Submission No 3

INQUIRY INTO SCRUTINY OF PUBLIC WORKS IN NEW SOUTH WALES

Organisation: Professionals Australia

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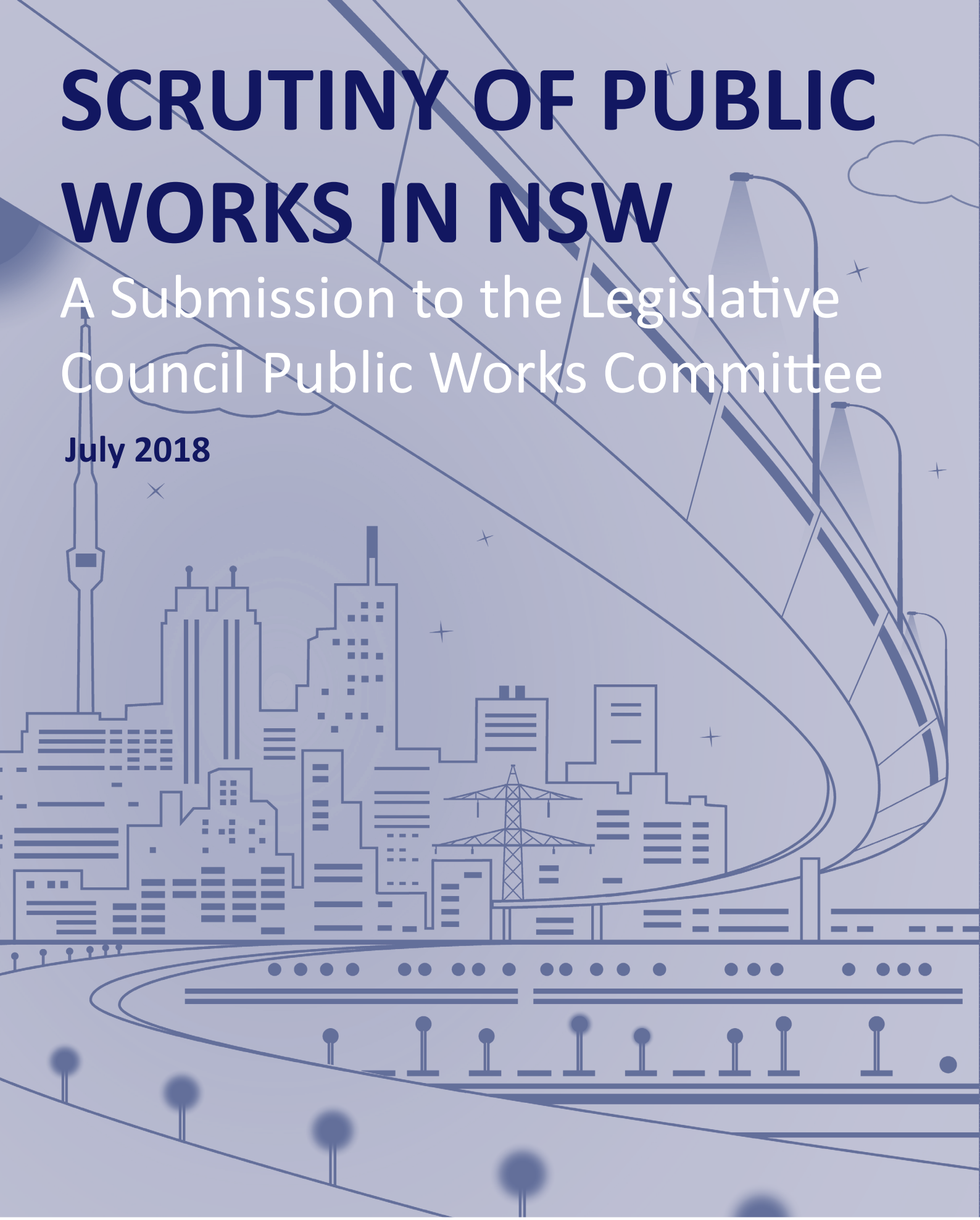
SCRUTINY OF PUBLIC WORKS IN NSW

A Submission to the Legislative Council Public Works Committee

July 2018



GORDON BROCK
Director NSW, Professionals Australia

Professionals Australia

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ABOUT PROFESSIONALS AUSTRALIA

Professionals Australia is a nationally registered industrial organisation representing a wide range of professionals throughout Australia. Our members include professional engineers, scientists, managers, pharmacists, architects, contractors, consultants and more. They are employed in all levels of government and are spread across the private sector. Our members perform design, scoping and project management roles across essential industries and services, including road, rail, federal, state and local government, IT, water, power, coal, construction and defence.

