

Propelling city growth

Securing the missing benefits of Australia's infrastructure boom

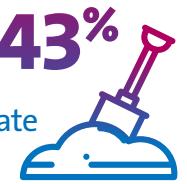
The scale of Australia's infrastructure boom is unprecedented: never before has the country sought to deliver so many complex infrastructure projects in such a short space of time. However, we believe developers and contractors won't be able to deliver many of these projects either on time or within existing budgets. Governments have earmarked A\$288 billion for the sector over the next 10 years, yet this may prove to be significantly less than what is required, and unless urgent changes are made, many of the expected benefits of these large projects could be lost.

Are more concerned about the risks facing the sector than they were five years ago



There's little doubt that infrastructure is required: the country's population is predicted to grow by 11.8 million people in the next 30 years¹ – the equivalent of adding a city the size of Canberra every year. The A\$288 billion will help fund megaprojects such as Sydney Metro West, Western Parkland City and Aerotropolis, Melbourne's North East Link and the Suburban Rail Loop. This investment in infrastructure has the potential to unlock widespread economic and social benefits.

Are concerned about the industry's ability to deliver the projects that are in the immediate project pipeline



And yet, executives within the industry are worried. According to our latest research, three in four (77%) are more concerned about the risks facing the sector than they were five years ago. Almost half (43%) are seriously concerned about the industry's ability to deliver the projects that are in the immediate pipeline.



of future projects in the pipeline are transport

Why is this? Part of the issue is the number and concentration of transport projects being delivered: more than 90% of the projects in Infrastructure Australia's priority list are transport related. And, geographically, 56% of projects are concentrated in central and suburban New South Wales and Victoria². This is contributing to two major issues: an acute skills shortage that's reaching crisis point, and escalating cost of materials that are putting unsustainable pressure on company performance.

As we explore in this paper, governments must take urgent action and explore a number of critical short- and medium-term initiatives to improve the situation and secure our economic prosperity.



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BENEFITS VANISHING BENEATH THE PRESSURE

Contractors and developers are suffering from an acute skills shortage. The country simply doesn't have the skills it needs to deliver on its infrastructure ambitions. At present, the industry employs some 410,000 people³, but the number of open vacancies indicates that another 19,300⁴ are needed – enough to fill 18 of Melbourne's new High Capacity Metro Trains⁵.

In 2018, the proportion of filled construction vacancies fell to historically low levels⁶. Last year alone, four in ten firms couldn't find the applicants they wanted⁷. Eight of the nine construction trades were considered to be in national shortage in 2018 – a jump from just one in nine only five years before⁸.

And this issue is exacerbated by the concentration of projects in central and suburban Melbourne and Sydney. As the local demand for skills increases, so can costs.

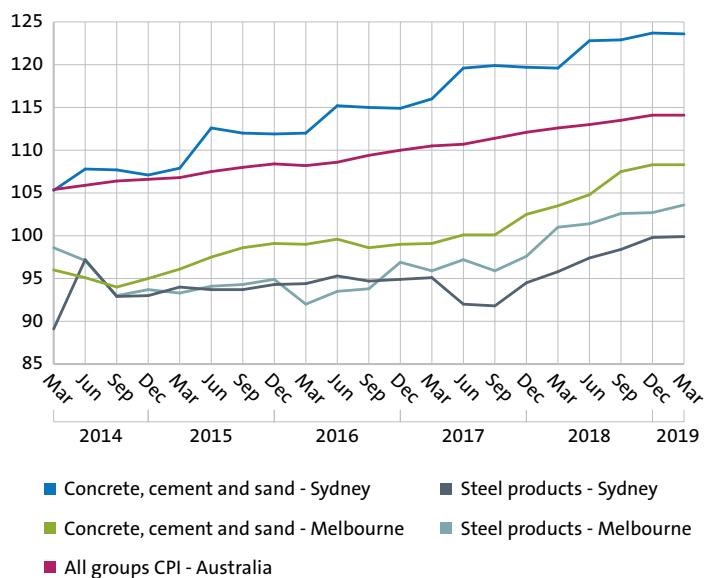
It's worth noting the problem here is not in finding labourers; it's in finding *skilled workers*. Data from the National Centre for Vocational Education Research indicates that just 10,995 apprentices and trainees in construction completed their education in 2018 – a 13% drop from 2014⁹. At the same time, the Electrical Trades Union of Australia notes a 45% decline in apprenticeships and training since 2014¹⁰.

The number of apprentices and trainees in construction is clearly decreasing: we produce too few trainees, and the effect is cumulative. Those trainees are crucial to building the future talent pipeline, and their shortage has a knock-on effect on the infrastructure industry as a whole.

The past five years have also seen a significant increase in the cost of raw materials, with some increasing by as much as 20%. There has been a worrying rise in the cost of concrete, cement, sand and steel – shown in Figure 1 – as well as bricks.

In parallel with the skills shortage, the escalating cost of raw materials isn't just cutting into construction companies' profits, but is also having a major impact on the viability of projects. If measures are not taken to tackle these two issues, the forecast return on any long-term infrastructure investment will need to be revised significantly downward.

