



29 January, 2015

Dr. Kathleen Dermody
Committee Secretary
Senate Economics References Committee
PO Box 6100
Canberra ACT 2600

Dear Dr. Dermody,

Re: Inquiry into Privatisation of State and Territory Assets and New Infrastructure

Thank-you for the opportunity to provide a submission to the Senate Economic References Committee Inquiry on Privatisation of State and Territory Assets and New Infrastructure.

Professionals Australia does not support nor propose a return to large public sector delivery agencies nor a move to broadbased privatisation of state and territory assets as a way of funding infrastructure delivery into the future. In our view, what is required is a way of ensuring that the public sector in states and territories is working effectively and that the Commonwealth – and the private sector – can rely on delivery agencies. The Commonwealth must ensure its own agencies are up to the task of scoping and designing for its own procurement and to be able to enforce capacity with states and territories.

Governments around Australia have discovered that you might be able to outsource risk, but you cannot outsource responsibility. By outsourcing major infrastructure projects without ensuring adequate in-house engineering capacity to ensure effective scoping and delivery, government has abrogated one of its primary roles – to ensure that the interests of the wider public are protected – and the community carries the risk and cost of this shift in practice. Privatising state and territory assets – that is, shifting all risks to the private sector – would further abrogate this primary government responsibility.

The Australian National Engineering Taskforce (ANET) found:

In contrast to past practices where government undertook much of the delivery of infrastructure itself, the last several decades have seen an evolution to a model which is largely contracted work arrangements that seek to shift risk and responsibility to the private sector. As such, current procurement practice is not delivering optimal results for the taxpayer, government or industry.

We refer you to the attached document “Better Infrastructure: Australia needs engineers to build better infrastructure”. This set of proposals provide real, tangible and proven ways to more effectively procure and deliver infrastructure in Australia without government further abrogating its responsibility to act in the broader public interest.

Yours faithfully,

Chris Walton
CEO

Better Infrastructure

**Australia needs engineers to
build better infrastructure**



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An open letter.

Stopping government waste when we purchase infrastructure

Having more quality engineers working in government would save taxpayer money. It's a fact.

The set of policy proposals presented here provide real, tangible and proven ways to save governments money in their infrastructure spend. These solutions have the support of the relevant associations and industry involved in procuring and delivering infrastructure in Australia.

Governments must ensure that when they invest taxpayer's money in infrastructure that it's not needlessly wasted. Unless they take urgent action to improve their management of infrastructure delivery, we will watch state, territory and the Federal Governments continue to waste billions of taxpayers' money over coming years.

Governments now lack the necessary internal engineering and technical expertise. The wheel has turned too far, which means as much as \$25 billion over the next decade will be wasted according to independent experts.

It's a sign of the times that government doesn't value the work of their own engineers yet places a premium on getting infrastructure delivered. This crazy situation means that the private sector now deals with a difficult client in government. Even the key beneficiaries of outsourcing are ringing the bell on waste.

Professionals Australia has a strong and vocal membership in government agencies throughout Australia charged with the delivery of major infrastructure. Both our public and private sector engineer members experience the problem in their working lives.

The professionals we represent are the key to Australia's future beyond the mining boom. They enable productivity growth, a diverse economy and the maintenance of high-wage, high-skill industry in Australia. They are the key professions in the delivery of infrastructure and deserve respect, recognition and reward for the critical role they play in our nation's prosperity.

Our members are an integral part of the chain in infrastructure delivery and they have an acute sense of responsibility to the public in the discharge of their duties. Increasingly, they have been concerned about the lack of capacity in state, territory and the Federal Government's agencies and that this is causing waste and inefficiency in infrastructure delivery, as well as having the potential to endanger the public. They are also concerned at the lack of strategy to develop the next generation of professionals.

We have to get governments to invest in infrastructure and to do that, we need quality engineers and engineering careers in government. We need workforce development in the public and private sector.

That's what our Better Infrastructure campaign is all about.