We provide support and advocacy on behalf of our members so that they can focus on providing our community with safe and reliable infrastructure and with vital goods and services.
This purpose has driven Professionals Australia to make this submission, as better infrastructure management means better community outcomes, better use of taxes and better recognition of the important role our members play in Australian society.

EXECUTIVE SUMMARY

The New South Wales Government has embarked on an ambitious and record-breaking infrastructure programme, with major projects in rail, roads, hospitals and schools. Almost half the national pipeline of public engineering projects underway are in New South Wales. However, according to reports all is not well. Several major projects, including Sydney's light rail project, are behind schedule and significantly beyond budget.

It is timely therefore, for the Legislative Council Public Works Committee to establish an inquiry into and report on public works to be executed (including works that are continuations, completions, repairs, reconstructions, extensions, or new works) where the estimated cost of completing such works exceeds $10 million.

Professionals Australia welcomes the opportunity to make a submission to this inquiry. While our submission does not directly focus on actual public works projects under scrutiny, it will raise issues and identify and recommend reforms that can improve the State Government's delivery of public works for its communities.

We recommend the Committee consider the following:

- The need for government and government agencies to be informed purchasers
- The scope of waste in major infrastructure projects
- Widespread consensus on the reasons for this waste
- Proposed solutions to minimise waste and provide better value for money.

Our submission highlights the importance of an informed public sector to the delivery of infrastructure projects. Improved engineering capability and capacity in the public sector will assist the New South Wales Government to better deliver its community infrastructure projects and initiatives, while at the same time provide best-value investment in local community assets.

The strategies and actions outlined in this submission will also assist in achieving the State Government's policies of creating jobs, deliver more projects, reduce waste, improve capability and reduce risk and liability, while also improving infrastructure delivery.

INTRODUCTION

Professionals Australia welcomes the opportunity to provide comment to the Public Works Committee of the NSW Legislative Council, as part of its inquiry into the future arrangements for the ongoing scrutiny of public works in New South Wales.

The professions and professionals which we represent are the key to Australia's future prosperity. They spark innovation, enable productivity growth, build a diverse economy and help maintain high-wage, high-skill industry in Australia. They are the key professions in the delivery of infrastructure and deserve respect, recognition and reward or the critical role they play in Australian society.

Not only are our members an integral part of the chain in infrastructure delivery, they have an acute sense of responsibility to the public in the discharge of their duties. Increasingly, they have become concerned about the lack of technical capacity and expertise in state, territory and federal government agencies and the waste and inefficiency in infrastructure delivery as well as the potential risk to public safety that this is causing.

The emergence of significant cost blowouts and delay in the delivery of key infrastructure projects within NSW in recent years comes as no surprise and is a direct consequence of a process of deliberate de-skilling within government agencies.

At a time when the government is embarking on an unprecedented infrastructure programme, it is critical that it looks at how to deliver best value for money to the people of New South Wales. The NSW Budget 2018 – 2019 sets out a record pipeline of projects in education, health, roads and public transport totalling $87.2 billion across the budget and forward estimates.

It is the responsibility of government to ensure that these funds are spent well, with waste minimised, on projects that are fit for purpose and which benefit the community. Accordingly, our recommendations focus on the development and delivery of infrastructure, how assets are procured and ways in which the process could deliver better value for money outcomes.

Professionals Australia believes that it is critical that when planning for the state's future infrastructure the government has the right systems and processes in place to assess, select and deliver and maintain that infrastructure effectively and efficiently.

In this submission we set out:

- Waste in infrastructure delivery. An analysis of the way government deliver infrastructure and why we're failing the public
- A better way forward. Practical, little cost solutions to save billions of dollars

This submission draws heavily from work we have previously performed for the Federal Government and in submissions to previous inquiries.

THE PROBLEM

Systematic cuts to the engineering and technical workforce in the public sector, combined with lowest price contracting for services, has caused a chronic diminution of engineering expertise throughout the infrastructure life cycle, as well as undervaluing the impact engineering and technical professionals have throughout all sectors of the economy.

