

Australian Constructors Association

Submission to the Productivity Commission 2022



AUSTRALIAN
CONSTRUCTORS
ASSOCIATION

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Introduction

Overview of ACA

Established in 1994, the Australian Constructors Association (ACA) is a trusted voice for the construction industry. We are the only representative body covering the three key sectors of the industry—vertical, horizontal and services. Collectively, our members construct and service over 90 per cent of the value of major infrastructure projects built in Australia.

Construction sector

The Australian construction industry is integral to the economy. It is the third largest industry in the country, employing 1 in 10 people and contributing almost 8 per cent of GDP. The industry is being called upon to rebuild the Australian economy post-COVID, as every \$1 spent on construction contributes \$3 to the wider economy.

However, productivity growth in the construction industry over the last 30 years lags other industries by 25 per cent and it is the second worst performing

industry in terms of digital innovation, after agriculture and hunting. In 2020, ACA commissioned a report by BIS Oxford Economics (**Appendix 1**) which concluded the opportunity cost (in terms of foregone construction and broader economic output, as a result of the industry's poor multifactor productivity performance) could be valued at \$35 billion for the 2019/20 year alone, with impacts on the broader economy likely to be higher.

In addition, the Australian construction industry has very low diversity (only 12 per cent of its workforce are female and that figure drops to around 2 per cent for onsite roles), mental unwellness (twice the national average of suicide) and is facing significant pressures due to recent substantial inflation of materials and labour combined with slim profit margins.

There are substantial benefits for both the construction industry, its workforce and the broader economy in improving sector productivity. If we can even halve the gap in productivity with other sectors, it would result in a \$15 billion opportunity.



Challenges

Procurement

Construction businesses spend substantial amounts of time and money bidding for projects in multi-tenderer processes. These processes are often lengthy, tying up bid teams for months when only one team will win the project. While some clients (asset owners) provide for reimbursement of a portion of bid costs, the process amounts to wasted effort and resources for no material benefit other than to give the illusion that a client is obtaining value for money.

Inability to rely on information is also an issue. This is where the client has provided information in the tender documents, for example geotechnical information obtained from a geotechnical engineer, but requires tenderers to acknowledge they do not rely on that information and will undertake their own investigations. ACA has published a joint paper with Consult Australia *Partnership for Change: Reliance Information* in relation to this issue (**Appendix 2**). As set out in that paper:

□ □ The accuracy of reliance information is essential to avoid significant impacts on the tendered cost, the project program and ultimately the quality of the project.

□ □ Tenderers are routinely required to assume risks for the accuracy of reliance information provided by clients, with no opportunity for relief where the information is inaccurate. Tenderers (both contractors and consultants) are often provided with insufficient time to independently verify reliance information during the tender period, and this verification is also an unnecessary productivity drain for all parties.

The amount of information required from tenderers in procurement is also problematic. For example, tenderers for road projects are often requested to draft traffic management plans despite being prequalified and known to be capable of producing such plans. These plans require hundreds of hours to produce and should not be necessary or, as a minimum, only made a requirement for the preferred tenderer.

Contracts

There are a number of issues involving the contract that impact productivity, including:

- » Form: a lack of standard contract templates results in additional resources required to bid for the project, including legal and commercial reviews of bespoke terms.
- » Risk allocation: arguably one of the biggest issues impacting the sector, inappropriate risk allocations whereby all or most risk is passed to the head contractor (and then onto the supply network). The mantra of ‘the party best able to manage the risk should bear the risk’ is premised on the false notion that being able to manage a risk, for example by having the expertise and site presence, equates to being able to bear the cost of the risk.

Inappropriate risk allocations impact productivity in a number of ways including:

- time and resources wasted on disputes and claims to avoid substantial losses (for example see the 2018 survey by PlanGrid and FMI Corporation which found that construction workers lose almost two full working days each week dealing with conflict, rework and other avoidable issues)
- inhibits open and transparent sharing of information, which is a necessary precursor for digital engineering
- stress and other negative impacts on wellbeing of the project workforce.