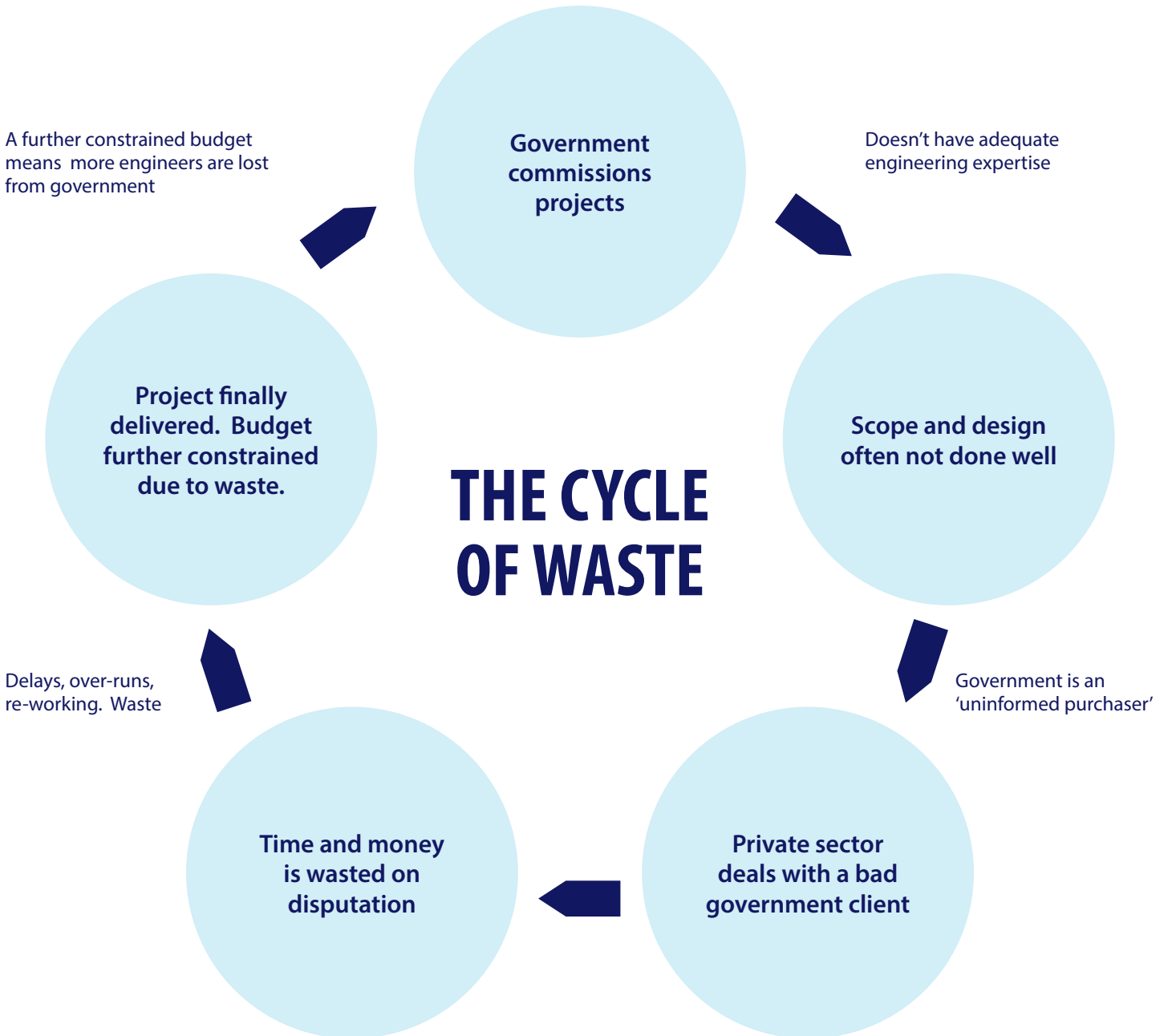
We call on you to get involved, make a difference and build a better future for engineering in Australia.

Yours sincerely,

Chris Walton, CEO
Professionals Australia

Waste in infrastructure delivery

If a government allows for a situation to arise where there is a shortage of infrastructure delivery expertise in its ranks, it becomes an uninformed purchaser. In every jurisdiction, this is now the sad reality. This leads to waste, project over-runs and increased costs



An acute lack of skills

There just aren't enough engineers in government to scope, design and manage projects. As state Governments cut staff to trim costs, they're cutting their engineering capacity further and further.