First, governments outsourced construction to the private sector to reduce the cost base by employing significantly fewer public works employees. Governments then outsourced design and specification of projects to the private sector, also in the name of lowering its cost base. Then governments reduced the number of engineering professionals they employed on the basis that they no longer carried out their own design work. Finally, managers with very little knowledge or understanding of what technically had to be delivered were appointed to procure infrastructure.

The result? Governments are no longer informed purchasers of infrastructure. Those working in government are under ever increasing pressure to do more with less. Whereas, those working in the private sector see projects impacted by delays, variations and cost blowouts.

Not surprisingly this dilution of in-house expertise has created problems throughout the entire infrastructure delivery cycle, with bad decisions and overspending occurring at every step of the process, namely:

- Flawed decision-making regarding priority infrastructure projects, leading to a focus on 'ribbon-cutting' as opposed to the use of objective criteria for project selection.
- Lack of consideration and integration of projects with existing infrastructure and systems
- Lumpiness of projects with a lack of long-term planning to ensure adequate capacity to deliver projects into the future
- Poor project scoping, leading to flawed project proposal assessment and lifelong costs of a project not being adequately considered
- A focus on the cheapest quote as opposed to the best value
- Poor project management, including a lack of experience in technical project implementation often resulting in the use of contractors to oversee contractors
- Inadequate asset management – maintenance not seen as exciting as infrastructure delivery and often subject to budget cuts because it is not as immediately noticeable
- Inadequate private and public-sector workforce development which is leading to a worsening crisis in capacity as many of the remaining experienced engineers retire
- Tendency to use an expensive short-term resource fix (eg headhunting expensive staff or use of 457 visas) rather than investing in the development of cadetships and graduate programmes to build the next generation of technical professionals.

WASTE IN INFRASTRUCTURE DELIVERY

If a government allows a situation to arise where there is a shortage of infrastructure delivery expertise in its ranks, it becomes an uninformed purchaser. This leads to waste, project over-runs and increased costs.

An acute lack of skills

There are just not enough engineers in government to effectively scope, design and manage projects. As governments cut staff to trim costs, they are cutting their engineering capacity further and further. Professionals Australia members can provide countless examples of projects which have run over time and/or over budget, everything from ticketing systems, railway construction, road construction, implementation of new IT systems through to the construction and maintenance of new schools and hospitals. This is supported by considerable research. Governments have allowed this situation to arise because they lack the in-house expertise to deliver projects effectively.

Why is efficiency so important?

The Productivity Commission in its 2015 Productivity Update outlined the central role that efficient infrastructure spending plays in driving prosperity.

"Efficient provision of public social infrastructure (such as schools and hospitals) provides services that benefit individuals, but can also have broader economic implications. To the extent that public social infrastructure leads to the maintenance and improvement of education and health outcomes, such investment supports workforce participation and productivity, drives economic growth as well as promotes broader community wellbeing."

"However, not all public infrastructure supports productivity and generates economic growth and wellbeing. Poorly selected public infrastructure investment can impede the efficient provision of public infrastructure services, crowd out private investment and reduce productivity, economic growth and wellbeing."

What it costs

Exact estimates of the total waste in infrastructure spending vary. However, there is a wide consensus among industry experts, consulting groups, government agencies and engineers, that broken procurement systems are costing the Australian economy billions of dollars. The vast majority of this waste is avoidable.

Figures from Deloitte Access Economics, in a report prepared for the Australian Constructors Association in in 2016, highlight the level of waste in infrastructure spending.

It found:

- There had been infrastructure cost blow-outs in seven of the previous eight years.
- The average cost blow-out is 6.5% across all projects and 12.7% in projects over $1 billion.
- In the peak of infrastructure projects in 2009 (65 projects) cost blow-outs peaked at 21.2%. The more spent, the greater the waste.

These figures indicate we are wasting at least $120 million for every $1 billion spent on a major project.

Every dollar wasted is a dollar that could be used to resolve the infrastructure backlog or to spend on new projects. The Australian Infrastructure Audit conducted by Infrastructure Australia in 2015, found that congestion and delays on our roads cost the economy $13.7 billion in 2011. The Audit forecast this figure to swell to $53.3 billion in 2031 if swift action is not taken. A major part of resolving this problem is making sure that money spent on infrastructure is not wasted.

