

Framework for Establishing Effective Project Procurement

FOR THE NSW INFRASTRUCTURE PROGRAM

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The Procurement Framework

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1. Introduction

The NSW Government is delivering a record infrastructure pipeline. The State is planning to deliver numerous large, complex infrastructure projects comprising multiple contract packages. The projects are at a scale previously unseen, with the majority over \$1B and this includes:

- Roads and Motorways
- Rail and Metro projects
- Light Rail projects
- Dams, pipelines (new or major augmentations)
- Buildings or precincts with complex elements (complex design, technical specifications or uses, sensitive sites)

Achievement of the NSW Government's infrastructure objectives will demand rigorous cooperation between Government and industry.

Complexity of delivery is compounded by several key features – working in developed and congested locations with latent inground conditions (contamination and existing utilities), heritage considerations and impacts on multiple communities and stakeholder. In addition, multiple contracts present interface and sequencing risks and also the need to continue providing existing services in a disrupted environment.

The NSW Government released a 10 Point Commitment to the Construction Industry in 2018. In May 2021, Infrastructure NSW was directed by the NSW Government to prepare a framework containing best practice guidance for establishing effective procurement processes for large, complex infrastructure projects in this '*Framework for Establishing Effective Project Procurement*' (Procurement Framework) to take the 10 Point Commitment further.

The Procurement Framework sets out practices the NSW Government expects to be routinely applied on large, complex infrastructure projects. These practices are the default approach to large complex infrastructure projects procurement. There may be occasions where specific practices are not suited to the circumstances of a project, but these should be the exception. To get the balance right, this Framework prescribes an '*if not, why not*' approach. Where default practices are not applied on a large, complex infrastructure project, reasons must be set out, approved at senior levels of delivery agencies (i.e., Chief Executive or Secretary of the responsible agency) and reported to Government through the Infrastructure Investment Assurance Framework.

Outcomes and Requirements: The key intended outcomes of the Procurement Framework are to:

- Improve value for money to NSW citizens through increased competition, improved design and effective allocation of risk;
- Improve sustainability of the industry by intentionally broadening industry capacity and capability;
- Support delivery of the NSW Government's committed pipeline of projects.

Project teams are required to consider the default procurement practices outlined in the Procurement Framework during Business Case development and incorporate the proposed

approach to packaging, contracting and procurement (the Delivery Strategy) in the final Business Case before the decision to proceed with the project is made by the NSW Government. The Delivery Strategy must be supported by industry engagement and by appropriate early investigations where inground or above ground conditions are likely to increase or compound risk in delivery.

Projects teams are required to consider how the default practices outlined in the Framework can be used to improve outcomes with proponents or the preferred proponent, where projects and contract packages have already commenced procurement using approved Delivery Strategies.

Default practices must be applied on each project in a manner commensurate with the needs of the project. Where it is proposed that a practice is not to be applied, reasons must be submitted for approval in writing to the Deputy Secretary of the responsible agency. There is no one-size-fits-all approach to packaging, contracting and delivering projects and Secretaries must consider the appropriate approach for each project or program.

Delivery Strategies need to consider delivery experience and lessons learnt on completed projects and resources with relevant experience and capability must be in project teams from development stage.

The Infrastructure Investor Assurance Framework will be updated to incorporate the Framework within the assurance practices to provide confidence to the NSW Government that the projects are planned, procured and delivered in accordance with the Framework.

2. Effective Procurement

Effective procurement is established early in the project development phase when preferred options are analysed in the Business Case before the decision to proceed with the project is made. It requires a solid understanding of issues that can arise during delivery and how best to resolve.

Good procurement will both optimise the delivery of project outcomes, de-risk projects through design and early works and choose a suitable contracting approach to reflect a fair allocation of risk.

