AUSTRALASIAN RAILWAY ASSOCIATION

Tendering Framework

A Best Practice Guide to Rolling Stock and Signalling Tendering in the Australian Rail Industry

2020

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Introduction

The railway industry requires relatively specialist, scarce and high value technical skills. This is particularly true in the areas of rolling stock and signalling. The typical procurement process requires high levels of access to the most skilled of these specialists.

Relative to the last 40 years of rail investment activity, Australia currently has a significant pipeline of current and forecast rail infrastructure projects. There are clear signs that the industry faces capacity challenges if these projects are to be delivered as anticipated. Resources consumed in the procurement process are therefore taken away from the industry's capacity to deliver. Utilising these scarce resources more efficiently (on productive and value adding outcomes) is vital in order to get the best outcomes for upcoming rail projects.

Further, Australia is competing for investment in a global marketplace. Suppliers will be more willing to invest their resources where they find procurement practices efficient, reasonable and predictable. Markets where procurement practices are seen as inefficient and expensive, where tenders are either not awarded or are significantly delayed, or where the scope or risk profile changes significantly after the initial decision to bid is made, are likely to be seen as unattractive.

The Australasian Railway Association (ARA) notes that Australia's tendering practices are found to be significantly costlier and more time consuming compared to international benchmarks. The tendering costs in Australia are estimated to be around 1-2% of a project's total cost, at least double the world benchmarks of 0.5%.[1] Increased tender costs immediately reflect in project pricing, so reducing costs of tendering should be important to all parties. High tender costs also increase the risk profile for tenderers and thereby tend to discourage participation.

The ARA therefore proposes that significant benefits could be realised if improvements were made to current Australian industry procurement practices. Substantial improvements can be achieved through more streamlined and consistent tender processes that improve efficiencies for both suppliers and purchasers, from pre-qualification right through to contract award.

In particular, to ensure that there is an efficient tender process that minimises the consumption of resources on redundant and non-productive outcomes. This would also tend to reduce procurement cycle times, further reducing costs and releasing industry capacity for delivery. Further, tendering on the basis of appropriate and more standardised contracting models and risk allocation frameworks for delivery will also reduce tender development and negotiation costs. Creating such a consistent and well understood delivery environment will also lead to more successful project delivery outcomes.

The ARA commends the recent procurement related initiative in NSW, embodied in the NSW Government Action Plan[2] and the commitment to:

- reduce the credentials requirements for firms with a proven track record and rely instead on streamlined prequalification schemes for contractors, tiered according to their size and capacity;
- review existing prequalification schemes to ensure they focus on capacity and capability and do not impose unnecessary costs and administrative burdens on suppliers; and
- minimise the number of project-specific plans bidders are required to generate and submit prior to the selection of a preferred tenderer.

The ARA believes that all states should adopt similar principles.

Inevitably, the benefits arising from any process optimisation and standardisation are multiplied when adopted across Australia's procurement agencies. The ARA therefore supports the convergence and the maximum practical standardisation of procurement practices on a national basis as an urgent and worthwhile objective.

Under the auspices of its Rail Industry Group, the ARA has therefore convened an expert committee of suppliers, consultants and other interested parties to make specific recommendations for improvement. These are outlined in the remainder of this document.

1 Rail Express, The Sustainability of Rail Contracting in Australia, 2012.

2 NSW Government Action Plan, June 2018, 'A ten point commitment to the construction sector'.

Opportunities for Efficiency Gains

Market Sounding and Pre-project Industry Engagement

Market sounding and similar pre-project industry engagement are both good practice and widely supported by the supply industry. The main concerns are that such processes are sometimes inappropriately complex and 'one way', ie more for the benefit of the purchaser.

Recommendation:

1. **The intent should not be to obtain intellectual property or 'free consultancy'**
2. **Submission requirements should be minimal and flexible, requiring limited effort to participate**
3. **Be open about the objectives of the project and the relative significance of the intended evaluation criteria. In particular, do not unrealistically emphasise non-price evaluation criteria if price factors will dominate the purchase decision**
4. **Engagement should include the opportunity for face-to-face meetings to provide additional context on any submitted materials**

Pre-qualification

The typical procurement process includes either a distinct pre-qualification phase or a requirement to supply equivalent information within the main Request for Proposal (RFP) document set. It establishes the supplier's qualifications, experience and capacity to undertake the works.