Cutting engineers to save money is penny wise, pound stupid.

We can all think of an example of a project which hasn't run on time or been delivered on budget, everything from ticketing systems, roads, schools or hospitals. What's become apparent through a vast array of research is that governments have allowed this situation to arise because they lack in-house expertise to deliver projects.

What the experts say

The Senate Inquiry "the shortage of engineering and related employment skills" report stated that "It is a matter of historical record that, during the 1980s and 1990s, the public sector began to outsource infrastructure and other engineering work to private industry". That means "that public sector capability to act as an informed purchaser and adequately scope and oversee large infrastructure and construction projects has been severely eroded over the past decades" (*The Senate Education, Employment and Workplace Relations References Committee, 2012*).

The peak research body in the construction industry has said that the current system is driving disputes between government and the private sector, leading to costs for industry and government amounting to up to \$7 billion per annum in Australia (Cooperative Research Centre for Construction Innovation, Guide to Leading Practice for Dispute Resolution).

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The Productivity Commission estimates that a lack of engineering capacity in government is costing \$6.2 billion per annum.

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The *Building the Education Revolution Implementation Taskforce Final Report* stated in 2011 that "there is a correlation between states capacity to leverage existing public works capacity and their overall value for money outcomes".

The Productivity Commission, in their review of the procurement of major infrastructure, states that clients (governments) should: "invest more in initial design to reduce the design imposts placed on tenderers" and "solutions rely on government becoming" informed purchasers and that "90 per cent of the cost variation of the top-20 non-residential capital works projects completed by 2012 (representing \$6.2 billion in spending) reflected early estimation errors". That's \$6.2 billion wasted due to a lack of government capacity.

The Infrastructure Coordinator, the statutory office holder that supports Infrastructure Australia, said in a submission to an inquiry on the procurement of public infrastructure, that in reports it had prepared, "on average, 48 per cent of projects failed to meet their baseline time, cost and quality objectives" and that "the potential wastage of capital is in the order of \$30 billion per annum".

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Employers estimate \$6 billion is wasted on disputation in Australia on infrastructure projects.

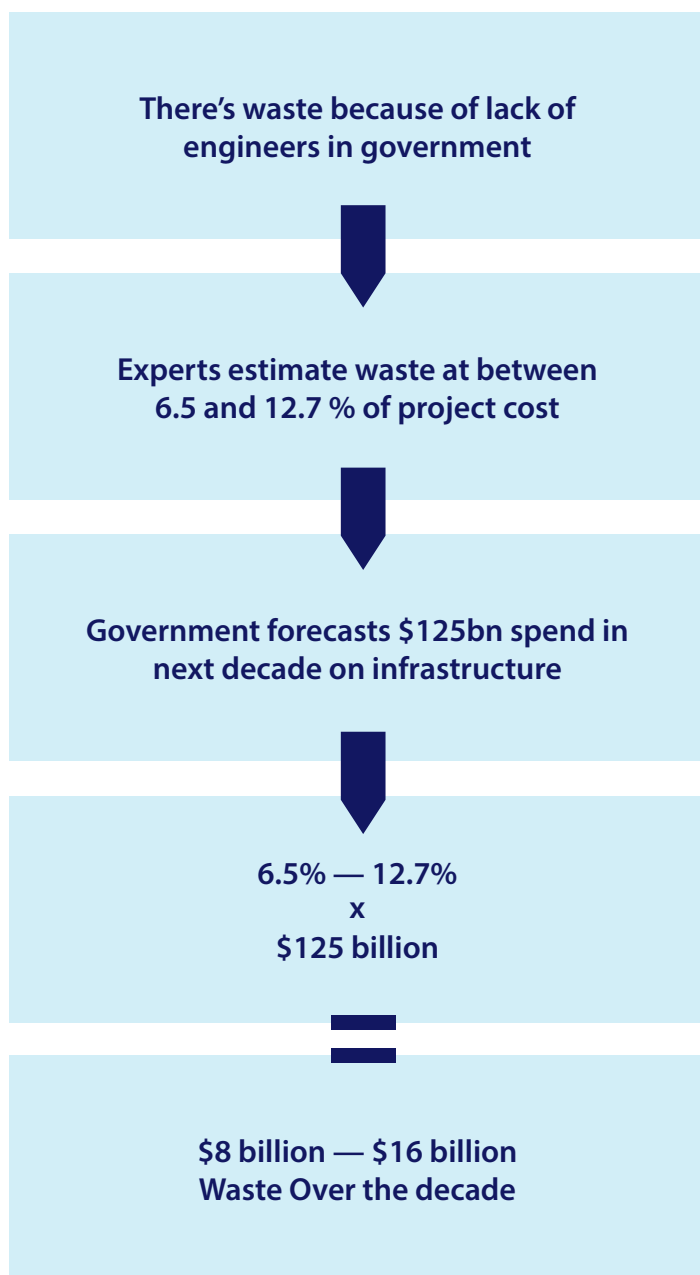
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The Australian National Audit Office, in their submission to a Senate Committee examining the Commonwealth's procurement of infrastructure stated that "In some cases, procurement processes examined by the ANAO were not adequately supported by a planning process which was appropriate to the scale and risk profile of the procurement. Insufficient planning and scoping for major capital works projects has resulted in unreliable estimates and delivery time-frames".

