

Procurement

- 4.1 Improving procurement processes is a key part of providing public infrastructure to Australians in an efficient and cost-effective manner. The evidence presented to the Committee highlighted serious deficiencies in procurement processes, especially around tendering processes, cost-benefit analysis, procurement skills and expertise and risk management. The Committee was, however, also presented with a range of potential solutions.

Tendering processes

- 4.2 Tendering processes have a significant bearing upon the outcome in public infrastructure development. In its report on public infrastructure, the Productivity Commission noted:
- The way in which government clients procure Australia's public infrastructure can play an important role in determining its costs. What is done prior to the approach to market, the type of contracts let and consequent risk allocation between parties, along with the ability of governments to subsequently manage the project are all critical ingredients of the story.¹
- 4.3 The evidence presented to the Committee indicates that typical tendering processes for public infrastructure in Australia are slow, costly, do not always promote innovation, and tend to exclude significant potential sources of finance, such as superannuation funds. The most prevalent form of contract used in public infrastructure is the design and construct

1 Productivity Commission, *Public Infrastructure: Inquiry Report*, Volume 2, No. 71, 27 May 2014, p. 440.

model, where the client provides a project brief and contractors provide final designs and construction price.²

- 4.4 The Australasian Railway Association (ARA) highlighted some of the problems with the tendering process. A financial burden is placed on all bidders, not just the successful one, representing the expenditure of considerable resources before construction has even begun. Design costs alone comprise fifty per cent of tender costs, while tenders also routinely involve the submission of documentation relating to non-design issues, such as 'workplace relations management, health and safety management, project management, construction and earthworks'.³ The consequence of this, according to the ARA, was that tendering is becoming cost prohibitive to many potential bidders:

The complexity and costs of bidding for major projects, particularly PPPs, has become a major impediment to market entry in Australia. Few private companies, including superannuation funds have the financial capability to be involved in tender processes that require significant upfront investment, without guarantee of success.⁴

- 4.5 A number of proposals have been put forward to streamline the tendering process, making it less costly and less onerous to bidders. One suggestion is to streamline contract conditions, allowing bidders to recycle documentation in bids for projects with similar requirements. Another suggestion is to centralise key elements of bids – for example geotechnical surveys. A third is to shortlist bids, thereby releasing parties from the obligation of continuing with the tender process to its completion.⁵
- 4.6 Greater up-front investment by government in project design, or separate contracts for design and construct were seen as possible solutions to reducing bid costs. This was particularly useful to potential bidders such as superannuation funds who could apply their financial expertise and resources to a detailed concept.⁶ Others considered it less useful, citing the link between design and construction expertise and the possible stifling of innovation if the design parameters were too prescriptive. The Property Council of Australia stated:

2 Productivity Commission, *Public Infrastructure: Inquiry Report*, Volume 2, No. 71, 27 May 2014, pp. 443–4.

3 Australasian Railway Association, *Submission 14*, pp. 12–13; Ms Rhianne Jory, Australasian Railway Association, *Committee Hansard*, 18 June 2014, p. 1.

4 Australasian Railway Association, *Submission 14*, p. 6.

5 Ms Rhianne Jory, Australasian Railway Association, *Committee Hansard*, 18 June 2014, p. 5.

6 Ms Jane McGill, Industry Super Australia, *Committee Hansard*, 3 September 2014, p. 2.

The challenge is: do you allow the industry, be it infrastructure or the development industry, to do what it does best, which is to identify the parcel of land and your key outcomes – what type of housing and infrastructure you want and what your end goals are – give the high-level advice and allow for the design, work and innovation to take place. Or do you have the alternative, in which you are quite restrictive but you ensure that all the outcomes you want are there and you go through the tender process.⁷

4.7 The Property Council leaned towards the first option, ‘because we think that if you are bringing in our sector ... having the opportunity to find ways to innovate and meet what you want to do in a way that is most cost-effective to business is always an ideal outcome’. The Property Council noted that ‘the natural basis of tendering is to be extraordinarily prescriptive to ensure that you are getting exactly the outcome that you want up-front’, but that this ‘often limits the imagination of what can be delivered and the opportunities for delivering more than what the base targets would be otherwise’.⁸

