding strategy needs to be developed. The VET sector is in need of immediate attention in this area. In this context, demand-driven funding models need to be retained but improved to be more equitable than current practice.

It is essential to address the decline in participation and funding in the VET sector and to restore a better balance between higher education and VET. There have been some indications that there may well be an oversupply of some higher education graduates in some fields. The demand-driven funding system has been more responsive to the labour market than previous mechanisms. Skills shortages for professional occupations have been reduced to only five occupations. On the other hand, there are thirty technical and trade occupations currently in skill shortage, which could be addressed by a re-invigorated VET system.[27]

[25] Noonan P., A new system for financing Australian tertiary education, Mitchell Institute, September 2016.
[26] Noonan P., A new system for financing Australian tertiary education, Mitchell Institute, September 2016.
[27] Norton A., To fix higher education we also need to fix vocational education, The Conversation, September 5, 2018.

A further issue concerns the current situation in regard to student loans schemes. There are inconsistencies in eligibility criteria for a student loan across the two sectors. All undergraduate students at Australian public universities have access to stable Commonwealth subsidies and HELP. In the VET sector, students undertaking advanced diplomas may or may not have access to an often variable State subsidy or VET student loan. Similarly, VET students in Certificate courses face upfront fees and cannot access the VET Student Loans program. The different levels of public subsidy and access to student loans programs have made accessing higher education loans more attractive.[28] The current situation concerning student loans is discriminatory and unacceptable. A way needs to be found to introduce a loans scheme with common characteristics across the sectors, initially for diploma level courses and above.

Recommendations:
Promote the establishment of a national independent coordinating agency to provide overall policy coherence for tertiary education.

Review the Queensland Government's funding of the VET sector to help establish greater parity with funding for higher education.

10.8 Addressing youth unemployment

There are many barriers to employment for young people. Lack of experience and work-readiness are commonly cited examples. Equipping individuals with the right skills that enable them to more fully participate in the workforce and understand the dignity of work can be achieved by keeping young people engaged in learning and providing alternative pathways to employment and further education.

Australia's youth unemployment trend rate of 11.3 per cent is more than double the overall national unemployment trend rate of 5.1 per cent.[29] In Queensland, the youth unemployment rate is slightly higher at 12.8 per cent.[30] While youth employment rates have marginally improved in recent years, particularly over 2018, there is evidence of a growing trend in part-time employment and a corresponding decrease in full-time employment among young people.

More young people are now reporting a desire to work more hours, which is resulting in an increase in the youth trend underemployment rate, currently at 19.7 per cent. This coupled with the unemployment rate represents a significant growth in the underutilisation rate (at 28.7 per cent) of younger persons in the economy, where young women are

[28] Croucher G., Noonan P. and Chew J.: Funding an expanded tertiary system: designing a coherent financing architecture, in Visions for Australian Tertiary Education, Melbourne CSHE, February 2017.
[29] Australian Bureau of Statistics, Labour Force, Australia, (cat. no. 6202.0), January 2019.
[30] Queensland Government Statistician's Office, Regional youth unemployment, January 2019,

disproportionately affected more than young men (30.3 per cent and 27.8 per cent respectively).

Young people not engaged in employment, education or training (NEET) face the prospect of a lifetime of social and economic disengagement. One in five young Australians between the age of 16 and 24 years spend more than twelve months not in employment, education or training, and longer periods are more frequent for those with lower educational attainment, young women and Indigenous youth.[31] The Australian Bureau of Statistics' 2018 *Survey of Education and Work* reveals that there are presently over 286,000 persons aged 15 to 24 years not engaged in study or employment.[32]

A 2015 PISA survey of students' sense of belonging in school found that Australian students have shown declining results over time, and rate lower when compared to the OECD average.[33] These feelings of disconnectedness can influence a student's ambition to remain at school or continue to further studies.

With each additional year/level of education not only do average wage earnings increase, but more importantly, the prospect of securing employment increases too. In 2016, 80 per cent of those with a Bachelor degree or higher and 75 per cent with an Advanced Diploma or Diploma had secured work compared to 67 per cent and 44 per cent respectively for those who completed only Year 12 or 11 only.[34]

In light of this data, it is critically important to keep young people engaged in learning for as long as possible, because for every additional year of education completed there is a smaller likelihood that a young person will fall into the desperate situation of experiencing prolonged periods of unemployment.

The VET system plays an important role in providing vocational and career pathways to further study and employment, through programs like VET in Schools and apprenticeships and traineeships, particularly for young people most at risk of disengagement from school. The attraction to vocational education and training, and in particular apprenticeships and traineeships has been declining among young people.[35] Year 13, for example, reports that 56 per cent of students still do not consider an apprenticeship when leaving school.[36]

There is concern that careers teachers do not adequately understand or promote the opportunities in the VET sector. It is important for those providing careers advice to be

[31] OECD (2016), *Investing in Youth: Australia, Investing in Youth*, OECD Publishing, Paris, p.20.
[32] Australian Bureau of Statistics, 6227.0 - Education and Work, Australia, May 2018.
[33] ACER, *PISA Australia in Focus Number 1: Sense of belonging at school*, 2018
[34] Lamb, S. and Huo, S. *Counting the costs of lost opportunity in Australian education*. Mitchell Institute report No. 02/2017. Mitchell Institute, Melbourne
[35] NCVER (2018), Apprentices and trainees https://www.ncver.edu.au/research-and-statistics/collection/apprentices-and-trainees-collection
[36] Year 13 (2018), *After the ATAR II: Understanding How Gen Z Make Decisions About Their Future*, p.13

aware of industry's emerging skill needs including an increasing requirement for higher level skills at the trades and para professional levels.

In striving to make school more relevant to students who are disengaging, or to work with those young unemployed who have disengaged, workplace experiences must be at the centre of school-based and job support programs. Through practical activities such work-based experiences can be effective for learners in developing their industry awareness; understanding the relevance to them; allowing learners to feel valued and make connections; and supporting them to build their skills and capabilities. Closer partnerships between industry, the school sector and job centres will enable more of this activity.

Managing the transition from school to a life beyond can be a difficult path for many young people to navigate without the right support and guidance. Sixty-eight per cent of young Australians say that school does not prepare them for the real world.[37] It is essential that adequate support is applied while in school and is readily available at the point of and beyond transition from school, with timely follow-up and after-care services provided by schools.

It is important to equip those at-risk of disengagement with the necessary life skills to survive and thrive in the new economy. Developing capabilities around interpersonal, creative and decision-making tasks will be beneficial in finding employment in jobs where routine and manual tasks are increasingly performed by machines.[38] The OECD advocates the need for school curricula to prioritise the development of critical thinking, collaborative skills, and personal attributes of mindfulness, curiosity, courage and resilience.[39]

Recommendations:

Increase investment in programs that prepare students for work and transition to the post-compulsory years while at school.

Fund programs to help young people deal with health and wellbeing challenges faced when moving out of the school environment.

Fund transition programs for unemployed young people that increase involvement by industry through work-based activities.

[37] Year 13 (2018), After the ATAR II: Understanding How Gen Z Make Decisions About Their Future, p.30
[38] AlphaBeta, *Mapping Australian workforce change*, 2018
[39] Schleicher, A., *Educating for the 21st Century*, 2015