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**WORKING WITH INDUSTRY SUPPLIERS TO PROVIDE
EQUITABLE & VALUE FOR MONEY PROJECT DELIVERY**

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C/-MACKAY CITY COUNCIL · PO BOX 41 · MACKAY · QLD 4740
TELEPHONE: 07 4968 4598 · FACSIMILE: 07 4968 4562
EMAIL: ipweaqcon@mackay.qld.gov.au

WORKING WITH INDUSTRY SUPPLIERS TO PROVIDE EQUITABLE & VALUE FOR MONEY PROJECT DELIVERY

Dennis Wogan <mailto:dennis.s.wogan@mainroads.qld.gov.au>
Executive Director (Capability & Delivery), Department of Main Roads, Queensland

Abstract

Main Roads is committed to the principles of equitable contracting and pursuit of value for money in the broader sense.

Concentration on risk transfer and lowest bid price in selection of suppliers has not resulted in the desired product quality, lowest whole of life costs or the ongoing development of skills needed for a sustainable and improving industry.

In recent times, Main Roads has revised its approach to the selection and management of engineering consultants, the choice of project delivery approaches and consequent contract types, and its prequalification and tenderer selection processes.

This paper outlines the background to these changes and the approaches now being adopted to achieve greater value for money in the delivery of projects.

Key Words: Project, Delivery, Equitable, Sustainability, Contract, Consultants, Selection, Prequalification

Introduction

Main Roads is currently working with the road construction industry and across government with the wider building and construction industry to improve the way in which projects are delivered. This activity is aimed at enhancing the value for money, in the broader sense, that the community receives from the investment in the delivery of a particular project.

This approach is supported by the State Purchasing Policy, which recognises the need to consider a number of factors in the procurement process, i.e.

- advancement of Government priorities;
- achieving value for money; and
- ensuring probity and accountability for outcomes.

In particular, the role and importance of non-price factors in choice of project delivery methods and in selection of suppliers (contractors) is clearly identified.

What Main Roads is seeking is a road construction industry which is characterised by the client and contractor working collaboratively to deliver projects that:

- achieve the quality of construction desired;

- are completed in the needed timeframe;
- meet value for money objectives based on the State Purchasing Policy and Government priorities;
- are completed efficiently at least cost to contractors and to Main Roads subject to the above; and
- provide adequate remuneration to industry in order for the industry to be both sustainable and capable of enhancing its ability to improve the quality of its products and the efficiency of its performance.

These objectives align with the philosophy expressed in the report prepared by Construction Queensland on "Wealth Creation through Equitable Asset Delivery":

This paper outlines a number of the initiatives being pursued by Main Roads to achieve the outcome of an equitable and value for money road construction industry. It covers areas such as:

- the engagement and management of engineering consultants
- prequalification
- appropriate project delivery choice; and
- tender selection.

The Engagement & Management of Engineering Consultants

One of the biggest issues facing the construction industry is the quality of design and its documentation. Figures of potential savings in the range of 10-15% have been quoted by industry researchers.

Consultation with the engineering profession indicated that selection processes that concentrated on purely price-based competition may be a contributing factor to poor performance.

The new process is aimed at preventing a fall in quality standards in planning, design, and other engineering fields, and avoiding long term risks to skills retention and continuity planning.

Development of the new Engineering Consultant System focussed on:

- the selection and reward processes;
- the quality of work supplied;
- the sharing of risk and responsibility in an atmosphere of teamwork and emphasis on results;
- ways to measure and report performance.

The system has three fundamental elements:

- setting up the brief to allow an appropriate risk and reward structure;
- selecting the right consultant;

- managing the consultancy to get the best result.

Underpinning Values

Main Roads officers will work with the consultant on the basis of informed client leadership, i.e. they will work in a relational way and be an integral part of the decision-making process on a progressive basis.

The quality of a consultancy will be gauged on the total life cost and quality of the finished product.

The consultancy will be structured to allow adequate remuneration and time to deliver the quality needed.