4.8 According to Consult Australia, the key was not so much the methodology of the tender process as its alignment to project requirements. That was where the skill in public infrastructure procurement lay:

When you are looking at method selection, the most important thing to preserve is flexibility, and I think we need to recognise that, when you are dealing with infrastructure, you are dealing with a whole range of very different projects and they each need to be considered on their merits, and the methodology that is put in place to procure services to deliver those projects needs to be tailored to the project at hand.⁹

4.9 Misalignment between project and tendering methodology was often the result of a lack of expertise or capability in procurement.¹⁰

4.10 Other suggestions for streamlining tendering processes and reducing costs include the purchase of intellectual property rights for design concepts (or, alternatively, actually contributing to design costs in return for ownership of the designs) or paying bid costs. The Productivity Commission noted that such methods could potentially increase the numbers of tenderers and encourage innovation. The Commission noted that ‘these types of

7 Ms Caryn Kakas, Property Council of Australia, *Committee Hansard*, 29 August 2014, p. 11.

8 Ms Caryn Kakas, Property Council of Australia, *Committee Hansard*, 29 August 2014, p. 11.

9 Mr Jonathan Cartledge, Consult Australia, *Committee Hansard*, 7 August 2014, pp. 9–10.

10 Mr Jonathan Cartledge, Consult Australia, *Committee Hansard*, 7 August 2014, p. 10.

tendering arrangements have been used in recent infrastructure projects, which suggests issues surrounding ownership of intellectual property are not insurmountable'.¹¹ Consult Australia supported such 'innovative approaches to tendering ... to make sure that governments have the ability to select the best value for money outcome and to have the opportunity to consider the most innovative proposals that come to market'.¹² On the other hand, the Property Council expressed reservations about bidders surrendering intellectual property (IP) rights on their designs:

Obviously it is a huge risk because an enormous amount of money and IP go into these sorts of tenders, and a substantial amount of time. The loss of that is a challenge. I certainly think that if that is made clear at the outset then it allows them to know that if they are not successful that is the trade-off that may occur. That being up-front in the tendering process certainly allows people to enter the tender with open eyes as to what might happen to their IP.¹³

- 4.11 The Civil Contractors Federation (WA Branch) (CCFWA) supported the 'de-bundling' of infrastructure projects – separating projects into smaller packages for the purpose of procurement. This had the advantage of promoting competition between a greater range of contractors and reducing costs. The Federation noted that only a few suppliers had the capacity to bid for large and complex projects, 'which cannot be optimal for a client seeking value for money, or for the sustainability of the contracting market'.¹⁴ The Federation stated that:

The art of procurement is deciding which package size, which level of complexity, is right to be able to carve out particular parts of a project that require innovation but not wrap them up with parts of a project that are so basic and straightforward that they could be delivered under a construct-only contract.¹⁵

- 4.12 The Productivity Commission noted that de-bundling came at a cost, including the 'costs of multiple tender processes, project co-ordination and re-integration subsequent to completion'.¹⁶ Nonetheless, the Commission found that the better packaging of projects could potentially reduce

11 Productivity Commission, *Public Infrastructure: Inquiry Report*, Volume 2, No. 71, 27 May 2014, p. 459; Mr Peter Harris, Productivity Commission, *Committee Hansard*, 27 August 2014, pp. 9–10.

12 Mr Jonathan Cartledge, Consult Australia, *Committee Hansard*, 7 August 2014, p. 10.

13 Ms Caryn Kakas, Property Council of Australia, *Committee Hansard*, 29 August 2014, p. 11.

14 Civil Contractors Federation (WA Branch), *Submission 25*, p. 6.

15 Mr Jeff Miller, Civil Contractors Federation (WA Branch), *Committee Hansard*, 31 October 2014, p. 3.

16 Productivity Commission, *Public Infrastructure: Inquiry Report*, Volume 2, No. 71, 27 May 2014, p. 433.

overall complexity, allow greater competition, greater flexibility in procurement and better allocation of risk. The Commission recommended that:

For larger and more complex projects, government clients should pre-test the market to gain insights into possible savings from packaging the project into smaller components, reducing the level of risk borne by any one contractor, and promoting greater competition by relatively smaller construction companies.¹⁷