The government has become so poorly equipped at managing projects that the private sector – key beneficiaries of outsourcing – are starting to feel the effect through dealing with poorly scoped and designed projects and protracted disputes. That means waste and delays.

Consult Australia – the representative body for consulting engineer employers - has said in evidence to the Senate Committee on engineering skills shortages "that \$6 billion a year is wasted on disputation in projects across Australia" and noted "that much of this expense is borne by taxpayers, as many, if not all, large projects are commissioned by governments".

The waste equation



What it costs

As has been demonstrated, figures vary as to the total waste which our broken system for procurement is causing in Australia. What governments, industry, researchers and engineers do agree on is that there are billions of dollars in avoidable waste.

The most recent figures from Deloitte Access Economics, in a report prepared for the Australian Construction Association this year demonstrate:

- There have been infrastructure blow-outs in seven of the last eight years.
- The average blow-out is 6.5 per cent across all projects and 12.7 per cent for projects over \$1 billion.
- The last time we had a surfeit of infrastructure projects (65 projects) was 2009 when blowouts peaked at 21.2 per cent. The more we spend, the more we waste.

We are wasting at least \$120 million for every billion spent on a major project.

According to data released at the time of the 2014 Federal Budget, \$125 billion will be spent over the next decade by governments and industry as governments re-focus on productivity enabling infrastructure. Using just the average 6.5 per cent waste cited by Deloitte, \$8 billion will be wasted on infrastructure spending over that period, but if we reach the 21 per cent of 2009, when we last had a project glut, we could waste up to \$25 billion, or \$2.5 billion each year.

\$8 billion could build:



THE FIRST STAGE OF THE
WESTCONNEX
ROAD



SYDNEY
LIGHT RAIL



THE NSW
M1–M2
LINK



FOUR SUBMARINES



SIXTY SCHOOLS



THREE HOSPITALS



THE MELBOURNE
EAST-WEST LINK

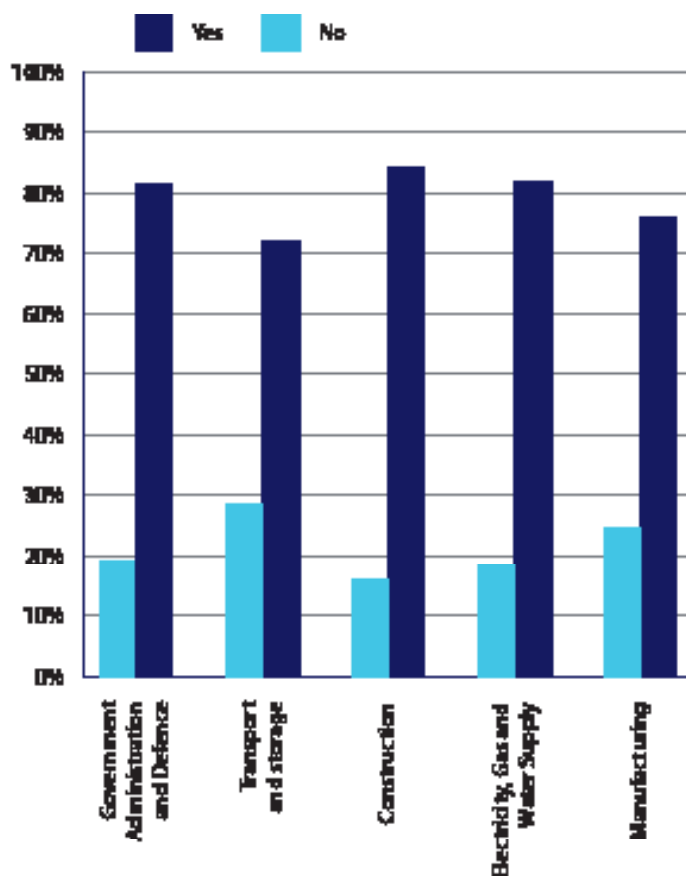
Engineers know there's a lack of skills

What is of greatest concern is that engineers – those at the heart of scope and design – agree. A Professionals Australia survey found 80% of engineers agree with the Senate Inquiry finding that governments no longer have sufficient in-house expertise to avoid wasting huge amounts of public money.

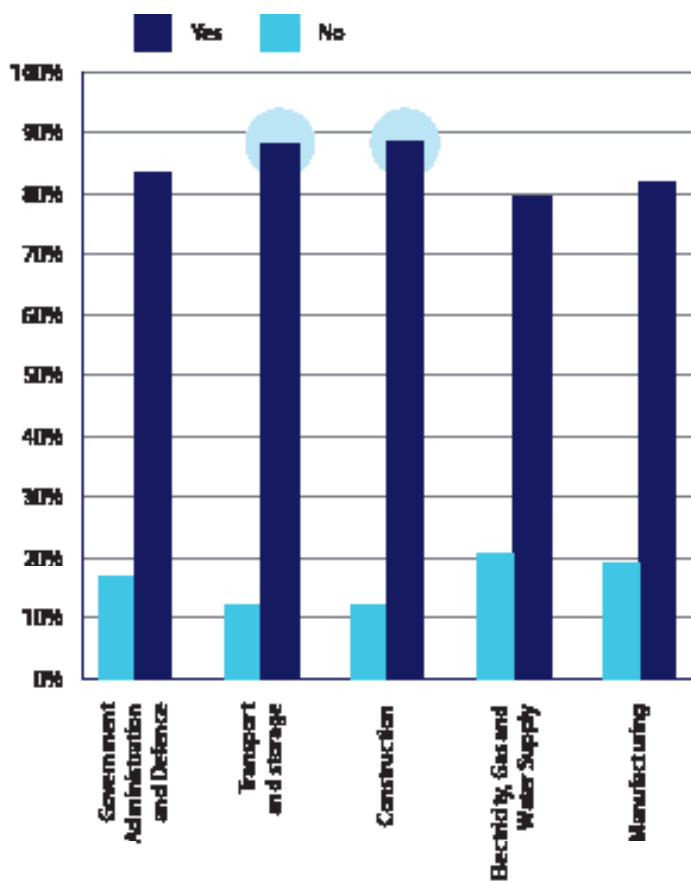
While the private sector is picking up work because of this lack of internal capacity, more than 80 per cent engineers believe the private sector is suffering from the lack of capacity in the public sector.

Engineers believe that the lack of in-house capacity is causing waste (93 per cent), project delays (94 per cent) and more than 70 per cent believe it has the capacity to endanger the public.

Question: Do you agree there is virtually no in-house (government) engineering capacity?