Applying the Deloitte findings to the proposed $87.2 to be spent on infrastructure in the next four years as proposed in the NSW Budget 2018 - 19, at least $5.7 billion will be wasted through inefficient infrastructure spending over that period. If the cost blow-outs reach the 21% found by Deloitte during the 2009 peak in major projects, waste would total $18.3 billion, or $4.6 billion each year.

HOW DID THIS HAPPEN?

The delivery of infrastructure projects is a major function of government. However, despite the importance of the role, the engineering and technical capacity within the public sector has steadily declined over several decades.

According to the Australian National Engineering Taskforce (ANET): "In contrast to past practices where government undertook much of the delivery of infrastructure itself, the last several decades have been 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 engages the private sector is at the heart of the problem. Not only have governments at all levels lost their informed purchaser capacity, they are exacerbating the problem by outsourcing a growing share of the infrastructure delivery function, without having properly specified the details first. While a number of procurement models are currently used by government to deliver major infrastructure, no model is effective and efficient without the informed involvement of government itself.

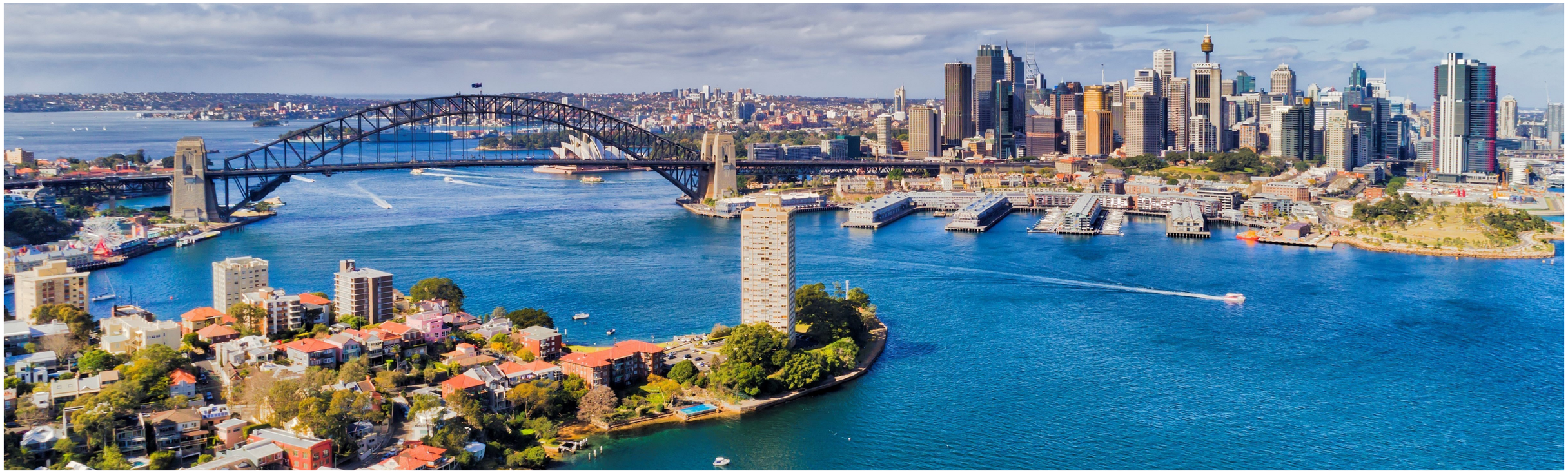
Design and construct (D&C) and public private partnerships (PPPs) are particularly attractive for government, as they give the appearance of being able to outsource financial risk and potentially provide access to additional funding. While government increasingly seeks to outsource risk, it cannot outsource responsibility.

The public expect their money to be spent effectively whether it is through private contractors or government staff. While new avenues to infrastructure funding are understandably appealing to government, they should not come at the cost of informed decision making. Government needs to regain its role in accurate scoping of projects and project oversight.

Government must know what it is buying to ensure that projects are meeting community needs and are less likely to require additional funding down the track. By allowing internal capacity to erode, we are seeing waste and delays which amount to billions of dollars. If we are going to build the infrastructure the community requires – 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 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 is working effectively and that government and the private sector can rely on delivery agencies. Professionals Australia advocates that government must drive workforce development in both the public and private sector.

Government investment in infrastructure projects is not just an investment in community assets, it is also an investment in the workforce. Major projects provide a boost to the workforce by creating jobs during the construction phase and an economic boost once they are operational.