4.13 According to its proponents, Building Information Modelling (BIM) is a technical tool with the capacity to transform the tender process. Allowing three-dimensional modelling across the whole of life of a project, from design to decommissioning, BIM enables 'significant benefits, including improved information sharing, time and cost savings, improved quality, greater transparency in decision making', and 'allows any potential tenderer to put forward more accurate costings for infrastructure projects. This would allow for the least whole-of-life cost tender to be selected.'¹⁸

4.14 In its evidence, Autodesk used examples of infrastructure projects where BIM had been deployed to highlight the potential cost and time savings of the technology and its capacity to improve management and coordination of projects.¹⁹ Autodesk urged public sector leadership in the uptake of BIM, stating:

While private sector use of BIM offers significant benefits and costs reductions, it is only through a public procurer-led approach that these benefits and cost reductions will fully accrue to public funding. When there is only fragmented adoption in the market the benefits will likely be taken wholly by the private sector, potentially to the detriment of the cost of public infrastructure.²⁰

4.15 In its report, the Productivity Commission was slightly more circumspect in its evaluation of BIM, acknowledging its benefits, but also its limitations. The Commission stated:

BIM has most potential for complex construction projects that have a number of different design elements. Its usefulness and potential cost savings may be limited in the delivery of smaller less complex infrastructure projects (such as those related to road repair or upgrade). Mandating BIM for all government contracts may

17 Productivity Commission, *Public Infrastructure: Inquiry Report*, Volume 2, No. 71, 27 May 2014, p. 478; Mr Paul Lindwall, Productivity Commission, *Committee Hansard*, 27 August 2014, p. 10.

18 Australasian Railway Association, *Submission 14*, p. 6; see also Mr Roger Somerville, Autodesk, *Committee Hansard*, 31 October 2014, pp. 6-7.

19 Mr Andrew Hill, Autodesk, *Committee Hansard*, 31 October 2014, pp. 8-9.

20 Autodesk, *Submission 26*, p. [1].

therefore impose a number of unnecessary costs on industry and governments.²¹

- 4.16 The Commission suggested that 'releasing concept designs in BIM format would encourage the rapid adoption of the technology by industry, potentially generating savings in both bid costs and overall construction costs',²² and recommended that:

For complex infrastructure projects, government clients should provide concept designs using Building Information Modelling (BIM) to help lower bid costs, and require tender designs to be submitted using BIM to reduce overall costs. To facilitate the consistent use of BIM by public sector procurers, Australian, State and Territory Governments should:

- facilitate the development of a common set of standards and protocols in close consultation with industry, including private sector bodies that undertake similar types of procurement
- include in their procurement guidelines detailed advice to agencies on the efficient use of BIM.²³

- 4.17 A final tendering option raised with the Committee was the inverted bid model (for more detail, see Chapter 3). The perceived advantages of inverted bidding are that it 'makes it possible for superannuation funds to participate as greenfield investors right up-front at the start of a project' and 'assures that the project is managed efficiently over its lifetime':²⁴

When you contrast that with the current bid model, after the deal has been structured and the tens of millions of dollars of fees have been taken, the investor no longer has any responsibility for the project. That is what happened with a lot of toll road projects. By the time they realised that the forecasts were overly optimistic, the investment bank and the construction company were long gone, and the people who carried the can were secondary equity investors and mum and dad investors. People felt that infrastructure should be a safe investment, and it just turned out not to be because of this lack of accountability by investors.²⁵

21 Productivity Commission, *Public Infrastructure: Inquiry Report*, Volume 2, No. 71, 27 May 2014, p. 469.

22 Productivity Commission, *Public Infrastructure: Inquiry Report*, Volume 2, No. 71, 27 May 2014, p. 470.

23 Productivity Commission, *Public Infrastructure: Inquiry Report*, Volume 2, No. 71, 27 May 2014, p. 470.

24 Ms Jane McGill, Industry Super Australia, *Committee Hansard*, 3 September 2014, p. 1.

25 Ms Jane McGill, Industry Super Australia, *Committee Hansard*, 3 September 2014, pp. 2-3.

- 4.18 The Productivity Commission had ‘some reservations about the framework relating to probity, competition in procurement and clarity of risk sharing between governments and private providers’ within the inverted bid model. The Commission considered ‘that a hybrid model based on the existing bidding framework and elements of the inverted bid could be worth trialling’.²⁶ (See Chapter 3).