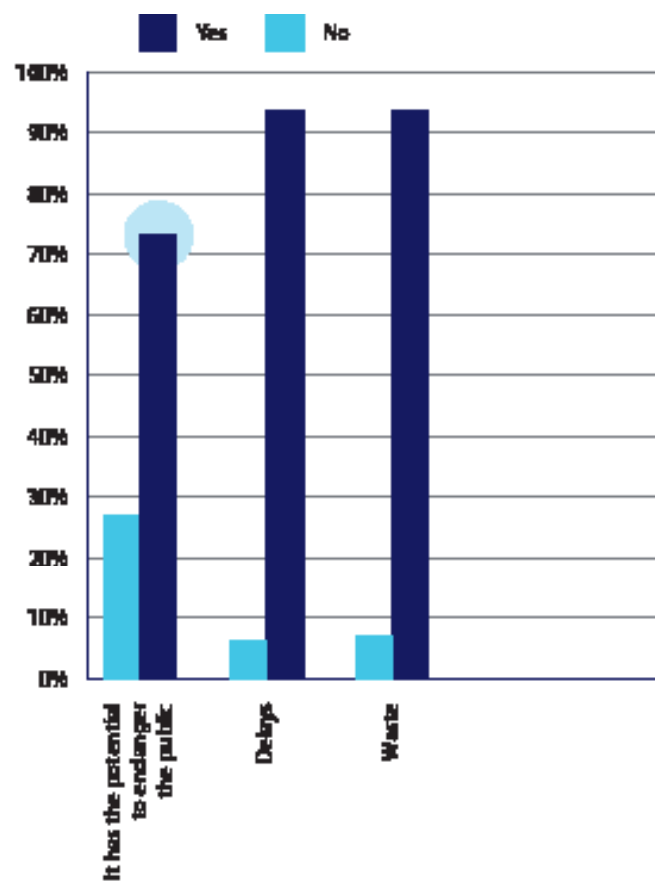


Question: Does the private sector suffer from poorly scoped or designed projects?



* Construction and transport are the worst sectors for poor scope and design.

Question: What do you think this lack of in-house engineering capacity is causing?



* The lack of internal engineering capacity is believed by 73% of engineers as having the capacity to endanger the public.

How did this happen?

As the Australian National Engineering Taskforce (ANET), in their major funded-work said:

“In contrast to past practices where government undertook much of the delivery of infrastructure itself, the last several decades have seen an evolution to a model which is largely contracted work arrangements that seek to shift risk and responsibility to the private sector. As such, current procurement practice is not delivering optimal results for the taxpayer, government or industry. It is also not driving investment in the workforce which is needed to ensure the government can become an informed purchaser and to provide for adequate investment by the private sector in workforce development”.

The way that government has engaged the private sector is at the heart of the problem. Not only have governments around Australia lost their informed purchaser capacity, they're helping to make it worse by continuing to use procurement models that perpetuate a loss of capacity.

Procurement models in Australia can be broadly categorised as:

- **Design and construct (D&C).** As opposed to a simple 'construct' process, the private sector designs and constructs a project wholly. Many people see a reliance on this model as driving the lack of capacity in the public sector, leaving us in a situation where the public sector lacks the skills as a project manager or as a client to see projects effectively delivered.
- **Public private partnerships (PPPs).** Is usually a contract for the delivery of infrastructure with the private sector, allied with services such as maintenance. The private sector then operates and maintains the infrastructure on a fixed term. There are myriad examples of failure and success with this model. An over-reliance on them has meant that the private sector can 'dazzle government with science' – from scope and design, to finance models – because they've already poached many of the personnel who used to do those jobs.
- **Alliance model.** Involves early involvement of the contractor with the client, who share risk, agree outcomes and work together to achieve them. This has the capacity to provide some cross-fertilisation of skills between the public and private sector as they work side-by-side.

The first two of these models have a particular attraction to government. They give the appearance of being able to outsource financial risk and ameliorate public concern over late delivery of projects or failure to meet budget.

Maintenance concerns: Assets deteriorate because they aren't maintained.

A short term focus by government has meant that they stop maintaining their assets – such as roads.

They sack engineers in asset management agencies to deliver a healthy looking budget while the value of the asset which sits on the books of government deteriorates because they haven't maintained it, simply because maintenance won't get the front pages of a newspaper. Eventually, the cost of repair of roads is higher because government hasn't provided a secure pipeline of funding for maintenance so that agencies can plan. Maintaining roads may not be as newsworthy as a major new freeway, but it's vital to ensure safe passenger and freight transit and for a productive State. One deep pothole can cause an entire road network to stall.

Governments around Australia have discovered that you might be able to outsource risk, but you cannot outsource responsibility. The public expect their money to be spent effectively whether it's with a contractor or on staff

What we do know is that two models for procurement in particular – PPPs and D&C – are driving waste in procurement and costing taxpayers billions.