Procurement should be used to encourage cadetships and graduate development. This will ensure community benefits flow into the future by building a workforce with the expertise to efficiently scope, design and deliver infrastructure.



CASE STUDY: SYDNEY WATER

Professionals Australia recently undertook a study of technical capacity at Sydney Water. The study identified many cases where outsourcing and a lack of technical capacity had led to inefficient infrastructure investment, caused waste and cost overruns and resulted in poor-value outcomes for taxpayer dollars.

Some of these examples are set out below.

- A water growth project by a consultant undertook capacity modelling as new customers were added to the system. Experienced Sydney Water staff stepped in when they recognised that if the pump stopped at maximum demand, negative pressure would occur. This would collapse the pipeline and leave several thousand people without water possibly for a week. The contract was cancelled and started again. This caused delay and added costs.
- In a water project, the consultants recommended two water mains be reduced to one. In doing so they missed checking that these mains are the backup for 50,000 customers in an adjoining zone. They also failed to consider that decommissioning both mains and re-zoning would have saved $8 million. These decisions caused weeks of delay and additional cost.
- A number of programmes have been resourced with staff capability not matched to the complexity of the work. Both internal and consultancy teams have simply run out of capacity to handle the volume of work which has fallen to junior and less experienced staff who are often left on their own because there are no experienced staff to supervise them. Other in-house staff then have to step in to fix the work. For a $100 million programme over five years, fixes have achieved a $26 million cost saving. Such remedial work is becoming increasingly difficult to manage as inhouse capacity is further eroded.

On occasion, staff have been able to achieve significant savings. For example, in a waste water project a consultant presented five options with the best option costing $44 million. A Sydney Water engineer found a better option for $17 million, saving $27 million. This was further reduced to $3 to $5 million through the efforts of an in-house engineering team.

Sydney Water is highly dependent on the work of its planning and engineering consultants to produce its system plans and engineering designs. Over the three years prior to this review, it paid approximately $50 million per year to external engineering consultancy panels. The review questioned whether this is value for money.

The consultant engineers' charge out rates were agreed and set at between $100 and $300 per hour. In contrast, Sydney Water in-house engineer's rates were between $40 and $75 per hour, based on the pay scale in the Enterprise Agreement. This means that Sydney Water was paying between 2.5 and 4 times the cost of in-house staff when it used external resources. The review suggests that by employing more in-house engineers and planners to undertake work currently being outsourced, it would build and retain technical capability, become a smarter and more resilient organisation and be less dependent on the external market.

While Sydney Water states that it uses external consultants to manage peaks and troughs, this is clearly not the complete picture. There is evidence indicating that the work is constant and increasing. There is also evidence that consultants are occupying desks on site for very long periods of time and that some consulting staff are permanently located in the Parramatta offices, and carry out Sydney Water staff work.

The ongoing push for outsourcing throughout the NSW public sector, which has made a virtue of reducing in-house technical capacity, has seen cost blow-outs and wasteful spending. Professionals Australia's relationship with Sydney Water goes back decades. We appreciate the challenging environment within which Sydney Water operates. Several years ago, Sydney Water and Professionals Australia committed to meet regularly to discuss matters such as technical capability, acknowledging that the two organisations understand that appropriate levels of engineering skills, knowledge and experience are required within the organisation in order for it to be an informed purchaser. However, change is slow and technical capacity concerns continue to exist. A similar story is no doubt playing out within other government agencies.

A NEW CONSENSUS – ENGINEERS SAVE TAXPAYERS' MONEY

The verdict is in: increasing engineering capacity in the public sector delivers better value for government and better outcomes for the community.

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 is not just a cost-centre. It's an integral part of the infrastructure delivery chain, providing the necessary scope, design and delivery skills government needs to gain best value for taxpayers' dollars.

This is not just the view of Professionals Australia. There is a growing consensus among industry experts, government agencies and major consulting groups, that a shortage of technical and procurement capability is a major cause of waste and increased risk within the public sector. Some of these views are set out below.

"It would be confidence-enhancing if there was an agreed story about a long-term pipeline of infrastructure projects, surrounded by appropriate governance on project selection."
- Glenn Stevens, Governor, Reserve Bank of Australia, 2015

"There are some elements of current government procurement policy and practice that are inefficient, adding unnecessarily to the cost of infrastructure. This includes cases where government clients have unclear project objectives and select inappropriate project delivery models."