Cost-benefit analysis

- 4.19 Cost-benefit analysis is a mechanism for providing a logical and consistent consideration of all costs and benefits associated with a project. Cost-benefit analysis estimates the net benefit of a project by valuing the benefits according to the willingness of individuals to pay for them and costs according to the best alternative forgone (opportunity cost). The net benefit is calculated by subtracting the total costs from the total benefits. Cost-benefit analysis can be used to determine whether a community will be better off overall compared to a ‘no-project’ scenario, or be used to determine the relative benefits of different project options.²⁷ The cost-benefit is typically expressed as a ratio of costs to benefits, with a ratio above one showing positive net benefits. In its report, the Productivity Commission noted that:

The standard decision rule is that projects with positive net benefits should be accepted. However, where there are mutually exclusive projects, the one with the highest net benefits should normally be preferred.²⁸

- 4.20 The Commission also noted, however, that ‘because there is always some uncertainty about the inputs to the analysis, a project with a benefit-cost ratio slightly above one cannot definitively be said to be in the community’s interests’.²⁹
- 4.21 In establishing a reliable guide to what is in the overall interest of a community, the cost-benefit analysis of a project needs to take into account all relevant economic, social and environmental outcomes.

26 Productivity Commission, *Public Infrastructure: Inquiry Report*, Volume 1, No. 71, 27 May 2014, pp. 16–17, 250–8.

27 Productivity Commission, *Public Infrastructure: Inquiry Report*, Volume 2, No. 71, 27 May 2014, p. 677.

28 Productivity Commission, *Public Infrastructure: Inquiry Report*, Volume 1, No. 71, 27 May 2014, p. 93.

29 Productivity Commission, *Public Infrastructure: Inquiry Report*, Volume 1, No. 71, 27 May 2014, p. 93.

Moreover, a project must be judged not only on construction costs but also on long-term maintenance and operating costs.³⁰

- 4.22 The importance of cost-benefit analysis in promoting rigour and transparency in decision making was highlighted in the evidence presented to the Committee.³¹ However, attention was also drawn to the limits of cost-benefit analysis in assessing infrastructure projects. Infrastructure Partnerships Australia observed that:

While benefit-cost ratios, even direct benefit-cost ratios, are increasingly being applied as some sort of pass-fail test for infrastructure projects, that extends well beyond their proper use. It is suggesting a degree of sophistication from a powerful but not that sophisticated assessment tool. A good example would be the Pacific Highway corridor. If you applied a direct benefit-cost to the sections, even Clybucca, which is underway at the moment, you would find that those individual sections of the road that have not yet been duplicated would fail the cost-benefit test. They would be well below 1. But, if you look across the corridor ... there is a real benefit to having a safe dual carriageway connection between two of your most economically significant capital cities.³²

- 4.23 Infrastructure Partnerships Australia urged a focus on wider economic benefits as a means of assessing the utility of public infrastructure:

We have to be more realistic around what the assessment tools are telling us. There has been a very simplistic focus on whether it is a pass/fail and that creates the incentive to get the high-pressure hose onto the business case to get it up above one. It has really set up what is a good diagnostic tool. It should be part of a dashboard of measures that you are looking at, including wider economic benefits and wider social benefits. I should add, on wider economic benefits, it is also important that you include wider economic costs, which sometimes are left off when people are trying to get past the pass/fail test. We have a real opportunity. If we take some of the raw emotion out of these things, if we step back and make them good statistical exercises that are looking at how the project performed both in delivery and in operation then we will start to set up the evidence base we need for a much better

30 Productivity Commission, *Public Infrastructure: Inquiry Report*, Volume 1, No. 71, 27 May 2014, pp. 93–4.

31 Mr Peter Harris, Productivity Commission, *Committee Hansard*, 27 August 2014, p. 4.

32 Mr Brendan Lyon, Infrastructure Partnerships Australia, *Committee Hansard*, 7 August 2014, p. 19.

and much more sophisticated allocation of limited capital funding capacity towards infrastructure.³³