- » Payment terms (cashflow): contractors are expected to essentially fund the construction of assets by being paid weeks or months following the expenditure of capital to secure labour and materials. At the least, a neutral cashflow should be provided, and ideally a positive cashflow, which will positively impact cashflow and productivity through the supply network.

The ACA and Consult Australia paper *Partnership for Change: Model Client* (Appendix 3) is relevant to some of the above issues. The paper calls on government clients to commit to the eight model client behaviours, developed to drive productivity.

Prescription

Prescriptive specifications are commonly incorporated into construction contracts which restricts contractors from innovating and providing new solutions. Outcomes-based specifications, however, promote innovative solutions including those supporting environmentally sustainable outcomes.


Tenders also commonly have prescriptive requirements for project team members, for example a set number of years' experience in the same type of construction and set qualifications (often engineering). This inhibits the development of agile and diverse project teams, which in turn benefit productivity outcomes by diversity of thought (see 'Culture' section below for more information on the productivity benefits of a diverse workplace).

Utilities

The lack of availability and accuracy of information on utility location precludes the development of appropriate mitigation strategies and results in unplanned delays, additional costs and rework. Contractors find themselves at the mercy of third-party utility providers to be able to progress often critical elements of project scope.

Utility providers' drivers are typically not aligned with the project or other stakeholders, leading to a lack of timeliness in response and requests for enhancements of infrastructure beyond simple replacement. This results in additional time, allocation of resources and cost to resolve.

[Victoria's Major Road Projects Big Build website](#) acknowledges this by stating in relation to relocation of utilities for road projects:

 If it's not done right, it's costly and causes impacts to road users and the local community.

Culture

The Construction Industry Culture Taskforce, of which the ACA is a founding member, commissioned research on the economic impact of not addressing the cultural problems faced by the industry. The resultant Cost of Doing Nothing Report (Appendix 4), available at www.cultureinconstruction.com.au, found a cost impact of approximately \$8 billion annually to the Australian economy if the cultural issues within the construction industry are not addressed.

This cost includes lost wellbeing from work-related injuries, illnesses and fatalities, estimated to be at least \$6.1 billion in the financial year 2017-18. Other impacts on productivity occur from a lack of diversity and long work hours/fatigue.





The three elements of diversity, worker time for life and wellbeing have been identified through independent research as all needing to be addressed to change and improve the industry's culture. See further RMIT's literature review report *Triple Wins: Work Hour Cultures for Health, Safety and Gender Equality in Construction 2021* (Appendix 5), available at www.cultureinconstruction.com.au.

The productivity benefits of diversity in the workplace are well documented. See for example *The Mix that Matters: Innovation Through Diversity* 2017 which found a clear relationship between the diversity of companies' management teams and revenues from innovative products and services. The Australian research paper Luanglath, Nalongded & Ali, Muhammad & Mohannak, Kavooos (2019) *Top management team gender diversity and productivity: The role of board gender diversity* [Equality, Diversity and Inclusion: An International Journal] also found a positive effect of 'top management team' gender diversity on employee productivity.

Another factor impacting productivity is a lack of mutual trust and understanding between the participants in project delivery. Collaborative contracting, enterprise approaches and education can aid in promoting better relationships among project participants.

The industry is also renowned for its lack of sharing of lessons learned and best practice. This is often attributed to risk allocations and fear of sharing suboptimal outcomes. Yet, where these are shared a step change in productivity can be achieved.

An example of the improvements that can be achieved from sharing learnings between projects is the Level Crossing Removal Program in Victoria (referred to in 'Case Studies' below). On this program, a collaborative contracting model and program approach encourages sharing of learnings about projects, innovation and improvements.