"This report finds opportunities for improvement in the skills of public sector procurement managers."

"The core objective of procurement policies across the Australian public sector is to achieve value for money… Rather than simply pursuing the lowest costs offering, government agencies must consider a range of factors in order to select the industry offering that best meets end user requirements.
Managing this complex decision process efficiently requires a significant level of expertise."
- Deloitte Access Economics, Economic Benefits of Better Procurement Practices, 2015

"Australia would benefit from a strong and consistent pipeline of well-planned infrastructure projects. This would provide greater certainty for infrastructure constructors and investors, and provide the basis for a well-resourced environment for project procurement and informed decision making." **- Infrastructure Australia, Australian Infrastructure Audit, 2015**

"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 resulting in unreliable estimates and delivery timeframes."

*"One of the keys to successful procurement is the availability of personnel that have procurement management skills and subject matter expertise so that the agency can act as an informed purchaser."***- Australian National Audit Office, Submission to Senate Committee Inquiry into Commonwealth Procurement Procedures, 2014**

Governments should "invest more in initial design to reduce the design imposts placed on tenderers" and "solutions rely on government clients being more informed about the project they are wishing to purchase."

"Based on recent levels of investment, a 10 % reduction in the cost of delivering infrastructure – a conservative estimate of the potential savings from implementing sensible reforms – would amount to an annual saving of around $3.5 billion."

"Proper project oversight by the client remains an important role. An informed and competent client has a better capacity for oversighting claims for variations and ensuring compliance with the contract … the inquiry suggested that public sector project management was poor, citing large cost overruns on some key public sector projects."

"Several governments have developed specialist major procurement agencies. These manage infrastructure procurement on behalf of government clients … The Commission sees merit in adopting this approach across all Australian jurisdictions to improve the quality of procurement-related advice and expertise in the public sector." **- The Productivity Commission, Public Infrastructure, 2014**

"Not all public infrastructure supports productivity and generates economic growth and wellbeing. Poorly selected public infrastructure investment can impede the efficient pro vision of public infrastructure services, crowd out private investment and reduce productivity, economic grow and wellbeing. Most relevant to enhancing the efficiency of the provision of public infrastructure is improving project selection processes." **- The Productivity Commission, Productivity Update, 2015**

"Skills and competencies are below a level that is desirable to achieve good outcomes on major public infrastructure project 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." **- Victorian Public Accounts and Estimates Committee, Inquiry into Effective Decision Making for the Successful Delivery of Significant Infrastructure Projects, 2012**

"There are deficiencies evident at all parts of the 'infrastructure chain' – planning, problem identification, policy development, option identification, modelling, project identification, approvals and contracting."

*"Attracting and retaining staff qualified to manage probity processes and monitor projects will reduce the cost of projects."***- National Infrastructure Co-ordinator, Submission to the Productivity Commission Inquiry into Public Infrastructure, 2013**

"Governance, planning and decision-making processes across Australia's infrastructure sectors often lack transparency and integration."

"Without a long-term and nation-wide vision for the infrastructure required to support Australia's productivity into the future, as well as effective decision-making processes for how it will be funded and delivered, there will be a lack of public and investor confidence in the capacity of governments to deliver a pipeline of nationally significant projects."

"If these processes are not reformed, increased investments in infrastructure will be inefficient and lead to poor project selection or delivery." **- Mark Birrell, Chairman, Infrastructure Australia, 2015**

A BETTER WAY FORWARD

There is no doubt that the problems facing public sector works and infrastructure delivery are major. The cost associated with these issues is even larger and is resulting in a drain on both our community assets and the economy as a whole; however, there are solutions to these challenges. What is needed is a series of practical, low-cost measures to see us get value for money from our infrastructure spend.

Our Proposals to Stop the Waste: Recommendations

Better infrastructure requires action from governments at all levels. Professionals Australia proposes steps which will strengthen government technical skills, reduce waste and help deliver the infrastructure that New South Wales needs, effectively and efficiently.

Government does not need to look far for a series of solutions which have the support of industry, employees and employer groups. In 2011, the Federal Government commissioned work by ANET, a partnership of the organisations which represent the major professional, industrial, commercial and academic interests in the engineering sector. The following proposals flow from that work. These proposals to stop the waste are simple, low-cost and are supported by the engineering profession, a Senate Inquiry and infrastructure peak bodies.