- 4.24 Consult Australia also urged a broader form of cost-benefit analysis in assessing infrastructure projects, stating:

Critical in assessing the merits of public investment in infrastructure is the application of broad cost-benefit analysis. Increasingly infrastructure projects are assessed individually, over relatively short time-frames and viewed as 'ready to proceed' only where utilisation is close to capacity. The benefits of a longer-term view of infrastructure investment, and governments' vital role in facilitating those longer-term benefits as part of a vision for our cities and regions, needs to be re-established.³⁴

- 4.25 Consult Australia considered the wider economic benefits model of assessment as superior to cost-benefit analysis. It highlighted the example of London's Crossrail project, where analysis of wider economic benefits had been used to quantify the impact of people moving to more productive jobs, the effects of agglomeration (decrease in the effective economic distance between areas), and increased labour force participation through improved transport options.³⁵ Crossrail's wider impacts were estimated at between £6bn and £18bn in welfare terms, including increased tax receipts, exceeding the initial public sector funding required for the project. Including wider economic benefits increased estimates of the benefit-cost ratio from 1.87 to between 2.73 and 3.05. The wider impacts were estimated as an increase in GDP of up to £42bn in 2002 prices, or £50bn in 2010 prices.³⁶

- 4.26 The Productivity Commission was more cautious in its assessments of the wider economic benefits model, stating that 'in principle, genuine wider economic benefits should be taken into account in assessing the merits of projects', but that study of wider economic benefits was 'in its infancy'. The result was that 'the inclusion of wider economic benefits in cost-benefit analyses has the potential to show one project to be superior to another purely because of differences in the way such benefits are defined and estimated'.³⁷

33 Mr Brendan Lyon, *Infrastructure Partnerships Australia, Committee Hansard*, 7 August 2014, p. 19.

34 Consult Australia, *Submission 2*, p. 5.

35 Consult Australia, *Submission 2*, p. 5; Consult Australia, *Submission 2.1*, p. [1].

36 Consult Australia, *Submission 2.1*, p. [1]; Crossrail Business Case—Summary Report, July 2010, *Exhibit 22*, p. 13.

37 Productivity Commission, *Public Infrastructure: Inquiry Report*, Volume 1, No. 71, 27 May 2014, p. 103.

Benchmarking

- 4.27 Benchmarking is an important tool in the procurement of public infrastructure. It involves the collection of data to formulate quantitative and qualitative indicators that enable comparison of economic performance and approaches to policy between projects and across jurisdictions. Benchmarking promotes accountability and can lead to increased efficiency and effectiveness in infrastructure procurement by exposing areas where improvement is needed, identifying targets for improvement and encouraging innovation.³⁸
- 4.28 Engineers Australia noted that 'benchmarking infrastructure costs contributes to planning and project evaluation in public sector agencies and in infrastructure construction businesses'. In addition, the provision of benchmarking data was 'particularly valuable for smaller organisations, whether public or private sector, who may not have the resource base to undertake the necessary level of research'. Access to data would 'improve the competitiveness of procurement by involving more players in the process'.³⁹
- 4.29 The Australian Trucking Association (ATA) also advocated benchmarking, stating in its submission that comparing road costs at each level of government 'to established benchmark costs and the associated level of guaranteed access with the investment would vastly improve the accountability of road agency spending'. The ATA supported the view that:
- ... the provision of data to support the benchmarking framework should be a requirement attached to all Australian Government funding for major infrastructure projects, and that ongoing benchmarking must be seen to be independent of both government and industry influence. Benchmarking must also be technically robust and credible.⁴⁰
- 4.30 The use of benchmarking has been linked to improvements in productivity in infrastructure procurement. The Productivity Commission stated that 'one of the major drivers of long-run construction costs in infrastructure is the achievement of productivity gains'. It noted that 'it is important to understand Australia's performance in this area, and to assess the factors contributing to it'. The Commission therefore recommended that the Australian Government introduce 'a detailed
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38 Productivity Commission, *Public Infrastructure: Inquiry Report*, Volume 2, No. 71, 27 May 2014, p. 371.