Pre-qualification itself is a worthwhile and valued practice in principle. It ultimately reduces the effort and investment of all parties involved by ensuring only qualified suppliers with a reasonable likelihood of ultimate success proceed to the RFP stage.

However, it should be an efficient process. In general the information required in such pre-qualification processes is highly repetitive in content, but frequently varies in format. It still requires effort to compile and submit. The effort is compounded by differences in requirements across Australian purchasers, despite the objectives being similar.

Currently, a number of state governments and other purchasers have some sort of a pre-qualification process. Further streamlining can be made to ensure that the pre-qualification process is not duplicated but rather aspects should be harmonised across purchasers. In some circumstances it is evident that purchasers with an established pre-qualification process are not leveraging it to its fullest potential, nor integrating some of the best practices of pre-qualification to make the process more effective. Furthermore, there is an opportunity for these parties with an established pre-qualification process to collaborate with each other to incorporate these best practices.

Significant cost savings could be achieved with a national pre-qualification system. An example of this would be the deployment of a system similar to the Metro Trains Melbourne Rail Industry Supplier Qualification Scheme (RISQS).

Another successful example would be of the UK's Rail Industry Supplier Accreditation Services (RISAS), which provides an independent assessment of a tendering company's capability. RISAS assesses the adequacy of key suppliers' procedures, practices and competence to manage risks which arise from the specialist nature of railway industry applications. These assessments are done at the early stages of the process, rather than at the later stages where changes would be less practical

Another example of a national approach is the South African Government, which maintains the Central Supplier Database (CSD) of organisations, institutions and individuals that can provide goods and services to the South African Government. The CSD serves as the single source of key supplier information for organs of state, providing consolidated, accurate, up-to-date, complete and verified supplier information. The central government procures through a so-called "supply-chain management" process to streamline the buying procedures of national, provincial, local and state-owned companies. This approach reduces the need for these key suppliers to provide generic information, thus allowing suppliers more time to focus on providing the goods and services itself.

Recommendation:

5. **A national pre-qualification scheme is needed. Data should be provided once and for all tenders, with periodic update and renewal. Qualified suppliers should only need to provide their registration number and confirmation that no material change has occurred since registration**

Probity Management

Careful consideration of all aspects of probity is a given in any tendering situation. However, some interpretations have led to excessive costs and constraints on those tendering. For example;

- The requirement for corporate non-disclosure agreements to be signed as a deed by company directors is considered excessive for tendering purposes. For international companies with off-site directors it sometimes introduces delays in obtaining tender documents

  Some purchasers require such deeds to be resubmitted at every stage of a tender process (pre-qualification, ECI, RFP, etc) and this appears excessive and inefficient.
- The requirement for individual (personal) deeds of confidentiality, imposes an administrative burden.

Recommendation:

6. **A corporate obligation to manage confidentiality (and conflict of interest) should be sufficient, perhaps with an index of staff covered**
7. **All such documents should only need to be signed by authorised company officers on behalf of the entire company and once for the entire process**

- Early Contractor Involvement (ECI) processes are often highly inefficient and ineffective because probity constraints mean the purchaser is unable to fully and openly engage in technical discussions.

  Providing multiple independent and expert teams is rarely feasible and introduces probity and equity issues of its own. Purchasers are often reluctant to answer supplier questions fully through a fear of creating an unfair competitive advantage, despite being willing to provide the same information to other bidders if they had only chosen to ask. In effect this denies the bidder who asked for the information a perfectly fair competitive advantage, and in the process denies the purchaser a better solution.

Recommendation:

8. **The use of ECI processes should be minimised in cases where the purchaser is unable to adequately resource their participation and engage in timely, open and effective discussions with the suppliers**

Where suppliers may be participating in tenders for multiple packages within an overall project, separation protocols are often invoked. This requires separate bidding teams and significant organisational and IT impact to satisfy. The rationale for this separation is rarely articulated and there is no opportunity to challenge the logic or consider whether alternative and more efficient methods would achieve a similar result.

