

Inquiry into procurement practices for government-funded infrastructure

House of Representatives Standing Committee on Infrastructure

Australian Constructors Association submission

16 July 2021



**AUSTRALIAN
CONSTRUCTORS
ASSOCIATION**

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About us

The Australian Constructors Association is the only representative body for contractors delivering vertical and horizontal construction projects, as well as undertaking infrastructure asset management (refer Figure 1). Our members construct and service the majority of major infrastructure projects built in Australia every year.

Our goal is to create a more sustainable construction industry, not just for the benefit of our members but also for the wider supply chain, asset owners and key stakeholders such as Australian taxpayers and the broader community.

The nation's third-largest industry, construction contributes \$137 billion to the economy annually, representing 7.2 per cent of Australia's total economic activity. Our industry employs 1.17 million people or 9.6 per cent of the total workforce and accounts for approximately one-third of all registered businesses.

The importance of the construction industry to the Australian economy cannot be understated. Through the design, development and delivery of essential infrastructure, we are vital to the long-term economic growth of the nation. Every \$1 spent on infrastructure boosts economic activity by nearly \$3 with beneficial flow on to the sector's supply chain and associated industries.

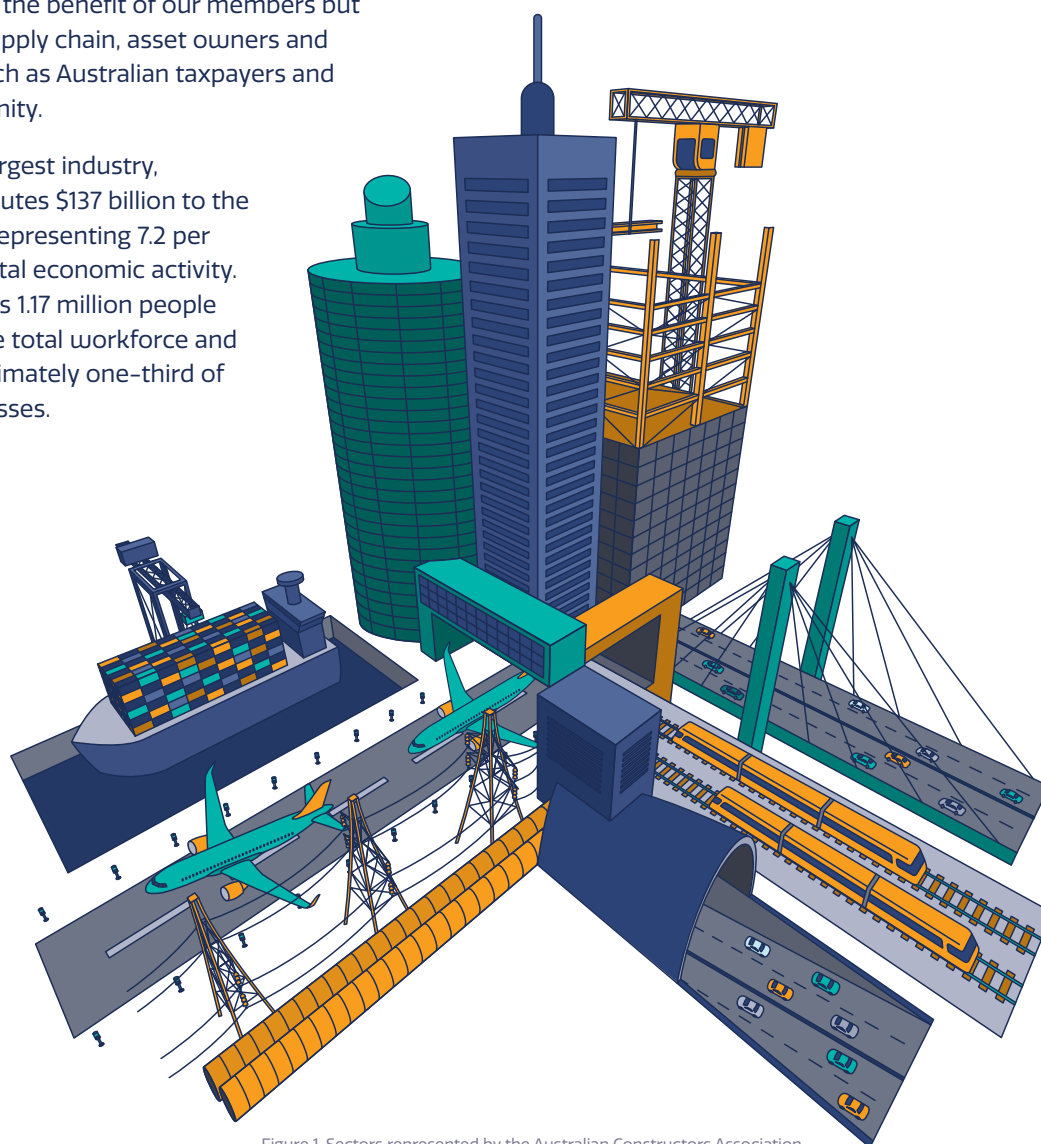


Figure 1. Sectors represented by the Australian Constructors Association

Summary

Australia is relying on the construction industry to rebuild the economy through construction of economic enabling infrastructure. However, achievement of this goal is at risk as the construction industry faces a number of structural challenges that are impacting on its very sustainability. These challenges are systemic and have built up over time, and whilst industry's challenges have not been caused by the pandemic it has certainly exacerbated them.

How projects are procured is a major contributor to the sustainability problem, but it is also a problem that can be readily addressed if all parties agreed on the need to do this. The unprecedented investment in infrastructure following the COVID-19 pandemic provides that need. Procurement reform presents an opportunity to reduce waste and improve project productivity, drive changes in industry culture and attract more workers to the industry—particularly

women. Just a halving of the productivity gap between construction and other industries would enable an extra \$15 billion of infrastructure to be built every year for the same budget.

Increased collaboration between all levels of government and industry is needed to successfully deliver the pipeline of projects. With closed international borders and long lead times to train new people, we need to focus on increasing the efficiency of our procurement and delivery processes. The current upwards cycle in planned work is a substantial challenge and long-term infrastructure demands are likely to be even higher. The only impediments to participation and growth in capability are those that apply to the market as a whole. Improvements in capability and capacity, sovereign or otherwise, are inextricably linked to improvements in industry culture and commercial frameworks (procurement).