Best practice procurement must:

- Be supported by early investigations to identify risks and an effective risk analysis and risk management plan to inform packaging and contracting discussions with industry, preferably undertaken in development;
- Engage industry and advisors in the pre-procurement phase to identify likely costs, risks and contingencies and to confirm the market has the appetite, capability and capacity to deliver the goods and services required;
- Foster and support strategic engagement to develop industry capability and capacity;
- Be based on a shared understanding of key drivers, expected outcomes and objectives between the client and contractors, enabling them to align their efforts and work together collaboratively in partnership;
- Provide an opportunity for industry to inform design to de-risk delivery;
- Utilise early works packages to mitigate site and utility risks where appropriate;
- Specify the required environmental and social standards through the process, i.e. at early market engagements, in the key documentation (the terms of reference, as an evaluation criteria etc.);
- Size works into packages to develop capability, use available industry capacity and to encourage a competitive bidding market to increase value for money;
- Include in the budget a risk allowance, using a probabilistic assessment of known risks included in the risk register, and a deterministic contingency allowance, to cover unknown or strategic risks;
- Allocate risk to the party best able to manage it. This must be based on an understanding of the risks best managed internally and the risks the market can better manage externally;
- Utilise open book, target cost and incentivised cost approaches for risks that cannot be efficiently priced and/or transferred to the private sector;
- Adopt and comply with a clear and transparent procurement process (including approvals and assurance);
- Recognise shared reputational impacts, benefits, risks and rewards.

3. If not, why not: engage with industry early

Pre-procurement engagement with industry (including talking to potential suppliers) must be undertaken, it is best practice and helps to maximise value for money from the resulting procurement. There are also cases where outcomes are maximised by engaging directly with a single supplier – for such cases please refer to the Unsolicited Proposal Guidelines (https://www.nsw.gov.au/sites/default/files/2020-05/Unsolicited_Proposals_Guide.pdf).

Successful market engagement allows the contractor market to begin planning their tender resources, forming consortia and engaging subcontractors or designers to get themselves ready to bid. It also enables the client agency/ State Owned Corporation (SOC) to identify potential risks in its packaging strategy.

Early contractor engagement in advance of the procurement process can allow constructability input into preferred solutions and reference designs as well as the proposed delivery approach but should be undertaken efficiently over a defined period commensurate with the requirements of the project to avoid unwarranted costs or delay.

3.1 Default Practices

Practice 1: Use early contractor engagement (e.g., engage with industry pre-procurement and during the procurement process). Early engagement can contribute to identifying the most effective delivery solutions. Engagement must be early enough to influence preferred solutions and reference designs as well as proposed delivery approach and must be undertaken efficiently over a defined period commensurate with the requirements of the project to avoid unwarranted costs or delays

Practice 2: Include proposed contract terms and risk allocation in early engagement with industry. Engagement must identify, mitigate and nominate risks that cannot be readily quantified or priced in lump sums

3.2 Key considerations

- Has the agency/SOC allowed enough time in the schedule for meaningful market engagement? e.g. to allow time for joint ventures/consortia to form, particularly involving international and local bidders.
- Has the agency/SOC analysed their need against other projects in procurement in NSW and the market's capacity and capability to supply in the required timeframes?

- Does the agency/SOC have an initial understanding of the market appetite, where industry can add most value and their preferred allocation of risk? Can risks be mitigated or quantified through investigations or other activities?
- Has the agency/SOC tested the outline packaging and contracting strategy with the market and does the procurement process enable the agency/SOC to engage with a wide range of industry providers including second tier/sub-tier supply chain members and subcontractors and set out how they will be engaged through the procurement?
- Has the agency/SOC considered a variety of market engagement methods? e.g. meetings with the market, issuing requests for information, early contractor involvement?
- If market appetite is lower than expected, does the agency/SOC know why? Having found out the reasons, how far is the agency/SOC willing to go to de-risk the project? e.g. allowing a longer procurement schedule to allow joint ventures and consortia to form, avoiding changes mid-way through the procurement process etc.

4. If not, why not: seek contractor input early in the design process

The most common cause of poor business case development, and subsequently poor procurements is inadequate scope development. The *Scope for Improvement* report prepared by Blake Dawson with Infrastructure Partnerships Australia and the Australian Constructors Association regularly identifies scoping inadequacies as attributing to cost overruns (61%), delayed completion (58%) and disputes (30%).