Given the significant inefficiencies a probity regime can impose on the participating suppliers, the associated requirements should proceed from an objective basis, and consider the impact on all parties.

Recommendation:

9. **The probity process should start with a clear and published statement of the risks that the probity regime intends to address**
10. **Probity requirements are risk based, ie. they are the result of considering the probability and impact of the risks occurring, and ensure that the costs and the impact of the resultant mitigations on all parties are proportionate to the risks involved**

Early Contractor Involvement

Early Contractor Involvement (ECI) phases are increasingly popular with purchasers. However, it is an approach that has gained some notoriety for consuming significant industry resources, particularly when it is a competitive ECI process involving multiple suppliers.

Although some token amount is sometimes offered to purchase the supplier's intellectual property generated as part of the ECI phase, such recompense is typically well below the fair market value of that work. For example, the recompense is often inconsistent with the typical industry benchmark hourly rates for equivalent work. A particular concern is the risk of significant scope and timing changes during the subsequent process and the resulting additional cost impact on the participating suppliers. Having entered the ECI process, the supplier is committed and has limited ability to successfully control those additional costs whilst still meeting their ECI obligations.

The purchaser should consider whether the requirements are sufficiently stable to justify a fixed price ECI approach at the outset anyway.

Recommendation:

11. **Purchasers should not initiate an ECI process without first ensuring the intended requirements are realistically researched and stable**
12. **There should be fair recompense for any intellectual property generated as part of the ECI or any other phase of the tender**
13. **There should be a fair and reasonable variation process for additional recompense for significant scope changes or time extension during the ECI or the subsequent tender process**

Standardised Terms and Conditions

One of the key areas of effort required in any procurement process is achieving agreement between the purchaser and supplier on terms and conditions. In some cases, it can take up to six months to achieve agreement. The quickest contracts are achieved where a contract re-uses a set of terms and conditions to which both parties have already agreed. A standardised set of general terms and conditions would assist in achieving a more streamlined and efficient tendering process. By having an established agreed set of base terms and conditions across purchasers, suppliers will be able to focus on the more vital aspects of the contract, being on the project itself. This would potentially help reduce time, cost and effort required for any project.

When proposing a standardised contract, any proposed customisations can be identified separately by both parties and can more easily be assessed for review by the other side. It is important that the standard set of terms and conditions proposed be fair to both parties, which would minimise the potential for customisations.

Recommendation:

14. **A standardised base set of terms and conditions should be used for all rail contracts in Australia**

Contract Models and Risk Mitigation

The tendering process, contract models and risk mitigation are inextricably linked. However, the long-standing principle that "the person best able to manage the risk should take the risk" is not always applied in today's commercial environment. Not infrequently, contractors are exposed to some risks over which they have little or no control – for example, delayed events (caused by adverse weather conditions and the like), site conditions, design errors, ambiguities and delayed approvals all fall into this category. The biggest impact regarding risk mitigation of late has been the changes to design standards midway through a project and the inappropriate burden of risk and costs that the contractor is being required to bear.

In many cases a single party cannot reasonably manage the risk but it is allocated regardless. Where a risk cannot be realistically controlled by a single party, this needs to be recognised. Some mechanism for the sharing or subdivision of the risk should be incorporated.

The key issue is to avoid unrealistic expectations that can lead to adversarial relationships and to the detriment of a successful project. There should be a critical examination of risks that may arise and then they must be allocated fairly and realistically. Risks need to be appropriately assessed, with probability accurately calculated.

Easier said than done. The Productivity Commission recommends for larger and more complex projects, government clients should pre-test the market to gain insights into possible savings from packaging the project into smaller components, and reducing the level of risk borne by any one contractor.

In addition, risk transference inadvertently hinders innovation opportunities and in turn restricts purchasers from reducing whole of life costs and the maximum potential performance of the asset.