Another example of shared best practice is the Construction Industry Leadership Forum, established by the ACA with the governments of NSW and Victoria, and now joined by Queensland. The Forum has produced a number of published practice notes identifying principles and options for consideration in responding to common commercial issues and other challenges impacting the procurement and delivery of major infrastructure projects. The practice notes can be found at www.constructionleadership.com.au



Project governance/insurance

Large projects often get bogged down in unnecessarily complex layers of multiple design reviews. The ACA and Consult Australia have published a paper *Partnership for Change: Multiple Design Reviews* (Appendix 6). As stated in that paper:

□ □ The contractual design process has become increasingly inefficient with excessive reviews that are not enhancing project outcomes or providing value to the clients. In fact, the multiple design reviews infrequently lead to significant physical changes to design and constructed products.

A related factor is professional indemnity (PI) insurance, and the requirement for multiple project participants to procure expensive insurance products for the same project. Project insurance procured by the client including PI insurance should be considered instead.

Digital engineering

Digital tools enable productivity improvements through the life of an asset. However, expecting construction contractors to be responsible for implementing digital approaches at their own cost and initiative is not reasonable given the benefits are largely for the asset owner and over the life of the asset.

In competitive environments with slim margins where the investment in digital engineering tools is not fully realised until the operational phase, digital tools will not be fully adopted during the construction phase (when the input data is required) unless it is included (and costed) in the tender requirements.

Whole-of-life costing of assets is also a factor in achieving this, and redefining value beyond the up-front price at the tender box for the construction.

Another key aspect is data management. Effectively collecting and managing data can improve all aspects of project delivery and operation of assets. When different asset owners have different system requirements and/or no clear requirement for collection and management of data on a project, data is not utilised efficiently or effectively.

Collaborative contracting frameworks also play a role in removing barriers to open and transparent sharing of information to use digital tools more effectively.

The ACA and Consult Australia paper *Partnership for Change: Digital Technology* contains relevant discussion and recommendations (**Appendix 7**). That paper states:

It is critical that a national led and coordinated approach is taken with prioritised investment to support digital adoption along with digital capability and capacity building.

Integrated and collaborative approaches are key enablers in technology adoption and promote advancements in innovation through incentivisation schemes.

Inconsistent and over-regulation

The different Australian jurisdictions have complex and differing requirements impacting construction, including:

- » safety
- » skills
- » security of payment
- » licensing.

The lack of harmonisation and mutual recognition between jurisdictions impedes productivity and creates administrative burdens for workers and contractors operating across jurisdictions.

Automatic mutual recognition laws were introduced, however have been implemented partially by some jurisdictions and not at all by others.

Industrial relations

Outdated and inflexible workplace practices contribute to the cultural challenges and inefficiencies the sector is facing. ACA encourages any changes in industrial relations legislation be developed through a productivity lens. There is a need for the construction industry to have greater flexibility in work practices to attract and retain workers, and initiatives designed to promote flexibility should be preserved.



Solutions



Future Australian Infrastructure Rating

ACA proposes a rating initiative to publicly rate how well infrastructure projects achieve targeted outcomes. The Future Australia Infrastructure Rating (FAIR) will drive the implementation of reforms identified in the *Australian Infrastructure Plan 2021*, and deliver outcomes that improve productivity, uptake of digital tools, skills for local workers, workforce diversity and environmental sustainability.



The initiative is proposed to be implemented on federally-funded infrastructure projects, ideally incorporated into the next iteration of the National

Partnership Agreement. Key reform areas identified for implementation are to be included in the business case and projects held to account to achieve improved outcomes in these areas through the published FAIR rating.

Delivery agencies will be incentivised to select the procurement method and value assessment best suited to achieve the desired outcomes in order to attract bidders that will be keen to burnish their credentials through involvement in high scoring projects.

ACA's 2022 budget submission to the Australian Government and an overview of FAIR are included at **Appendix 8**.