Roads Australia (September 2020) has found that:

- The time available during the design phase for most big projects is often not adequate for design firms to innovate or explore better engineering solutions
- Governments do not engage with industry early enough in the design stage
- Current procurement models which apply 'hard edged' risk transfer can often result in adversarial approaches to risk and issue management on projects which are counterproductive to the objective of efficient project delivery. In the worst cases, they can lead to significant and complex legal disputes which ultimately create a lose-lose scenario

4.1 Default Practices

Practice 3: Optimise the State's role in advancing design of projects with tenderers to levels that avoid duplication of design effort (incorporating early contractor participation and promoting design challenge to incorporate innovation), without eroding the intended allocation of risk

4.2 Key considerations

- What early actions can an agency undertake to allow it to design to greater detail before tender?
 - What opportunity/benefit is there for the contractors to contribute to design?
 - Are there mechanisms in place for industry to provide constructability input to designs before the finalisation of the concept design?
- Who will own the design and will there be a transfer - if so when will this happen?
- Can additional time be devoted to the design phase to help foster innovation and improve project outcomes?
- Is there value in separating the design and construction of the project in two separate packages?
- Did the design risks inform the contracting strategies?

5. If not, why not: facilitate early works packages to de-risk delivery

Commercial pressures, access to information, latent conditions not visible or known can lead to contractors not adequately assessing risks, leaving them with significant financial exposure to large, complex infrastructure projects that they have tendered for. This raises the risk of significant cost overruns, delays due to contractual disputes, and significant losses for contractors in the delivery phase.

More comprehensive early works can lay the foundation for a more complete joint understanding of risks by government and industry, better risk management and less chance of commercial dispute.

Designation of packages that can be undertaken prior to the commencement of main works that address common risks, such as removal of existing assets, relocation of utilities and investigation of in ground conditions, can assist in expediting delivery timeframes and de-risking the site ahead of main works activities. In the case of public private partnerships, these works are undertaken as “State works” that fall outside the scope of the PPP or main contract.

Utilisation of existing pre-qualified panels to appoint early works contractors on an open-book reimbursable basis can also assist with speed to market, reducing bid costs and developing a sustainable pipeline of work for tier 2 and tier 3 contractors.

5.1 Default Practices

Practice 4: Designate work packages that can be undertaken prior to the commencement of main works that address common risks, such as removal of existing assets, relocation of utilities and investigation of in ground conditions

Practice 5: To expedite projects, utilise existing pre-qualified panels to appoint early works contractors for early works. Where early works cannot be reliably quantified and priced prior to commencement, this may be done on an open-book reimbursable basis, with selection based mainly on program, margins and preliminaries

5.2 Key considerations

- Is the early works package informed by the early market engagement and market feedback?
- Do the early works packages separate and mitigate risks from the main works?
- Do the contractors have the skills and capabilities required for the early works, so they can price themselves competitively and the agency/SOC has confidence in their ability to perform?
- Are the packages of work structured so that they can be easily commissioned and transferred to the main works contractor?

- Has the agency/SOC considered the soft (non-contractual) and hard (contractual) interfaces between early works and main works?
- To what extent does the nature of early works determine the approach in the main works contract (such as entry points for tunnelling)?
- Is there a case for the early works package to be undertaken by or after engagement with potential main works contractors?

6. If not, why not: size project packages to attract competition

Sizing contract packages across the NSW portfolio is a key method to develop capability, use available capacity and increase competition. In such cases, packages can be sized to be more readily priced and managed by either tier 2 contractors (typically up to \$300m to \$500m) or joint ventures between tier 1 and tier 2 contractors.

The aim of each procurement process should be to bring individual contracts within the capacities of the market to drive value-creating competition. This may involve considering the structure of works packages, reducing their size or risk profile to suit market depth, capacities and capabilities.

In some instances, the scale of works packages inhibit participation by Tier 2 and 3 contractors, thereby limiting competition on a project that would otherwise be within the skills range and capability of these businesses.

6.1 Default Practices

Practice 6: Size contract packages across the NSW portfolio to facilitate competitive bids from a wide range of participants. To utilise the full capacity of the construction market, offer tender packages capable of being more readily priced and managed by either tier 2 contractors or joint ventures between Tier 1 and Tier 2 contractors. The dollar value of the package may vary depending on the nature of works and form of procurement and risk allocation in the contract

6.2 Key considerations

- Have multiple packages of works been considered for this project?
- Are the work package sizes appropriate to drive market appetite and competitive bidding?
- Has the feedback from the market engagement informed the packaging strategy?
- Does the packaging strategy encompass the entire scope?
- Has the agency/SOC considered the soft (non-contractual) and hard (contractual) interfaces between packages?