Recommendation:

15. **The NSW Government's Action Plan "A 10-point commitment to the Construction Sector" should be the benchmark for tendering, development of contracting models and the associated allocation of risk**

Harmonisation of Specifications

One of ARA's leading campaigns over recent years has been to advocate for the harmonisation of specifications. RISSB has collaboratively developed multiple standards but with limited uptake in actual procurement usage. These have included:

- reducing purchasing costs through volume effects; and
- reducing tendering costs and time through common reusable responses. Similarly for evaluation costs.

Recommendation:

16. **Adoption of common and internationally recognised standards where available. Where a local variant is essential it should be nationally applied and controlled by RISSB**

Formatting of Tender Documents

Tenders often contain large volumes of information. How this is managed can often help or hinder the ability of the supplier to efficiently download and read the documents, and share them with experts in the organisation for review and response.

The broad application of Digital Rights Management (ie. Ansarada etc) to tender documentation is constraining given the existence of confidentiality obligations and the nature of most of the documentation affected. This is because it:

- makes documents difficult and slow to handle;
- precludes copying and pasting content into submissions;
- is often unsuitable for direct completion of forms as required by the tender itself;
- requires constant connection to the internet – a constraint on team members working whilst offsite; and
- is actually less effective than may be imagined as unauthorised tools exist to remove DRM, or the documents may simply be printed to a PDF file. Suppliers should not be incentivised to do this.

Frequently documents are provided in PDF format rather than their native editable format. This requires documents to be manually recreated before updates can be made.

Recommendation:

17. **The use of DRM should be justified on a case-by-case basis and restricted to only the most genuinely sensitive documents that will not significantly impact the efficiency of the supplier's submission. Documents that the supplier may need to edit should be provided in the native editable format by default**

Compliance Management

The response to any tender requires a detailed analysis of the purchaser's requirements:

- the supplier must assure themselves that their obligations are fully understood and costed; and
- the purchaser must also understand the offer.

Typically, this results in the provision of a Statement of Compliance as an integral part of the submitted offer, whether or not the purchaser specifically requests it.

It is rare that compliance is total does not require further explanation. In some cases, full compliance may be offered but the manner of compliance is specific and integral to the offer.

For example, the purchaser requirement may be to supply a widget, and the supplier may comply by offering a green widget. It is still a compliant Widget as required but how the supplier complies is a necessary condition of the offer. It is a green widget, not any other colour. Therefore the supplier will provide a compliant but constrained response, ie. "We comply, the widget will be green"

However, there is often confusion and debate about whether such a response represents full compliance or a category of non-compliance. This has particular significance when compliance is quantitively scored during tender revaluation. Any doubt or confusion could disadvantage either or both parties. The purchaser could be denied a compliant but cost effective solution, the supplier could be denied the order.

In this example, unless the requirement clearly states that the widget may be any colour, constraining its colour should still be regarded as full compliance. It is still a widget regardless. However, the binary nature of traditional compliance statements does not make this clear. It potentially leaves the purchaser in doubt about whether the provided constraint may actually contradict or conflict with the fundamental compliance intended by the supplier. A more pragmatic set of permitted compliance statements is required that recognises this scenario and provides clarity for all parties.

Recommendation:

18. **The permitted responses to statements of compliance should include the 'Fully Comply but in the Stated Manner' category**

A further compliance statement related issue involves the structure of the requirements specifications themselves. During delivery, formal Requirements Traceability is frequently a specific contract requirement. For example, using DOORS or a similar tool to ensure that each and every original requirement is transparently transferred through the various layers of design and test documentation in an auditable manner so that final compliance can be rigorously demonstrated.

However, tender specifications are frequently narrative in style with multiple and interwoven requirements within a single paragraph. Significant effort is required to unravel and extract the individual requirements so that an unambiguous compliance statement can be developed against each one. That unravelling process can subtly change the meaning of the extracted requirement, involving risks for the purchaser and the supplier. It is a task that must be formally repeated as one of the first post contract deliverables, leading to additional effort and potential disputes. It would be unnecessary if the original tender specification were provided as a well structured set of traceable requirements.