Figure 1: Prices of raw materials (weighted index values, March 2014-19)



² Allens calculation based on Infrastructure Partnerships Australia data, 2019
³ NCVER 2019, Australian vocational education and training statistics: Data slicer: Apprentices and trainees, December 2018, NCVER, Adelaide
⁴ Australian Bureau of Statistics, Feb 2019
⁵ <https://transport.vic.gov.au/our-transport-future/our-projects/high-capacity-metro-trains>
⁶ Department of Jobs and Small Business, Construction Trades report, Australia, November 2018
⁷ Department of Jobs and Small Business, Construction Trades report, Australia, November 2018
⁸ Department of Jobs and Small Business, Construction Trades report, Australia, November 2018

⁹ NCVER 2019, Australian vocational education and training statistics: Data slicer: Apprentices and trainees, December 2018, NCVER, Adelaide
¹⁰ The Electrical Trades Union of Australia, by email

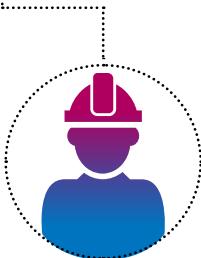
INDUSTRY FEARS ITS ABILITY TO DELIVER

Infrastructure leaders in Australia are clearly worried. According to our research, the industry has genuine concerns about the feasibility of delivering the project pipeline over the next few years. As a direct result, the benefits of Australia's infrastructure investment will become progressively harder to attain.

In our survey, the clear majority (64%) of respondents confirm that the project pipeline is stronger than it was five years ago, but almost half (43%) also say their biggest concern in the next five years is their ability to deliver against that pipeline.

Asked which factors contribute most strongly to project delays and cost blowouts, respondents blame poorly managed project-specific risks (26%), design and development delays (20%), and changes to project scope (14%).

These issues are creating greater volatility in project outcomes and are compounding the challenges created by the talent crisis and the rising cost of raw materials. The implication is clear: infrastructure businesses have serious concerns about their ability to complete the projects that underpin the liveability of our cities and our quality of life. If we keep going down this path, much of the upside from these investments will be lost.



In 2018, the proportion of filled construction vacancies fell to historically low levels



Government must now take urgent and coordinated action and throw its weight behind a range of short-, medium- and long-term strategies to achieve its vision for the future of Australia's infrastructure

MAPPING A NEW WAY FORWARD

Given the project volatility outlined in this paper, the industry needs greater stewardship and leadership. There are several actions that governments can take in the short- and medium-term to make a substantial improvement.

WAYS TO GET IMMEDIATE RESULTS

1 Rethink the traditional approach to risk

Our research suggests the single most effective way to address industry challenges – as indicated by more than one in three respondents (36%) – would be to increase risk-sharing between industry and governments on major projects. Rather than the one-size-fits-all method that sees the industry carrying the majority of the risk, governments should adapt their approach to the specific complexities and investment challenges of any given project.

2 Champion productive contract management

Respondents to our survey suggest that a less adversarial approach to contract management would be a quick and achievable way to improve project performance. A good example of an effective policy is New South Wales's 10-point plan¹¹, which sets out a vision for 'healthy ongoing competition between a capable field of construction firms, sub-contractors and the industry supply chain'.

3 Rebalance the pipeline towards schools and hospitals

Social infrastructure, such as schools and hospitals, has been largely forgotten, but our respondents say it's the single biggest thing that's underrepresented in the pipeline. When we take demographic forecasts into account, it's clear Australia must do more in this area. These projects notably carry substantially less risk of cost blowouts and delays than many projects currently in the pipeline, and we need more of them to realise the maximum benefit for the country.

¹¹ <http://www.infrastructure.nsw.gov.au/media/1649/10-point-commitment-to-the-construction-industry-final-002.pdf>

MEDIUM AND LONGER-TERM OPPORTUNITIES

1 Invite new entrants into the labour market

Improving the labour market must be a core ambition, but it won't happen overnight. What the industry needs is a significant, prolonged commitment, and we believe there are two initiatives that governments should consider. First, measures that enable the existing labour force to move more easily from one project to another, which call for better project scheduling on the local level. Second, a review of funding levels for vocational education and training that ensures investment is more closely calibrated with the needs of the economy.

2 More smaller projects, spread across major cities and regions

Federal Government should assume a clearer leadership role in allocating money to state governments and helping to prioritise projects across the country. This would reduce the risk of unsustainable project concentration, which exacerbates key skills and materials-related challenges.

A bipartisan and depoliticised approach to the allocation of federal funding to State governments is required alongside a commitment to prioritise projects in a way that drives sustainable economic and social benefits for the community and safeguards the value of the nation's investment in public infrastructure across generations.

In addition, balance needs to be restored to the pipeline by introducing more smaller projects. For example, more projects with a capital cost in the A\$100–400 million range, such as hospital upgrades and regional health projects. This will reduce bid costs and delivery timelines, and will allow smaller builders and sponsors to assist in delivering much-needed infrastructure in our cities and regions.

3 Invest in complementary projects

Governments should increase the number of projects that deliver environmental and social outcomes for communities and prioritise creating attractive and liveable places and spaces. The need that actually exists from a social and environmental perspective is not necessarily being met by this over focus on transport projects, if we were balancing the economic and social objectives we would see more mix in our pipeline.

CONCLUSION: BECOMING MORE ALERT TO THE CRISIS

Governments infrastructure ambitions are to be welcomed. Strategic investment in transport networks, balanced by the creation of essential social and community infrastructure, is the key to economic growth and enhanced liveability in Australia's rapidly growing cities.

Yet the infrastructure sector also faces issues governments can't ignore. Left unchecked, the challenges outlined in this paper have the potential to undermine many of the benefits that could otherwise be achieved through investment. Putting aside A\$288 billion is an impressive commitment, but that's the easy part. In our view, government must now take urgent and coordinated action and throw its weight behind a range of short-, medium- and long-term strategies to achieve its vision for the future of Australia's infrastructure.

The Allens infrastructure leaders survey (July 2019) includes responses from 61 senior industry leaders drawn from 33 developers, contractors and financiers operating in Australia. The survey asked a series of questions to understand their priorities, biggest challenges and possible solutions.

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