This submission highlights a number of positive project case studies and lessons that can be learned from other portfolio areas that can guide reform. Internationally, the UK Construction Playbook is a role model for consolidating best practice procurement and delivery processes into one easy to follow document, but it is not the only national jurisdiction to place conditions on how funds for infrastructure projects should be spent. The United States of America, Canada and France are Federal jurisdictions where this happens. Closer to Australia, New Zealand has a Construction Sector Accord to create a platform for industry and government to work together to meet some of the key challenges facing the sector.

Australian Governments must seek to leverage both the economic and social benefits of infrastructure spend. This is why tender evaluation frameworks need to be developed to prioritise overall project value over lowest construction price. Further, the particular circumstances of a project should drive the selection of the procurement model not, as is currently often the case, the market conditions. The Australian Constructors Association acknowledges there are several state-based reform initiatives trying to tackle these issues; however, reform of the magnitude required not only requires greater collaboration between all levels of government but leadership from the Federal Government.

Key recommendations

The Australian Constructors Association calls on the Federal Government to:

1. Coordinate and incentivise procurement reform to accelerate adoption of best practice and address industry sustainability issues.
2. Mandate the requirement for a positive cash flow on all federally funded infrastructure projects.
3. Establish a national whole-of-government agency to develop a standard suite of contracts.
4. Mandate standard forms of contracts to be used on all federally funded projects.
5. Mandate compliance with a culture standard, preferably adopting the culture standard developed by the Construction Industry Culture Taskforce, on all federally funded projects.
6. Support the development and adoption of a framework to ensure projects are procured based on best value not lowest cost.

Industry sustainability

This inquiry comes at a crucial time. The Australian Government is relying on the construction industry to rebuild the economy through construction of economic enabling infrastructure. However, achievement of this goal is at risk as the infrastructure industry faces a number of structural challenges that are impacting on its very sustainability.

The construction industry consistently has one of the highest rates of insolvencies in Australia and productivity growth over the last 30 years has trailed other significant industries by 25 per cent. Women make up only 12 per cent of the industry's workforce and our workers are six times more likely to die from suicide than a workplace incident.

Whilst industry's challenges have not been caused by the pandemic (they are systemic and have built up over time) it has certainly exacerbated them.