Project Brief

The project brief is one of the three fundamental elements of the new system. It is vitally important to clearly define the scope of the project with expected deliverables, time, and cost.

The preparation of an Estimate of Fees, based on a schedule of activities and/or work disciplines, is a critical aspect of the selection process, as it determines the selection method to be used.

The brief needs to be structured in a way that reflects any varying complexities and risk associated with the commission. This may result in separable activities being identified. Different remuneration bases may be required for the different activities within the brief.

The standard pricing methods adopted are:

- fixed fee when the work or work activity is well-defined and clearly understood
- time rate when the work cannot be clearly defined in scope and understanding
- cost and fixed fee when the scope and outcomes are reasonably clear and incentives or disincentives, based on performance are appropriate.

Consultant Selection

Prequalification

The scope of prequalification has been increased beyond road, bridge and hydraulic design areas, to encompass Traffic Engineering, Transport Planning, and Economic Studies.

A more rigorous assessment of skills and capability has been incorporated into the new system, to clearly identify consultant credentials for assessment.

The introduction of District prequalification registers (as a subset of the statewide register) will allow for situations where the selection criteria would clearly require local knowledge and local availability.

Selection Methods

A choice of selection methods allows the department to address the risks appropriate to the task and budgets, and ensure the required quality of outcome.

The expected fee, as estimated in preparing the project brief, determines whether to use a Sole Invitee (up to \$66,000) or the three consultants to make an Offer method (over \$66,000).

Sole Invitation

This approach is used for the following reasons:

- Expediency for urgent work;
- Administrative simplicity;
- Significant background knowledge possessed by the consultant; and
- Consultant is the only available source of expertise.

Value-Based Selection with Second Envelope

This approach is used when the requirements can be tightly specified, eg, a straightforward project without unknowns.

Assessment is made against non-price criteria in the first instance (the second envelopes are not opened before the non-price criteria have been assessed).

The second envelopes are then opened and the mean price calculated. Then a weighted price / non-price comparison is made, with the price index related to the mean price and not the lowest price.

Qualification-Based Selection with Second Envelope

This is used where the requirements cannot be tightly specified (producing higher risk).

The selection process is geared to selecting the consultant most qualified to deliver the requirements of the brief and then negotiating a fee. The negotiation starts from the information supplied in the second envelope.

Managing the Consultancy

The new system requires both parties to develop and maintain good relationships and communication. This ensures optimal outcomes for Main Roads, the consultant, the community and Government, by aligning the efforts of the parties and making best use of the expertise and resources available.

The representatives of the Principal and the consultant are required to work in a cooperative and supportive manner. The Principal will participate in the decision-making process through input at project meetings on a progressive basis.

It is expected that a partnering approach will be adopted in managing the commission.

The responsibility for the quality of technical engineering issues is clearly with the consultant. Some shared responsibility will exist for the appropriateness of technical solutions.

The process by which these outcomes are sought are by:

- Initial meeting that establishes a standing agenda to address relational issues as well as technical progress.

This meeting will establish Key Performance Indicators (KPIs) which relate to the ongoing health of relationships and communications between the parties.

These KPIs may include such aspects as:

- Openness and constructive communication;
 - Trustfulness and cooperation;
 - Working relations;
 - Teamwork and willingness to achieve project objectives.
- Ongoing management meetings that cover relationship management and project matters.

Relational issues will be addressed prior to discussion of technical issues and includes assessment and discussion of the relational KPIs established at the initial meeting.

This session is aimed at identifying and resolving any blockages or sticking points at the earliest opportunity.

The Project Management section of the meeting addresses project performance, administrative and quality issues.

Performance Reporting

The system requires two consultant performance reports to be prepared: after supply of contract documents, and after construction. These reports protect the department's interest, and provide the consultant with the opportunity to address problems before they affect their prequalification status.

Prequalification

For many years Main Roads has operated a prequalification system for prime engineering consultants and construction contractors for major works.

The major works prequalification systems acts as a coarse sieve to ensure that the pool of potential tenderers for any project generally has the ability to undertake projects with various ranges of size and complexity.