National digital twin for utilities

We believe substantial productivity improvements could be made through the creation of a freely available national digital twin of utilities. This would enable asset owners and constructors to efficiently design projects based on known locations of services. This task could potentially be undertaken in partnership with Before You Dig Australia (BYDA). BYDA was created by all major utility companies to provide details on utility locations based on historical (often inaccurate) records.

In addition, federal laws should be implemented to oblige utility providers to cooperate with industry at all stages in a project's development but particularly in providing information and organising timely relocation of services where necessary.

National data standard

A national standard for data management would increase the effectiveness of data collected. For example, the Rail Industry Safety and Standards Board (RISSB) has developed a draft Australian Standard (AS7739) Digital Engineering for Rail. This document aims to provide digital engineering guidance and an overarching digital framework for successful digital engineering project implementation. A similar concept could be developed for other forms of infrastructure.

National harmonisation

Further work is needed to effectively harmonise the various regulations across the nation impacting the sector including licensing, safety, industrial relations and skills.

National standard contractual forms with fair risk allocations and standard specifications would also produce significant productivity benefits.

The Construction Industry Leadership Forum has identified contract harmonisation as a reform area that can produce benefits for both government and industry.

Enterprise approach to delivery

An enterprise approach to delivery brings together the entire construction network including asset owners, constructors, consultants and suppliers, to work in a more integrated and collaborative way. The approach is underpinned by longer term relationships and a program approach. Participants are incentivised to deliver better outcomes, and a step-change in innovation and productivity can be realised.

Whilst not suitable for all types of projects, there is significant opportunity for this model to be more widely adopted through more careful planning of projects that are able to be consolidated into programs of work.



Case Studies

THE FOLLOWING ARE EXAMPLES OF PROJECTS WITH AN ENTERPRISE MODEL OF DELIVERY:

Level Crossing Removal Project

The Level Crossing Removal Project (LXRP) was established by the Victorian Government to oversee one of the largest rail infrastructure projects in the state's history. Central to the project is the elimination of 50 level crossings across metropolitan Melbourne by 2025, in addition to other rail network upgrades such as new train stations, track duplication and train stabling yards.

The works are undertaken on a programme alliance basis by five different alliance teams who were allocated the entire forward programme of works. Each alliance must meet minimum standards of performance against key result areas to keep their allocation of work. Amongst other things, this has resulted in significantly reduced tendering time/cost, design standardisation and increased innovation, reduced indirect cost, sharing of knowledge across the alliances and increased social procurement and skills development.

The program has been so successful, an additional 35 level crossings have been slated for removal by the alliances.

Sydney Water

Under the initiative Partnering for Success (P4S), Sydney Water is one of the first organisations in Australia to implement the Principles of the [Project 13 Enterprise Delivery Model](#). The model brings together owners, partners, advisers and suppliers, working in more integrated and collaborative arrangements, underpinned by long term relationships (in this case 10 years). P4S has also adopted the New Engineering Contract (NEC) which promotes collaboration and collective risk sharing. Participating organisations are incentivised through the contract to deliver better outcomes.



Appendices

- 1 BIS Oxford Economics, The Opportunity Cost of Poor Productivity Performance in the Australian Construction Industry >
- 2 Australian Constructors Association and Consult Australia, Partnership for Change: Reliance Information, May 2022 >
- 3 Australian Constructors and Consult Australia Partnership for Change: Model Client, May 2022 >
- 4 BIS Oxford Economics The Cost of Doing Nothing Report May 2021 >
- 5 RMIT Triple Wins: Work Hour Cultures for Health, Safety and Gender Equality in Construction April 2021 >
- 6 Australian Constructors Association and Consult Australia, Partnership for Change: Multiple Design Reviews, May 2022 >
- 7 Australian Constructors Association and Consult Australia, Partnership for Change: Digital Technology, May 2022 >
- 8 Australian Constructors Association Pre-Budget Submission and overview document on the Future Australian Infrastructure Rating Initiative >



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