39 Engineers Australia, *Submission 1*, pp. 5–6.

40 Australian Trucking Association, *Submission 5*, p. 5.

benchmarking framework', with Infrastructure Australia overseeing 'public reporting of benchmarking results across Australia for major infrastructure construction projects covering transport, energy, water and social infrastructure'. The provision of data by state and territory governments would 'be a requirement for all projects where the Australian Government provides funding'. The Commission noted that:

State and Territory Governments will have an important role to play in, and be primary beneficiaries of, such benchmarking. It will improve the information base for their infrastructure tendering, and significantly improve ex post evaluation.⁴¹

Special procurement agencies

- 4.31 In its report, the Productivity Commission stated that 'the establishment of specialised agencies to procure and manage the delivery of infrastructure projects provides one means to overcome concerns over a lack of public sector procurement and project management skills'.⁴²
- 4.32 The evidence presented to the Committee highlighted the need to create and retain specialist procurement skills in the public sector. Consult Australia observed that 'the procurement skills of the client have a large bearing on the success of the project', and that 'a consequence of government outsourcing has been an ongoing critical shortage of staff with skills in procurement at all levels of government'. This had impacted on the quality of infrastructure procurement and the cost of outcomes in the past.⁴³
- 4.33 Consult Australia suggested the 'creation of a Centre for Procurement Excellence as a possible solution to this issue',⁴⁴ possibly by expanding the role of the Australasian Procurement and Construction Council. 'It may well be that establishing such a centre could simply be an expansion of that organisation.'⁴⁵
- 4.34 An alternative would be to enhance the role of Infrastructure Australia in 'providing independent oversight and advice in infrastructure

41 Productivity Commission, *Public Infrastructure: Inquiry Report*, Volume 1, No. 71, 27 May 2014, pp. 24-5; Volume 2, No. 71, 27 May 2014, pp. 382-3.

42 Productivity Commission, *Public Infrastructure: Inquiry Report*, Volume 2, No. 71, 27 May 2014, p. 490.

43 Consult Australia, *Submission 2*, p. 7.

44 Consult Australia, *Submission 2*, p. 7; see also Australian Sustainable Built Environment Council, *Submission 13*, p. 2.

45 Mr Robin Schuck, Consult Australia, *Committee Hansard*, 7 August 2014, p. 12.

provision'.⁴⁶ This was supported by Infrastructure Partnerships Australia, who suggested that part of Infrastructure Australia's remit could be to focus on process design:

... deciding what proper processes are to go through, what are appropriate assumptions to go into these things, and then either incentivise or require projects that win federal funding support to go through a process of ex post assessments.⁴⁷

- 4.35 The Property Council of Australia supported Infrastructure Australia taking on a funding and finance advisory role, producing 'a comprehensive and regularly updated "menu" of funding and financing options for governments and infrastructure proponents'.⁴⁸

Managing risk

- 4.36 Risk is the uncertain but quantifiable consequence of an activity. Within infrastructure planning and procurement, it may relate to design and construction, operation, or the financial, political and regulatory environments.⁴⁹ Risk management involves the effective pricing and allocation of risk between parties. In the provision of public infrastructure, risk may be borne by government, the private sector providers or by third parties (contractors, insurance companies or end-users).⁵⁰ In practice, less than optimum allocation of risk can be caused by the failure of parties to properly assess risk, shifting of risks to parties not best able to manage them, and implicit or explicit government guarantees which distort risk management incentives.⁵¹

- 4.37 The evidence presented to the Committee highlighted the perils of poor risk management. Consult Australia noted that:

Improper risk allocation is a major driver of increased costs in the provision of public infrastructure. It is common practice for public sector agencies to offer contracts where all risk is transferred to other parties irrespective of who is best able to manage that risk.