This system looks at areas of financial viability, experience, management systems such as quality, occupational health and safety and environmental and management arrangements such as organisational structure, project management and interface management.

It is being increasingly recognised that the system does not address all the non-price issues that impact on specific project imperatives, value for money and other government objectives such as regional development and the smart state. Greater use of non-price selection criteria will be made in future. This is discussed later in the paper.

The quality of product is also dependent on the quality of performance of the suppliers and subcontractors to the prime contractors. In recognition of this Main Roads is expanding and formalising a process of registration of specialised suppliers.

This process assesses the suppliers across a range of criteria covering:

- staff expertise (organisational and project levels)

- equipment capability and capacity
- management system
- evidence of capability

A consistent framework for registering specialist suppliers has been adopted across the department. The framework covers assessment criteria, registration and deregistration processes, performance assessment and appeals processes.

The range of products and services covered by the scheme will depend on the number of suppliers in the particular industry sector and its relative importance to the quality of the road or bridge project.

Current areas of registration being developed are:

- Asphalt
- Asphalt paving
- Steel and Aluminium Components
- Reinforcing and Stressing Steel
- Precast Concrete Elements
- Cement and Concrete Products

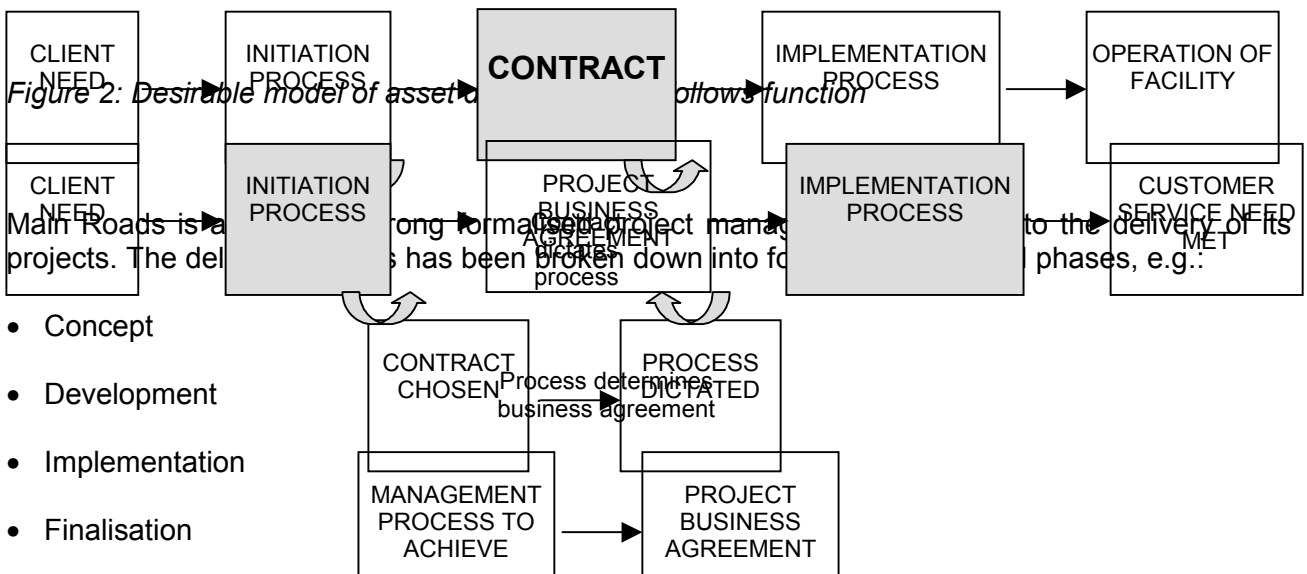
The department is working collaboratively with these industry areas to ensure mutual understanding and acceptance of the systems, assessment criteria and performance reporting arrangements. Performance assessment involves, at times, active hands on surveillance in this area and not a simple reliance on a paper trail which has characterised some quality assurance approaches in the past.