The Australian Constructors Association has identified three key pillars necessary for a sustainable industry which must be strengthened if we are to address the issues identified above. These are: equitable and aligned commercial frameworks, a positive industry culture, and sufficient capability, capacity and skills to execute the projects it is called upon to deliver.



PRODUCTIVITY

Productivity growth over the last 30 years lags other industries by 25 per cent.



FINANCIAL OUTCOMES

Construction accounts for 20 per cent of all insolvencies in Australia every year.



BOOM/BUST INVESTMENT CYCLE

Lack of consistent project pipeline to provide certainty for investment.



MEGA PROJECTS

Increase in large risky projects.



DIVERSITY

Women make up 12 per cent of the workforce.



MENTAL HEALTH

Workers are 6 times more likely to die from suicide than from a workplace incident.



COVID-19

Construction called upon to rebuild the economy.

Importance of procurement

Figure 2 highlights the three pillars of a sustainable construction industry. Each pillar is interlinked—meaning improvement in industry sustainability requires improvement in all three pillars. This is an important point when considering procurement reform.



Figure 2. Pillars of a sustainable industry

Different types of procurement

The commercial frameworks in Figure 2 refer to the mechanisms used to procure and deliver projects and include common frameworks such as:

LUMP SUM

This is one of the most traditional forms of contract where a project is awarded for a fixed sum of money in respect of a defined scope of work. The owner retains the risk of any changes to design, but the contractor is generally required to include all other construction risks in their price e.g. ground conditions, existing utilities and weather regardless of how reasonable it is for the contractor to do so.

DESIGN AND CONSTRUCT (D&C)

Design and Construct contracts differ from Lump Sum contracts in that the contractor is required to develop a detailed design for the project and assume all associated risk, usually based on a concept design and defined performance objectives. The owner carries the risk of any changes to the performance objectives.

Managing Contractor (MC)

In this model, a contractor is engaged to manage a project on behalf of an owner including providing input into the design, developing a project budget, and managing the different trade packages. The owner and the Managing Contractor generally negotiate a fixed lump sum management fee, but the Managing Contractor may also receive incentive payments for achieving cost and schedule targets.

EARLY CONTRACTOR INVOLVEMENT (ECI)

The Early Contractor Involvement model, as the name suggests, seeks to involve the contractor earlier in the procurement process in order to provide constructability input into the development of the concept design and to investigate ways to mitigate project risk. Once the concept design is finalised, the contractor usually submits a tender to undertake the project on a Design and Construct basis. The owner is not obliged to accept the tender and can seek quotations from other contractors if they wish.

INCENTIVISED TARGET COST (ITC)

Under an Incentivised Target Cost contract, like the Managing Contractor model, the contractor works with the owner to develop a design and budget. As distinct from the Managing Contractor model, under the Incentivised Target Cost the contractor is responsible for direct engagement of the designer

and all trade contractors but may undertake works themselves. The contractor is reimbursed the cost of all work plus a fee. The contractor is incentivised to deliver the works under budget through being entitled to a share in any savings but similarly being accountable for a share in any over-run.

ALLIANCE

Alliance commercial frameworks seek to bind the owner, main contractor, designer and, sometimes, specialist trade contractors and consultants in one contract that aligns the interests of all parties and incentivises them to collaborate to achieve best for project outcomes. Similar to the Incentivised Target Cost model, the non-owner participants are reimbursed based on actual costs incurred plus an agreed fee that can be increased or decreased depending on how well the team perform against cost and non-cost targets. Multi-party contracts such as Alliances facilitate the open and transparent sharing of information that is required for the adoption of digital engineering tools and processes such as Building Information Modelling (BIM).

Choosing the right procurement process

The choice of commercial framework used to procure and deliver a project is important because it has a significant impact on how parties collaborate, the number of disputes between them and therefore the culture of the project and the industry as a whole. This in turn impacts on the attractiveness of the industry as a place to work.

The commercial frameworks above are generally listed according to the extent to which they facilitate collaboration between the parties and align their interests (reduce disputes) to achieve desired project outcomes. Lump Sum frameworks are considered the least collaborative and Alliance frameworks the most collaborative.



Challenges and opportunities with existing procurement practices

Historically, the choice of commercial framework (procurement model) used in Australia has largely been driven by market cycles. In times of lower demand for construction services, less collaborative models tend to be used as they provide increased opportunity to transfer risk to the contractor. Asset owners have sought to do this where possible in the belief that this will provide them with increased certainty of final cost (note many recent examples disprove this notion). Conversely, in times of higher demand, more collaborative procurement models have been chosen as these are perceived to be more favoured by industry.