By allowing internal capacity to erode, we're seeing waste and delays which amount to billions of dollars. If we're going to build the infrastructure we need, cost-effectively, and on-schedule, we need practical solutions to ensure that those delivering the projects are capable of discharging their duties.

Professionals Australia does not support nor propose a return to large public sector delivery agencies. That is neither practical nor desirable. What is required is a way of making sure that the public sector in states and territories is working properly and that the Commonwealth – and the private sector – can rely on delivery agencies. The Commonwealth must ensure its own agencies are up to the task of scope and design for its own procurement, such as in defence and to be able to enforce capacity with states and territories.

Given this ongoing reliance on the private sector, Professionals Australia advocates that government must drive workforce development in both the public and private sector

Procurement should be used to encourage cadetships and graduate development. This will ensure the community benefits from engineers in the scoping, design and delivery of infrastructure.

The Better Infrastructure campaign is calling for five actions:

- 1 Bring the engineering profession together to get expert advice on what the profession needs.**
- 2 Rebuild engineering expertise in government and make sure we're delivering infrastructure well.**
- 3 Make sure that companies building infrastructure invest back into the engineering profession.**
- 4 Lift the status of the engineering profession and act to ensure its quality and integrity.**
- 5 Lock in funding and reduce the influence of politics on infrastructure by recognising and listening to the advice of engineers.**

It's not just us

On the record – Engineers save taxpayers' money

The verdict is in: engineering capacity in the public sector delivers better value for government. Professionals Australia has long-argued that government needs to be an informed purchaser when it comes to buying and delivering infrastructure to avoid cost over-runs and delays. Engineering isn't just a cost-centre, it's as an integral part of the infrastructure delivery chain, providing the necessary scope, design and delivery skills government need to gain best value for taxpayer's dollars.

Here's just a sample of additional recent commentary:

Brendan Lyon

CEO Infrastructure Partnerships Australia, 2014

"The more you can get transparency and rigour into major projects the better off you will be... We need to look at how large projects (over \$1 billion) could be better managed."

Bill Scales

Former Productivity Commission chairman and leader of the review into the NBN, 2014

In a review of the policy process that led to the creation of the NBN network, former Productivity Commission chairman Bill Scales said all public infrastructure projects worth over \$1 billion should be subject to a cost-benefit analysis, with the results made public before the project starts.

The Productivity Commission

(Review of the procurement of major infrastructure), 2014

Clients (governments) should: "invest more in initial design to reduce the design imposts placed on tenderers" and "solutions rely on government becoming"... informed purchasers.

"90 per cent of the cost variation of the top-20 non-residential capital works projects completed by 2012 (representing \$6.2 billion in spending) reflected early estimation errors". That's \$6.2 billion wasted due to a lack of government capacity.

"Several governments have developed specialist major procurement agencies that manage infrastructure procurement on behalf of government clients... The Commission sees merit in adopting this approach".

Infrastructure Australia

2014

The Infrastructure Coordinator, the statutory office holder that supports Infrastructure Australia, said in a submission to an inquiry on the procurement of public infrastructure, that in reports it had prepared, "on average, 48 per cent of projects failed to meet their baseline time, cost and quality objectives." The same report "estimated that based on:

- public and private infrastructure investment of \$215 billion;
- the best case project success rate of 52 per cent;
- with a conservative average cost overrun of 40 per cent; and
- the potential wastage of capital is in the order of \$30 billion per annum".

The Infrastructure Coordinator went on to say, "There are deficiencies evident at all parts of the 'infrastructure chain' – planning, problem identification, policy development, option identification, modelling, project identification, approvals and contracting" and that "Attracting and retaining staff qualified to manage probity processes and monitor projects will reduce the cost of projects".

The Australian National Audit Office

2014

In their submission to a Senate Committee examining the Commonwealth's procurement of infrastructure the ANAO stated that "In some cases, procurement processes examined by the ANAO were not adequately supported by a planning process which was appropriate to the scale and risk profile of the procurement. Insufficient planning and scoping for major capital works projects has resulted in unreliable estimates and delivery timeframes".