Project Delivery

There has been a tendency in the government sector of the road construction industry to adopt a form of contract and let this dictate the process for project delivery. There is a growing recognition that this is not the conceptually appropriate way. While a lot of road projects are similar and could end up with the same delivery type response we need to approach its determination in a different way. This has been epitomised in the work of Construction Queensland's "Wealth Creation through Equitable Asset Delivery".

It advocates a move away from allowing a preselected contract type to dictate project initiation implementation processes. This can result in a lack of risk appropriate to the particular project being considered or the creation of an inequitable relationship between clients, consultants and contractors. It advocates a reverse process, i.e. move from a situation depicted in figure 1 to one depicted by figure 2.

Figure 1: Strategy Dictated by Contract



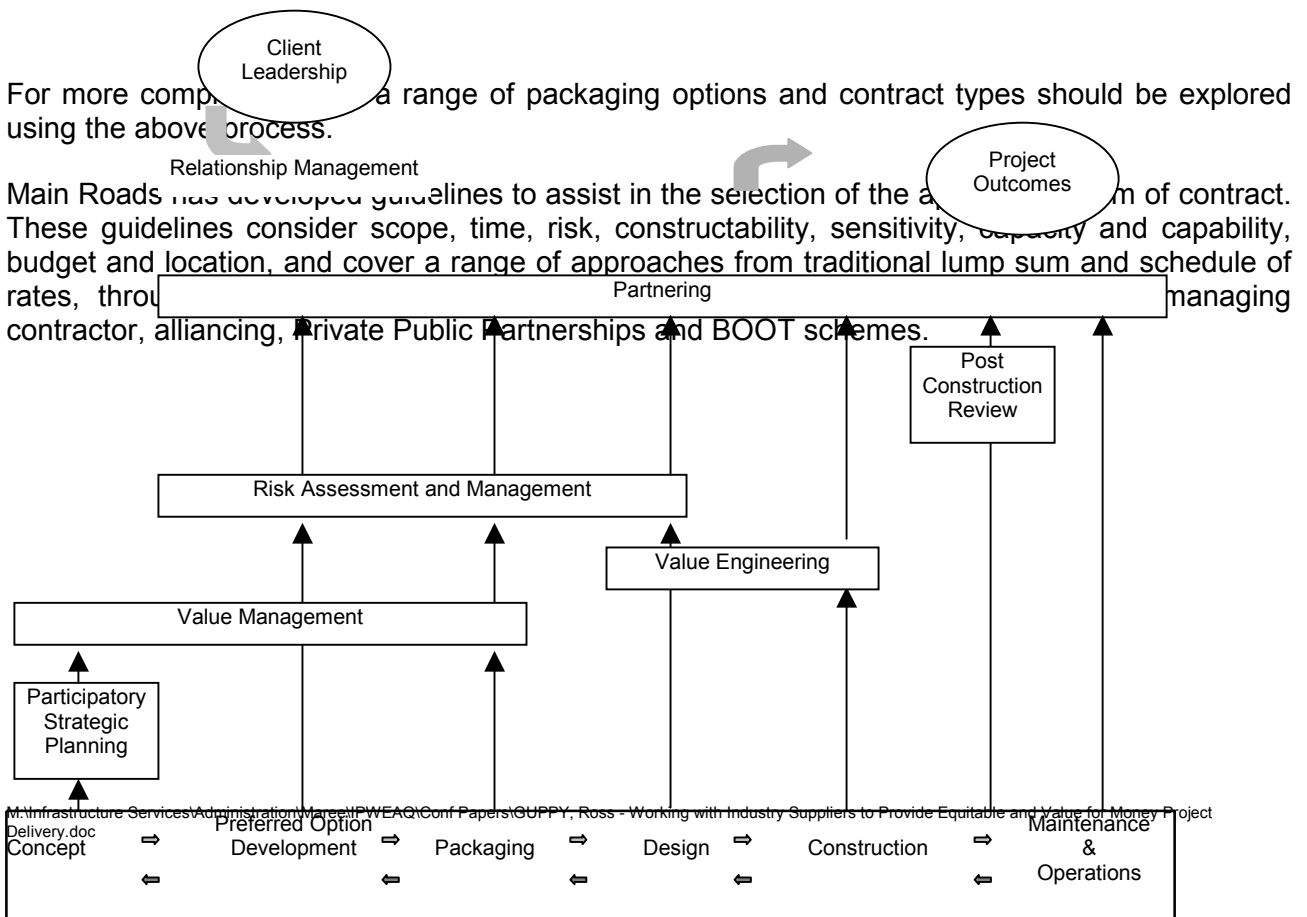
The delivery strategy is considered in both the concept and development phases.