The less collaborative procurement practices:

- Frame construction as zero-sum game where there can only be one winner as opposed to aligning the interests of all parties to achieve agreed project outcomes,
- Preclude innovation by not involving contractors earlier enough in the procurement process to provide constructability advice and mandating prescriptive specifications that allow little if any option to propose new materials and technologies,
- Focus on achieving lowest tender price rather than maximum project value, and
- Encourage contractors to compete on their willingness to accept and price unquantifiable risk rather than on how efficiently they can undertake the work.

How projects are procured is therefore a major contributor to industry's sustainability problem, but it is also a problem that can be readily addressed if all parties agreed on the need to do this.

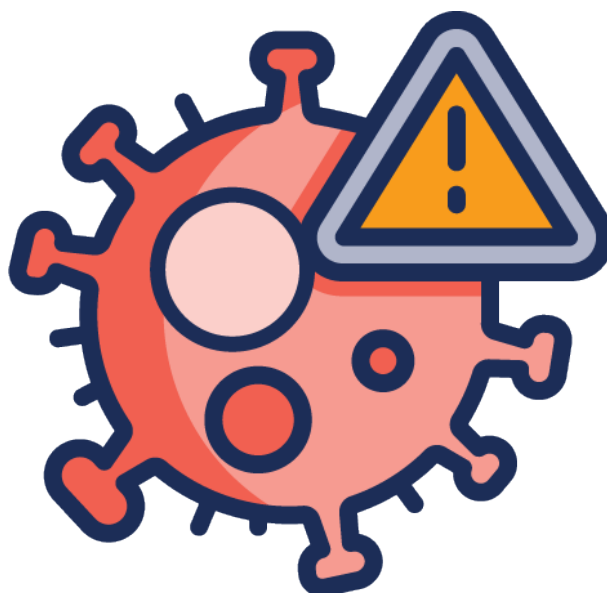
COVID-19 provides that need.

COVID-19 platform for change

Capability and capacity constraints are unlikely to be addressable through skilled migration for the foreseeable future and, given it takes over six years to train an engineer, large scale training initiatives will not substantially help either.

The main options to address skills shortages are:

- Use procurement to improve industry culture and attract back into the industry those that have left in recent years, particularly women,
- Use procurement processes to reduce waste and improve project productivity—to build more with less!



Reform opportunities

The potential opportunity from procurement reform is significant. Just halving the productivity gap between construction and other industries would enable an extra \$15 billion of infrastructure to be built every year for the same budget.

Successful reform would see:

- Procurement frameworks selected based on project specifics rather than market cycles,
- Projects awarded based on best value rather than lowest cost,
- Compliance with an industry culture standard, such as that being developed by the Construction Industry Culture Taskforce, being made a mandatory requirement of any procurement process.

Whilst there are several state-based reform initiatives trying to tackle these issues, such as the Construction Industry Leadership Forum (comprised of the Australian Constructors Association and the Victorian and NSW Governments) nationwide reform is piecemeal and lacking pace to avoid the planned pipeline of infrastructure being placed at risk.

Role of the Federal Government

Reform of the magnitude required to create a sustainable and progressive industry able to deliver the record level of committed investment in infrastructure can only be achieved through greater collaboration between all levels of government across Australia.

The Federal Government is uniquely placed to facilitate this.



Existing infrastructure pipelines and supply requirements

Over the next five years, Australia is expected to deliver a record pipeline of economic and social infrastructure, much of which will be put in place by the private sector. This investment is at risk if a sustainable industry is not in place to help plan and deliver it. Measures such as productivity, profitability, hours worked and diversity show that industry is becoming less sustainable over time. The upwards cycle in planned work is a substantial challenge, but long-term infrastructure demands are likely to be even higher.

To successfully deliver the pipeline of projects there needs to be increased collaboration between all levels of government and industry. This will not only

enable us to better identify potential skills shortages well in advance, it could help smooth resource peaks by amending project start dates or to inform training initiatives to address potential shortfalls.

In the short term, with closed international borders and long lead times to train new people, we need to focus on increasing the efficiency of our procurement and delivery processes. For example, we should put our valuable resources to work optimising designs and de-risking projects through advance works rather than tying them up at tender producing volumes of information that add little or no value.