1. Implement an infrastructure policy framework that delivers better outcomes

While we support the NSW State Infrastructure Strategy 2018, we see the need to go further. Steps need to be taken to strengthen government engineering skills, improve workforce development and increase the efficiency and utilisation of funding by improving procurement processes to reduce waste.

For example, total project budget should include a provisional sum for project scoping, as well as a percentage for project design, delivery and management. A major area of waste in infrastructure delivery occurs in the initial scoping of projects. According to Deloitte Access Economics, 37% of public sector projects suffer from unclear project objectives, often resulting in major cost increases. A clear project scope is critical in ensuring that project goals are met in a cost-effective manner. In order to ensure that adequate attention is paid to the scoping of projects, a provisional sum should be allocated to the process.

2. Become informed purchasers of infrastructure and services

Professionals Australia believes that private sector involvement in the delivery of infrastructure brings massive benefits. It has the potential to maximise the use of taxpayers' dollars, deliver innovation and to improve our capacity. However, that potential remains largely unfulfilled because governments don't have the expertise to adequately scope and procure.

Governments once had well-staffed public works departments and owned major utilities such as electricity and gas. Approximately 30 years ago the trend began to privatise and contract out and today, government in many areas lacks the internal professional capacity to be an informed purchaser leading to problems for government and business. Government gets poor value outcomes because it doesn't adequately plan and scope the project. Business is affected by delay and disputes as they deal with an uninformed client which attempts to shift too much risk.

Government agencies and bodies involved in the provision of infrastructure should be audited under the guidance of the State Chief Engineer to ensure that they have the adequate skills, resources and capacity to understand and deliver the projects they are responsible for.

Government should bring the engineering profession and industry together to create an engineering workforce plan which restores and/or creates positions at critical decision-making levels requiring engineering qualifications.

3. Involve engineers in developing a better infrastructure pipeline across local and state government

Public works in Australia take place in a largely devolved environment, where individual agencies manage their own property requirements and the delivery of public works projects. Under this devolved model, proponent agencies, including local government, all have an important role in the public works scrutiny process, which includes providing information to the Public Works Committee of the proposed works and their estimated cost.

Professionals Australia is supportive of the Committee's work in inquiring into the scrutiny of public works. Scrutiny of public works is necessary to hold people, governments, and companies accountable. Moreover, large projects have financial, social and environmental impacts on local areas and on the community at large. However, we would like to convey that for the Committee's future reference, we recommend that the threshold trigger point for which public works must be referred to the Parliamentary Standing Committee on Public Works for scrutiny be raised from the current $10 million cost of completing works to $50 million to allow the Committee to focus on higher risk and higher value proposals with more significant public impact.

In addition to ensuring consistency and integration across government departments and agencies it is also critical that the State Government incorporate engineering expertise into infrastructure project selection. Projects need to be selected on merit and community needs, not political preference.

It is also critical that the State Government incorporates local government's plans into its priorities for the State. Recognition from both local and the state government of the interdependencies between local and state significant infrastructure is vital if past dislocation and dysfunction – and the associated waste – is to be avoided in the future.

Integrating long-term plans would firstly recognise these interdependencies and achieve greater levels of alignment, making priorities and key projects clearer to communities. This would also allow a delivery schedule to be developed for infrastructure across NSW, which could include deliverables over timeframes including 2, 5 and 10 years. If the State Government took a more strategic role, this would ensure integration of local governments and state agency planning and delivery.

An integration of planning at local and state levels would also allow governments to explore the possibility of resource-sharing, avoid cost duplication, and provide greater scope for informed State Government investment in major infrastructure projects.

4. Develop and maintain a high-skill workforce

To deliver infrastructure efficiently and effectively technical skills in the public sector must be strengthened and a strong workforce development plan established. It is recommended that:

a. Engineers should be registered to ensure that they are appropriately skilled and qualified to protect the community from poor project delivery

Professionals Australia has for a long time advocated that high standards of conduct and practice are vital to keeping our communities safe and engineering as a profession, strong. The standard of professionalism among engineers must be high to ensure competent practice, ethical conduct, maximum economic benefit and most importantly the safety of the community.