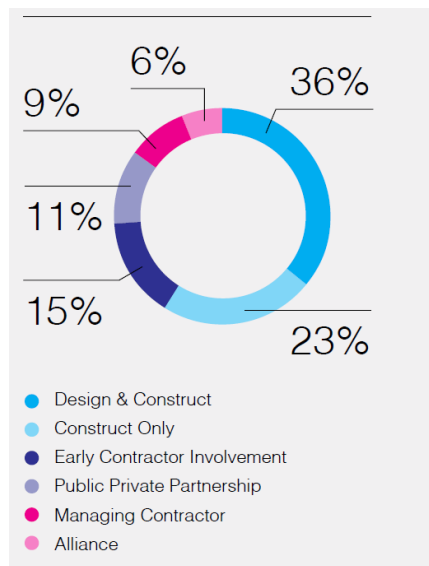
- Does the agency/SOC have the skills and resources to manage the technical /commercial /operational interfaces that the packaging strategy will create?
- When the packaging strategy changes, does the agency/SOC go back to the market for input to test its appetite and arrange an assurance review to test the updated strategy?
- Is there an open dialogue with the contractors throughout development and delivery?
- Are the packages of work structured so that they can be readily commissioned and transferred at the start of operation?

7. If not, why not: increase use of open book/ target costs and standard contracts

The NSW Government Action Plan: A 10 Point Commitment to the Construction Sector commits to working towards procuring and managing contracts in a more collaborative way, including:

- Move away from a reliance on fixed price, lump sum procurement methods, and be open to collaborative contracting models.
- Adopt expedited engagement processes like Early Contractor Involvement (ECI) where a project’s risk profile justifies it and where it saves time and resources without sacrificing value for money.

Despite this commitment, the 2020 Infrastructure NSW Trends and Insights 2020 Report shows that the majority of High-Profile High-Risk projects continue to be delivered via lump sum/fixed price contracts:



7.1 Default Practices

Practice 7: Where integration is a key risk and to the extent possible, maintain consistency and simplicity of contracts across relevant projects

Practice 8: Utilise open book and/or target cost mechanisms for elements of projects where a firm price for that element cannot realistically be determined or efficiently priced in a tender process (these elements may include contamination, utility relocations/utility authority approvals). Where this method is applied, the approach should include mechanisms to firm up those elements as the project progresses and provide value for money to taxpayers

Practice 9: Ensure that risk allocation between client and head contractor is passed down to subcontractors wherever practicable.

Practice 10: Reward innovation and productivity enhancing measures that save taxpayers money or deliver better outcomes with incentives, including on more traditional forms of contract. Incentives should address areas where performance exceeds minimum requirements of the contract specification, such as managing interfaces with other works, early completion or supporting strong community and stakeholder outcomes.

7.2 Key considerations

- Which elements of the contract cannot be realistically priced in a lump sum? How could those costs be revealed and firmed up over the course of a contract?
- Is the form of contract appropriate to manage the risk and reward innovation and productivity enhancing measures by the delivery partner?
- Does the market understand the form of contract?
- Will the incentives and collaboration tools encourage behaviours that will realise the benefits?
- Does the contracting strategy complement the packaging strategy?
- Does the contracting strategy cover all physical and contractual interfaces?
- Is the agency/SOC's organisational structure sufficient to effectively administer the proposed contracting strategy?

- During the contract period, is it clear how the project is managed to control costs and avoid/resolve disputes?

8. If not, why not: include sufficient risk allowances in cost estimates

Single point cost estimates that exclude risk estimates for unknown and unknown risks drive poor outcomes in procurement by placing pressure on the project team to accept lower cost proposals rather than those that present the best value to the NSW Government. This in turn encourages contractors to bid low with an intention of making large claims later in the project. This can lead to adversarial, counterproductive relationships (particularly when combined with lump sum contracts or hard-edged risk transfer), cost overruns or legal action.

8.1 Default Practices

Practice 11: Project cost estimates to include a risk allowance based on a quantitative risk analysis of known risks contained in the risk register and deterministic contingency allowance to cover unknown or strategic risks.