Client leadership is critical to the successful outcome of the project. It involves a hands-on approach where the client, through espousing appropriate behaviours and actions, influences the supply chain to adopt a collaborative, group problem solving, best for project approach.

Integration of the supply chain at the appropriate times is highly beneficial.

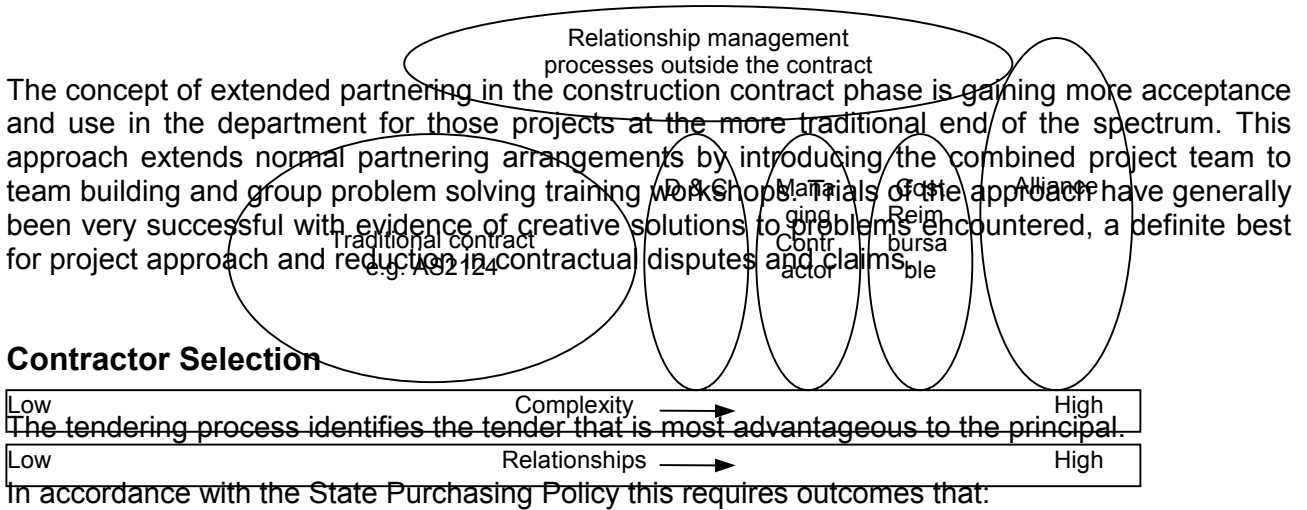
Figure 3 depicts this diagrammatically. The need for the use of the various techniques depends on the complexity of the project. However, a partnering approach is a fundamental component of the process.

Figure 3: Supply Chain Integration



In a broad sense this is summarised in figure 4.

Figure 4: Contract Complexity Relationship Spectrum



- advance the state government's five priorities;
- achieves value for money; and
- ensures probity and accountability.

Value for money includes more than the consideration of the tender price. It also includes non-cost factors such as fitness for purpose, quality, service and support, and whole of life costs including the internal processing costs of acquiring and maintaining the asset.

Implicit in this is the need to consider to what extent non-price factors should be considered in the selection process. For many small simple jobs these factors may be adequately addressed through the prequalification process. However, as the scope and complexity increases they may need to be built into the selection criteria for specific projects.