Challenges and opportunities to enhance Australia's sovereign industry capability

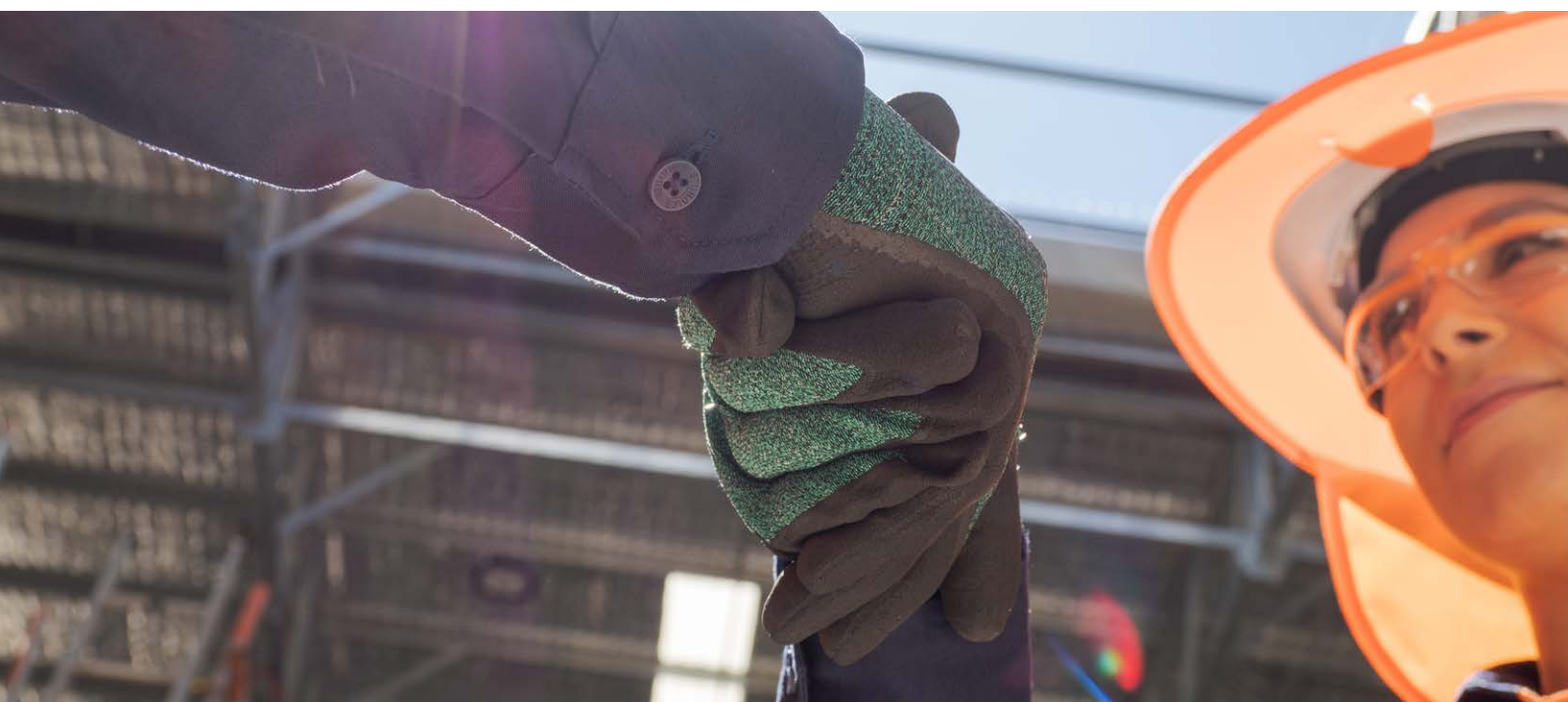
There has been considerable debate of late on the issue of ways to provide increased opportunities for Australian owned businesses. The implied hypothesis has been that there are currently not enough chances for Australian owned businesses to participate or there are barriers to participation.

Whilst it may be true that most Australian owned businesses lack the financial capacity to independently undertake mega projects (greater than \$1 billion), most international contractors are also compelled to partner with other contractors (including Australian owned contractors) on these large projects because of the significant risks involved. These projects also make up a very small proportion of the overall pipeline of work and rarely generate returns for those 'lucky' enough to be awarded them.