8.2 Key considerations

- Is the risk register comprehensive, incorporating input from similar projects, industry, modelling and studies?
- What investigations, studies or other activities could be used to better quantify or mitigate identified risks?
- Has input been gained from industry around where they see the greatest risks and what investigations they would need to quantify the risks or support a realistic cost estimate?
- Can any of the risks be designed out, or mitigated through early works, prior to releasing the tender(s) for the main works?
- How do other recommendations in this Framework, such as early works, contractor design input, collaborative contracts or smaller project packages impact on the calculated risk allowance?

9. If not, why not: undertake tender processes that are efficient and cost-effective

There is tension between the timeframe required to scope, procure and commission major projects and the political and community desire to see progress. This is further exacerbated if there is an early announcement of a projects scope and cost. Please refer to “Timely Information on Infrastructure Projects – A Guide” for further information on what can be announced at each stage of the project life cycle to avoid early anchoring of costs and programs:

<https://www.infrastructure.nsw.gov.au/expert-advice/timely-information-on-infrastructure-projects/>

This tension puts pressure on governments to reduce planning and procurement timelines. In some cases, this has resulted in inadequate understanding and scoping of projects risks, or a misallocation of risk between parties. If there is insufficient time to undertake adequate due diligence on key risks such as site conditions, contamination, utility relocations and planning approvals and these risks are passed on to the private sector it is a recipe for cost overrun and litigation.

In the current market environment with a substantial project pipeline, most contractors would rather ‘lose early’ than ‘lose late’ due to the significant opportunity cost of bidding and the ability to refocus attention on other opportunities in the project pipeline.

With pressure on tender timeframes, the private sector is often facing:

- Truncated bidding timeframes which can limit the ability of new entrants to participate
- Significant information requests that have been unable to be tailored for the project due to truncated timeframes and are not material to the evaluation of bids
- Large bidder shortlists as the government attempts to ensure a competitive process
- Significant bidding costs

9.1 Default Practices

Practice 12: Undertake a holistic review of tender requirements and hence costs, including a review of plans and documents required of tenderers, to ensure that each has a genuine purpose in the selection of contractors and delivery of projects, and that they are really required at tender stage

Practice 13: Use realistic tender timetables, taking account of required due diligence, land acquisition, planning approvals, budget processes and the effect of other projects in the pipeline

Practice 14: Communicate realistic tender timetables, taking into consideration other projects in the pipeline, clearly to tenderers and stick to them. Where changes to timetable are necessary, contractors should be updated.

Practice 15: Move as soon as practicable but in stages to a smaller bidding field and preferred contractor. This facilitates direct engagement where open book processes are required, and also provides an environment for innovation and allows early release of unsuccessful contractors

Practice 16: Increase the State's role in stakeholder management and project communications with a view to reducing costs of bidding and ensuring that responsibilities are allocated to parties most able to manage outcomes. The respective roles should reflect the party best able to manage the risk

Practice 17: As far as practicable, use prequalification to reduce the number of times a contractor is required to submit its systems and plans. Where documents and plans are genuinely significant in evaluation, require submission at one stage only (EOI, RFT, negotiations with preferred, post contract award). In some cases, detailed plans need not be provided until a contractor is nominated as preferred or a contract is awarded. Insofar as plans are required at early stages, limit the detail required of bidders (which may include indexes or outlines only) and increase the State's role in producing draft documentation and draft plans to reduce the requirements sought from tenderers

Practice 18: Recognise international experience of international contractors and key personnel, subject to those contractors (1) genuinely bringing people, systems and skills into the market to support projects (2) providing bonding or guarantees that can be relied upon and easily drawn if needed and (3) partnering with domestic tier 1 and tier 2 contractors as another way to grow the market

Practice 19: Defer projects where tender results do not yield value for money, rather than continue with processes that cost participants money but are unlikely to yield a satisfactory result

9.2 Key considerations

- Does the tender approach proposed factor in market feedback and the decisions on packaging and contracting?
- Does the tender approach allow for international contractors to be able to participate in the tender or do the tender requirements exclude them?
- Is there enough time provided in the tender timetable given due diligence, land acquisition and approval requirements?
- Is there a clear link between bid information requests and bid evaluation criteria?
- Is the information requested in the bid documents repeated between Registration of Interest, Expression of Interest and tenders?