46 Australian Trucking Association, *Submission 5*, p. 7.

47 Mr Brendan Lyon, Infrastructure Partnerships Australia, *Committee Hansard*, 7 August 2014, p. 19.

48 Property Council of Australia, *Submission 22*, p. 13.

49 Productivity Commission, *Public Infrastructure: Inquiry Report*, Volume 1, No. 71, 27 May 2014, p. 123.

50 Productivity Commission, *Public Infrastructure: Inquiry Report*, Volume 1, No. 71, 27 May 2014, p. 124.

51 Productivity Commission, *Public Infrastructure: Inquiry Report*, Volume 1, No. 71, 27 May 2014, p. 132.

Because these contracts are offered on a 'take it or leave it' basis, there is seldom opportunity for service providers to negotiate appropriate risk allocation. While at face value that might seem a prudent move on behalf of taxpayers, it actually leads to greater risk and increases the cost of work for a number of reasons.⁵²

4.38 Governments simply shifting risk to the private sector can place builders and operators of public infrastructure, or their contractors, at risk of insolvency if the commercial risks they undertake exceed their capacity to manage them.⁵³ This in turn creates the possibility that government will be required to meet the cost of commercial failure regardless of the contractual apportioning of risk.⁵⁴

4.39 Alternatively, government accepting the principal risk in project management leads to a loss of commercial discipline. Devolving risk to the private sector improves public infrastructure outcomes:

Demonstrably, the benefit that you have had from private involvement in public infrastructure markets has been around the commercial disciplines, around exposing private investors to the risks in the delivery of those projects, where you can get cost certainty into the capital cost delivery and get very significant innovation into the design and operation and the recurrent operating costs.⁵⁵

4.40 The consensus in the evidence was that the best way to manage risk was collaboratively. Infrastructure Partnerships Australia stated that 'government's approach to procurement should be to apportion risk efficiently, not to take it back';⁵⁶ while Industry Super Australia argued that there were cases where it was appropriate for risks and costs 'to be shared between the two parties'.⁵⁷ Consult Australia stated:

When risks were properly evaluated, allocated between the parties and better managed, a more collaborative approach was taken as each party had an interest in seeing the risks properly dealt with. This in turn led to better project outcomes, including better and

52 Consult Australia, *Submission 2*, p. 7.

53 Mr Jonathan Cartledge, Consult Australia, *Committee Hansard*, 7 August 2014, p. 8; Mr Robin Schuck, Consult Australia, *Committee Hansard*, 7 August 2014, pp. 10-11.

54 Industry Super Australia, *Submission 12*, p. 26.

55 Mr Brendan Lyon, Infrastructure Partnerships Australia, *Committee Hansard*, 7 August 2014, p. 22.

56 Mr Brendan Lyon, Infrastructure Partnerships Australia, *Committee Hansard*, 7 August 2014, p. 22.

57 Industry Super Australia, *Submission 12*, p. 26

more efficient delivery of the deliverables, including reduced cost, time and disputation.⁵⁸

- 4.41 Alliancing has been proposed as one mechanism for allocating risk. An alliance is an agreement between the parties to a contract to share the benefits or costs associated with project risks. The parties agree to a benchmark price, time and service level. Any benefits or costs are shared between the parties according to an agreed formula.⁵⁹ The benefits of alliances were seen as a 'collaborative approach to the contract' and a 'greater awareness of shared risk across the project', with risk apportioned to the parties best placed to manage the risk. It avoids an 'adversarial approach that tries to shift risk to different parties'.⁶⁰ The problem was a tendency for governments to bundle contracts, making them accessible to larger enterprises only, and the transfer of risk from government to the alliance partners.⁶¹ It was acknowledged that alliancing was not relevant to all situations, but was appropriate on large-scale time critical projects where not all risk factors could be calculated from the start.⁶²
- 4.42 Inverted bidding was also seen as a useful tool in risk management. Industry Super Australia argued that 'early participation from long-term equity investors will lead to a better pricing of risk'; and that the inverted bid model is quite flexible in terms of how it deals with patronage and construction risk', leading to more robust outcomes in terms of infrastructure procurement.⁶³

Committee conclusions

- 4.43 The Committee is of the view that public sector procurement practices are not always serving the taxpayer well and need to be more efficient, cost-effective and flexible. The Committee has been presented with a range of possible improvements to current tendering practices which are both practical and innovative, and which could form the basis of procurement practices which are robust and flexible. The Committee noted the potential for governments to take a greater role in promoting design innovation, either by co-funding the design elements of bids or the purchase of

58 Consult Australia, *Submission 2*, p. 8.

59 Industry Super Australia, *Submission 12*, p. 7.

60 Mr Jonathan Cartledge, Consult Australia, *Committee Hansard*, 7 August 2014, p. 11.

61 Mr Jeff Miller, Civil Contractors Federation (WA Branch), *Committee Hansard*, 31 October 2014, p. 3.

62 Mr Robin Schuck, Consult Australia, *Committee Hansard*, 7 August 2014, p. 11.

63 Mr Matthew Linden, Industry Super Australia, *Committee Hansard*, 3 September 2014, p. 7.

intellectual property in bidding processes, the development of Building Information Modelling and some form of inverted bidding process. The application of such concepts in a fit-for-purpose way will save significant amounts of money and result in better design, construction and operational outcomes.