Garry Bowditch

CEO, University of Wollongong, SMART Infrastructure Research Group, 2014

"Value for money has been thrown out the window a long time ago," Mr Bowditch said, adding the cost excesses reduced Australia's attractiveness to international investors. "In my view, it's quite humiliating."

Peter Layton

Australian Strategic Policy Institute (ASPI) 2014

"To improve efficiency, Defence management needs to get better, not get cut".

The Victorian Public Accounts and Estimates Committee 2012

Took advice from experts Evans and Peck that "Skills and competencies are below a level that is desirable to achieve good outcomes on major public infrastructure projects in Victoria. This is caused by a deterioration of commercial and technical expertise in the public and private sectors, evidenced by a shortage of skilled and experienced people in project development and delivery in both the public and private sectors".

A better way forward

Professionals Australia believes that private sector involvement in the delivery of infrastructure brings massive benefit. It has the potential to maximise the use of taxpayer's dollars, deliver innovation and to improve our capacity. That potential remains unfulfilled, because governments don't have the expertise to work with them and doesn't know what they're buying.






The government has outsourced its engineering capacity to the private sector, who in-turn, suffer from a lack of 'informed purchaser' capacity. Money for projects is bid for competitively, while scope and design capacity sits static in the agency – they're not considered as intrinsically linked. This is a problem for both the public and the ultimate decision makers: government. What we need is a series of practical, below-cost measures to see us get value for money from our infrastructure spend.

Our proposals to stop the waste

Government does not need to look far for a series of solutions which have the support of industry, employee and employer groups. The previous government commissioned work by ANET, a partnership of "the organisations represent the major professional, industrial, commercial and academic interests in the engineering sector". The submissions have been responded to by the government, and included the recommendation "That a collaborative engineering working group of stakeholders be convened by the Minister for Industry to take forward the recommendations of AWPA's Engineering workforce study".



Our proposals to stop the waste are simple and low-cost, and are supported by the engineering profession, a Senate Inquiry, industry and infrastructure peak bodies. They are:

-  **Bring the engineering profession together to get expert advice on what the profession needs.** Convene the peak bodies in engineering and get advice on what is needed to build better infrastructure. Work with them to improve training, education and career pathways for engineers;
-  **Rebuild engineering expertise in government and make sure we're delivering infrastructure well.** Establish a centralised procurement unit to audit government procurement expertise and ensure that government has the capacity needed to deliver major projects, and use that same unit to examine what models have been used to deliver infrastructure and if they've served the government – and the public – well. Develop attraction and retention policies for engineers in government workplaces including competitive wage structures, continuing career development and senior engineering roles such as Chief Engineers in infrastructure delivery agencies;
-  **Make sure that companies building infrastructure invest back into the engineering profession.** Make sure that companies that win contracts to deliver government work invest back in the key enabling profession of engineering by having in place cadetship graduate programs and diversity programs, so we get a bigger workforce;
-  **Lift the status of the engineering profession and act to ensure its quality and integrity.** Celebrate and highlight the importance and achievements of engineers to the public, so that more people choose the profession as a career. Mandate a quality, affordable registration scheme for engineers to instil public confidence;
-  **Lock in funding and reduce the influence of politics on infrastructure by recognising and listening to the advice of engineers.** For too long, the advice of the engineering profession has been ignored. If there's a health crisis, we rely on the medical profession and if there's a constitutional impasse, we call on lawyers. Yet, despite billions of dollars of waste and shoddy results, governments ignore engineers.

In conclusion

Stakeholders and government representatives have agreed on a set of solutions which would save government billions and ensure we never see a repeat of poorly delivered infrastructure programs.

These proposals would:

- Ensure the government – and taxpayer – is getting value for money in its infrastructure spend.
- Mean the private sector could deal with a better client – cutting disputation and waste.
- Minimise project delays.
- Enhance public safety.
- Develop the capacity of government and the private sector to deliver projects.

Australia can't afford to waste one dollar in its infrastructure spend. We already have a huge backlog. Government must protect taxpayers' interests by properly managing what is a large proportion of the budget. It might be penny wise to save dollars on those that scope and manage a project, but there is a mounting body of evidence that those savings will be later lost in capital costs and disputation. It's penny-wise, pound-stupid.

Professionals Australia

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