Recommendation:

19. **Tender specifications (functional requirements) should be issued in a format suitable for compliance analysis and subsequent traceability analysis, ie. one requirement per paragraph in an editable format suitable for direct input into a tool like DOORS**

Standardised Templates

Governments can also reduce bid costs to more efficient levels by streamlining compliance requirements, particularly where the information provided by firms is rarely a differentiating feature of the successful tenderer. Options include the development of standard form agreements for firms, management plan architectures or submission of compliance documentation as part of pre-qualification schemes[3].

Infrastructure NSW identified in its NSW Government Action Plan an aim to adopt a minimal set of sector-specific variations to standard contract forms, to be used only where strictly necessary and/or by agreement with bidders[4].

A standardisation of the management plan architecture across jurisdictions will also assist suppliers in that previously accepted plans can be easily adapted to the new opportunity reducing the overall cost in developing the plans during the tender phase.

Recommendation:

20. **The Australian rail industry welcomes standardised forms with minimal variations and recognises the extended benefits if all jurisdictions took the same approach or agreed to the same set of minimum standardised management plan architecture**

For example:

Code	Title
PMP	Project Management Plan
SPMP	Supplier's Privacy Management Plan
CommP	Communications Plan
StMP	Stakeholder Management Plan
AAP	Authorisation and Accreditation Plan
SMP	Work Health and Safety Management Plan
QMP	Quality Management Plan
CMP	Configuration Management Plan
RMP	Risk Management Plan
CoMP	Competency Management Plan
TrMP	Training Management Plan
VGMP	Vandalism and Graffiti Management Plan
ISMP	Incident and Security Management Plan
ESMP	Environment and Sustainability Management Plan
SEMP	System Engineering Management Plan
SSP	System Safety Plan
RAMP	Reliability Availability Maintainability (RAM) Plan
HFMP	Human Factors Management Plan
EMCP	Electromagnetic Compatibility (EMC) Management Plan
VP	Verification Plan
MPP	Manufacturing and Procurement Plan
ORP	Operational Readiness Plan
TrP	Transition Plan
AMP	Asset Management Plan
ISAP	Independent Safety Assessor (ISA) Plan

3 Deloitte Access Economics, 2015, 'Economic benefits of better procurement practices'.

4 NSW Government Action Plan, June 2018, 'A ten point commitment to the construction sector'.

Cost of Procuring Rolling Stock

The cost of planning, procuring, designing and building new trains can be substantial. Invariably, the level of costs incurred will depend on the nature of the order, the nature of the rolling stock being purchased and the practices of the manufacturer. Approximately half of whole of life costs is spent prior to operations, with planning and design typically accounting for 20% of whole of life costs, even for trains based on proven platforms, and the other 30% incurred during the build. This level of cost is not surprising given the relatively high levels of customisation typically applied to Australian trains. The remaining 50% of whole of life costs are incurred during operations. Even during operations, capital costs can account for over 50% of ongoing costs, incurred through changes in componentry, refurbishments and disposal[5].

Therefore, it's vital that the procurement process does not create unnecessary, adverse effects when planning the project that would impact the whole life performance of the asset. Significant cost savings are available if the procurement process is streamlined, simplified and transparent.

For the supplier, the costs of tendering such a project are particularly large, often running to many millions of dollars. This is of particular significance in Australia where the typical initial order for rolling stock is small by global standards. Even if the potential for follow on orders is expected to increase the total purchase to a more attractive level, such purchases carry significant uncertainty and all tender engineering costs must be applied to the initial order.

Therefore, where there is a requirement for new rolling stock, and there are two or more bidders contesting the work, a stipend should be provided to the non-successful tenderers to aid in cost recovery of the new train design costs associated with tendering.

Recommendation:

21. **Where there is a requirement for new rolling stock, and there are two or more bidders contesting the work, a stipend should routinely be provided to the non-successful tenderers to aid in cost recovery of the design costs associated with tendering**

5 Deloitte Access Economics, *Opportunities for Greater Passenger Rolling Stock Procurement Efficiency*, September 2013

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