Recommendation 7

4.44 **The Committee recommends that the Australian Government propose to Infrastructure Australia that it develop innovative procurement practices for the tendering of public infrastructure with a view to making tender processes, more efficient, cost effective and flexible. Some of the options that should be considered include:**

- **3D imaging of infrastructure and the need for regulation of the technology to be used;**
- **Promoting the use of Building Information Modelling;**
- **Co-funding design or purchase of intellectual property rights;**
- **The development of inverted bidding tender processes;**
- **Streamlining of tender processes and documentation;**
- **De-bundling projects;**
- **Centralising common elements of bids to make them more cost-effective; and**
- **Shortlisting of favoured tenders.**

4.45 The Committee supports the need for rigorous and transparent analysis of the costs and benefits of infrastructure projects. This is the only means by which the public and participants in infrastructure projects can be assured of the economic, social and environmental merits of public infrastructure. The Committee notes that under the provisions of the Infrastructure Australia Amendment (Cost Benefit Analysis and Other Measures) Bill 2014, Infrastructure Australia must undertake evaluations of infrastructure proposals that involve Commonwealth funding of at least \$100 million and provide that a proposal must not be included in an Infrastructure Priority List unless a cost benefit analysis has been prepared in accordance with the approved method.⁶⁴

4.46 However, the Committee is also of the view that there is merit in exploring the wider economic benefits of infrastructure projects to ensure that projects are not being evaluated in isolation from the broader costs and benefits they may bring. Infrastructure projects must also be considered in

64 Infrastructure Australia Amendment (Cost Benefit Analysis and Other Measures) Bill 2014.

terms of the value they create elsewhere and their capacity to transform the economy.

Recommendation 8

- 4.47 **The Committee recommends that the Australian Government propose to Infrastructure Australia that it develop a methodology for evaluating the wider economic benefits of infrastructure projects with a view to applying this methodology to all major public infrastructure projects involving Commonwealth capital expenditure of more than \$100 million.**
- 4.48 The Committee supports the idea of a single agency providing direction and support for public infrastructure procurement. Focussing engineering, legal and financial expertise in a single agency able to provide high-level policy advice and direct support to agencies undertaking infrastructure procurement will ensure that government agencies will have access to relevant expertise at all stages of the procurement process.
- 4.49 The Committee believes this concentration of expertise best resides with Infrastructure Australia, as the Commonwealth's lead agency in public infrastructure assessment. The Committee also supports the recommendation of the Productivity Commission that Infrastructure Australia have responsibility for benchmarking infrastructure procurement in nationally.

Recommendation 9

- 4.50 **The Committee recommends that the Australian Government legislate to enhance the role of Infrastructure Australia as a specialist interdisciplinary procurement agency, with the capacity to provide high-level policy advice and direct support to government agencies undertaking infrastructure procurement, including development of best practice policies in finance, funding and procurement and benchmarking infrastructure procurement.**
- 4.51 The Committee is of the view that governments need to develop better strategies for risk management in the procurement of public infrastructure. The costs associated with poor definition and allocation of risk are sufficient to warrant a more collaborative approach between government and the private sector in apportioning risk, ensuring that risks are allocated appropriately in terms of ensuring commercial discipline and proportionately in terms of matching risk to capacity.

Recommendation 10

- 4.52 **The Committee recommends that the Australian Government, through COAG, work with state and territory governments to develop better risk management strategies in infrastructure procurement, with a focus on greater collaboration between government and the private sector in the identification and allocation of risk in the design, construction and management of public infrastructure.**

Mrs Jane Prentice MP

Chairman