While the term "engineer" is protected in many of our major trading partners, in Australia it is a maze of poor regulation, reflecting the low priority we give to the enablers of innovation. In New South Wales, anyone can call themselves an engineer, and neither the engineering profession nor the community are protected by a registration scheme which ensures competence and enhances the integrity of the profession. Practicing doctors, lawyers, accountants and architects must be registered. We licence skilled trades, but do not require registration for the engineers who supervise them. The engineer who designs key elements of the project and oversees its execution is not required to be registered.

Government recognition of the engineering profession through a statutory scheme not only protects the community, it lifts the standing of the profession and gives it the value it deserves. In doing so, we will build its profile, driving interest in careers and industry. Registration of the profession and a statutory backing for its integrity is a sign of the standing it enjoys in the eyes of the government and the community. Registration of engineers is the next step forward for the engineering profession.

The NSW Parliament now has the opportunity to take this step, with a Notice of Motion currently before the Parliament.

That this House:

(1) Recognises the importance of qualified engineers and calls on the Government, in consultation with the key industry groups, to implement on a transitional phase, in basis, a required for all local government authorities to have a suitably qualified engineer.

(2) Calls on the Government to recognise engineers as a profession, through a state and national registration scheme, similar to Queensland and as raised at Council of Australian Governments in 2011 – 12.

(3) Supports cadetships for civil engineering across all Government projects, in order to ensure the long-term workforce capabilities.

This motion was originally moved on 12 August 2017 by Mr John Sidoti MP, Member for Drummoyne. It has subsequently been moved on a further four occasions by the Honourable Members for Campbelltown, Ballina, Orange and Wallsend.

Currently, Queensland is the only state with a registration scheme for engineers, under the Professional Engineers Act 2002 and the Professional Engineers Regulation 2003. In Victoria, the Engineers Registration Bill 2018 is currently before the Upper House. Other states and territories have committed to such registration schemes, leaving NSW the only state which is yet to take this step. Registration of engineers will protect the community and enhance safeguards, reduce engineering failures and cost overruns. We urge the New South Wales Government to move forward with this important step.

b. Engineers should be supported through the funding of continuing professional development (CPD) and reimbursement of engineer accreditation

Ongoing efficient project delivery requires management by qualified technical staff, with a strong knowledge of modern, best practice infrastructure. Continued CPD is integral to ensuring that engineering staff within State Government possess the skills required to efficiently deliver innovative infrastructure solutions for local communities. Provision of professional development within the public sector should serve as an example to the private sector, encouraging ongoing skill development in the profession.

c. State Government should support engineering cadetships and graduate programmes across all government projects to ensure the long-term workforce capabilities

Although future workforce capabilities within State Government is a priority, the government should also be concerned with the workforce in the private sector who are contracted by government to deliver projects and services. Many of these firms are not training adequate numbers of professional employees to ensure a sustainable workforce. This could ultimately affect government through a lack of competition in tenders and inflated wages.

The State Government should be encouraging workforce development in the private sector on certain projects, particularly larger projects funded by the State Government. Procurement policies could provide incentives for private sector to develop the workforce, including the employment of cadets and graduate engineers on all government projects over $20 million.

There are a range of additional options which could also be considered:

- Making the skills and competencies of the contractor's workforce one of the significant evaluation criteria for tender acceptance would encourage the private sector to demonstrate capacity and commitment to developing its professional workforce
- A workforce development plan should be required of all tenderers to all larger projects commissioned.
- A provisional sum of 1% could be included in certain projects to be spent on workforce development in the contractor, with the aim of generating transferable skills. The provisional sum may fund cadetships, apprenticeships and traineeships.

CONCLUSION

We appreciate the opportunity to make representations and share our views through this submission. Our members are committed to improving the planning and delivery of public works infrastructure in New South Wales and we welcome the opportunity to provide proposals which we believe will make vital improvements to infrastructure management. However, these improvements will not be realised without ensuring that the systems and skilled professionals are in place to enable the effective and efficient management of infrastructure investment.

With healthy budget surpluses and a record pipeline of infrastructure projects underway and planned, New South Wales has both the opportunity and the need to ensure the best possible outcomes for the people of New South Wales.

As has been seen elsewhere, the larger the project spend, the greater the waste. It is therefore critical that the government takes the necessary steps to ensure that its responsible agencies are equipped to best understand what infrastructure is required and to effectively manage its delivery in a timely and cost-effective way.

We believe our recommendations will go a long way to achieving this outcome.

Professionals Australia

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