Regardless of the entities that sign the Head Contract, most large projects will usually be divided up into distinct, and often significant, work packages that are then offered to the wider market, therefore providing ample opportunities to participate.

In all other respects, the only impediments to participation and growth in capability are those that apply to the market as a whole. These issues, identified above, are affecting the fundamental sustainability of the industry such as attempts to pass all project risk to the contractor irrespective of their ability to quantify and price the risk.

Improvements in capability and capacity, sovereign or otherwise, are inextricably linked to improvements in industry culture and commercial frameworks (procurement).



Lessons from other Australian jurisdictions and portfolio areas

Local lessons

For the last five years, the Australian Constructors Association has been working closely with the NSW and Victorian Governments through the Construction Industry Leadership Forum to improve industry sustainability and, in turn, increase the effectiveness and value of the procurement and delivery of governments' infrastructure programs. This collaborative forum has already influenced many positive industry outcomes such as:

MELBOURNE NORTH EAST LINK

This \$8 billion project was originally intended to be procured as a traditional Public Private Partnership (PPP) where the contractor would have been engaged on a Design and Construct contract. As a result of increased understanding of industry issues derived through participation in the Construction Industry Leadership Forum, and a recognition of the risks involved in the project, the Victorian Major Transport Infrastructure Authority amended the procurement process to include an Incentivised Target Cost model as part of the PPP. Whilst the results of the decision in respect of project outcomes are yet to be seen, it did result in improved contractor participation in the procurement process.

SYDNEY METRO – WEST (TUNNEL AND STATION BOXES)

Recognising the issue of contractors competing against each other to price difficult to quantify risk, Sydney Metro together with the Construction Industry Leadership Forum undertook a trial to transparently identify and allocate risk during the tender process. This trial was deemed a great success and is now being rolled out on other Metro projects and being considered by other NSW and Victorian delivery agencies.

MELBOURNE LEVEL CROSSING REMOVAL PROJECT (LXRP)

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 75 level crossings across metropolitan Melbourne.

LXRP's Program Alliance framework is the primary delivery mechanism for its portfolio of works. This framework provides for the development and delivery of multiple work packages, on a fully allocated and staged basis, across five Program Alliances. The 'program' approach has driven a longer-term manufacturing or production mindset to development and delivery, rather than a bespoke approach to single-site projects. The certainty created through the full allocation of work packages to the Program Alliances enables them to attract and retain large-scale, high performing teams, and drive continuous improvement. It also enables the Program Alliances to make greater investment in skills development, plant, longer-term supply chain agreements, workplace conditions and solution standardisation and reuse. Importantly, upfront investment is offset by efficiencies realised across subsequent packages and between Program Alliances.

Defence lessons

The Australian Defence Force undertakes a large amount of construction work. They have sought to draw on elements of the Integrated Project Delivery model (see below) in order to make their Managing Contractor model more collaborative.

Aside from construction, the Australian Defence Force obviously manages many other large value procurement programs. It is worth noting that, unlike construction, under these programs the supplier/contractor is not expected to fund the construction of the equipment. Payment terms ensure that the



supplier has a positive or, in worst case, neutral cash flow. This begs the question why construction should be treated differently.

Poor cashflow is the main reason for the high level of business failures in the construction industry. Whilst there has been a strong focus on legislation to ensure payment in accordance with contract terms, there has been no focus on mandating improved payment terms for the Head Contractor, particularly on government funded projects where cash flow should not be an issue.

International lessons

In December 2020, the UK Government, in collaboration with industry, published a Construction Playbook¹. The Playbook, developed in under a year, documents best practice procurement and delivery processes and UK delivery agencies are required to follow the Playbook or explain why not. The success of the Playbook will be monitored by tracking key performance indicators such as construction productivity, increased use of modern methods of construction and amount of embedded carbon in infrastructure projects. Whilst the UK does not operate a Federal system of government, the states could be seen as analogous to delivery agencies in an Australian context.

Unlike Australia, there are many examples of Federal Governments that place significant pre-conditions on how money granted to states/provinces for infrastructure is used. These include Canada, United States of America and France. The European Union also requires member countries to follow extensive guidelines for constructing projects using EU grants.

Closer to Australia, in April 2019 New Zealand announced a Construction Sector Accord² to create 'a platform for industry and government to work together to meet some of the key challenges facing the sector including skills and labour shortages, unclear regulations, a lack of coordinated leadership, an uncertain pipeline of work and a culture of shifting risk'.

¹ <https://www.gov.uk/government/publications/the-construction-playbook>

² <https://www.constructionaccord.nz/>



Maximising local content opportunities

It is important that government seeks to leverage both the economic and social benefits of infrastructure spend. The Australian Constructors Association advocates for maximising local content as much as possible but there are often commercial impediments to doing so in a competitive bid process that do not recognise or reward local content. This is why we believe that governments need to develop commercial frameworks that prioritise overall project value over lowest bid cost.

The UK Construction Innovation Hub has developed a value toolkit³ for this very purpose and the Construction Industry Leadership Forum here in Australia is looking to develop its own value framework to better recognise non cost project benefits and enable more informed decisions to be taken.

Generally speaking, more collaborative forms of contract facilitate increased local content as they provide an opportunity for all parties to make informed decisions on a best for project basis. These can include achieving increased training and upskilling on projects which provide a legacy benefit for future projects, achieving local employment and diversity targets, and maximising local content and engagement of social and indigenous enterprise.

³ <https://constructioninnovationhub.org.uk/value-toolkit/>



Alternative procurement models

Most alternative procurement models tend to be variations of existing models, an example of which is Integrated Project Delivery.

Integrated Project Delivery (IPD)

IPD combines the benefits of a multi-party Alliance contract by aligning the interests of multiple project stakeholders towards achieving an agreed set of outcomes with the contractual performance obligations of an ITC contract. IPD is increasingly used as a procurement model in the United States and has attracted the attention of the Department of Defence here in Australia.

Appropriate rather than alternative models

The Australian Constructors Association believes that rather than seek alternative procurement models to address industry issues, we should instead focus on improved selection of existing procurement models. Traditional Lump Sum contracts are perfectly suited for projects with a clearly defined scope and well understood risks but are less suited to challenging projects with a large number of uncertain elements. In this instance, an Alliance project is likely to deliver the best outcome.

The particular circumstances of a project should drive the selection of the procurement model not the market conditions—as is currently often the case.

Delivery agencies should be provided the tools to enable them to make informed choices and their decisions should be supported by Treasury departments on the basis that they will deliver best value outcomes as opposed to lowest initial cost.

Contract standardisation rather than bespoke

Regardless of choice of procurement model, a major issue for industry is the increasing use of bespoke contract forms.

In recent industry soundings, it was noted that the move away from standard contracts is a consequence of a culture which is more focused on minimising risk to the client ('protecting taxpayer money' in the case of government clients) than reducing overall costs of infrastructure provision and sustainability of the industry. As a result, contracts become more complex over time as any 'contractual cracks' which provided relief to a contractor in one situation are addressed in subsequent iterations.

Ultimately, attempts to minimise client risks in this way are counterproductive to achieving true value for money in infrastructure provision as they increase costs and risks for industry. Even if risks (and costs) are successfully transferred to industry in this way, these costs will eventually need to be reimbursed through higher prices in future tenders or, in severe cases, by firms exiting the industry as they can no longer absorb or insure against the risk.

To realise the full potential for procurement reform, the Australian Constructors Association recommends the establishment of a national whole-of-government agency committed to develop and mandate the use of a standard suite of contracts covering different procurement models from Design and Construct to more collaborative models, instead of leaving contract development to individual agencies under a decentralised procurement system.

Given that industry deals with different contracts across jurisdictions, supporting the development of a national, harmonised approach will require coordination of State and Federal Governments.



Key recommendations

The Australian Government is relying on the construction industry to rebuild the economy through construction of economic enabling infrastructure. However, achievement of this goal is at risk as the infrastructure industry faces several structural challenges that are impacting on its very sustainability.

To address these issues, the Australian Constructors Association calls on the Federal Government to:

1. Coordinate and incentivise procurement reform to accelerate adoption of best practice and address industry sustainability issues.
2. Mandate the requirement for a positive cash flow on all federally funded infrastructure projects.
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5. Mandate compliance with a culture standard, preferably adopting the culture standard developed by the Construction Industry Culture Taskforce, on all federally funded projects.
6. Support the development and adoption of a framework to ensure projects are procured based on best value not lowest cost.

Contact

The Australian Constructors Association welcomes the opportunity to discuss the issues raised in this submission. Please contact:

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