Our current thinking is that these non-price factors would fit into three categories:

- Project specific requirements not adequately covered by the prequalification system.
- Addressing government priorities.
- Industry cultural change initiatives that have not matured sufficiently to be incorporated in the prequalification system.

Critical project requirements may be better satisfied by contractors who demonstrate specific skills or experience directly relevant to the circumstances of a specific project such as specific traffic management challenges, community relationship factors or safety and environmental constraints.

Government priorities such as regional development and employment need to be considered. This may mean evaluation of the extent of proposed use of local suppliers and local labour. Often these cannot be meaningfully prescribed in objective conditions of tender but need to be related to the contractor's plans for the project. The Queensland Department of Public Works is influencing industry performance by using weightings of 2 to 5% for non-price criteria in this area.

The third area is one which may be subject to more debate. Main Roads has a clear agenda to influence industry to move to a more sustainable, equitable and collaborative level. This means we wish to work with contractors who bid a price which assumes a reasonable level of risk occurrence and treats its own suppliers in a reasonable and equitable way. We also desire to work with contractors who are prepared to work in a relational way to produce a win win outcome on projects. Contracts won on bids which reflect inadequate provision for contractor risk often result in poorer quality and contractual disputes, and greater short and long term costs to the client. This needs to be recognised in the tender selection process.

Main Roads is developing guidelines which indicate when any or all of these price factors should be included and how they will be evaluated in the assessment process. It is expected that they will start to come into play for more complex projects and more generally for projects beyond the \$3-5M range.

The guidelines consider two ways in which these factors can be addressed. One is by a two-stage process where the already prequalified pool is reduced to a small number of contractors based on the response to non-price criteria and then price only tenders are invited from this pool.

The other approach is a one-stage process where the tenderer submits two envelopes, one for non-price and a second for price. A weighting is assigned to price and non-price.

The approach adopted will depend on the scale and nature of the project. However, the cost to industry of tendering must be considered as well in deciding the approach and the size of the final pool in the two-stage alternative.

Significant cultural change is required by both the client and the contractor. The client will need to make assessments of qualitative factors and be prepared to substantiate that assessment. This will require additional time and effort. The contractor will need to look more closely at how they account for a wider range of activities in their bid price and compete on a better understanding of the outcomes the client is expecting from the way the project is delivered.

Conclusion

This paper has outlined some of the initiatives Main Roads is pursuing to improve the value for money the community receives from the delivery of its infrastructure projects and to encourage a more sustainable and equitable industry.

The principles underpinning these initiatives are fairly straightforward.

- The client must provide leadership and clearly set out what it expects and work with its suppliers relationally to achieve these outcomes.
- The supplier needs to understand the outcomes sought by the client and to price their work to provide these outcomes at a level which assumes that a sensible level of contractor's risk will eventuate.
- In assessing tenders the client needs to recognise that it will not achieve its outcomes unless the accepted tender price is adequate enough to cover the contractor's costs and provide a reasonable level of profit. Consideration of price alone will not necessarily evaluate this.
- When the above conditions are met the client and contractor need to work in a partnership arrangement to achieve a best for project outcome.

While these principles are fairly simple and obvious, there are considerable challenges for Main Roads to have the supporting behaviours understood and accepted across all sectors of the road construction industry. As a government agency Main Roads must ensure that its projects are delivered at efficient and competitive prices, and be able to demonstrate this. Industry must be challenged to improve efficiency and reduce costs but at the same time price its work at a level which allows industry sustainability, ongoing skills development, and improvement throughout the full supply chain.

The initiatives outlined are a part of a range of activities in the Main Roads' strategy to foster an industry where the client and contractor work collaboratively to deliver projects that:

- achieve the quality of construction desired;
- are completed in the needed timeframe;
- meet value for money objectives based on the State Purchasing Policy and Government priorities;
- are completed efficiently at least cost to contractors and to Main Roads subject to the above; and
- provide adequate remuneration to industry in order for the industry to be both sustainable and capable of enhancing its ability to improve the quality of its products and the efficiency of its performance.

Author Biography



Dennis Wogan is an Executive Director in the Queensland Department of Main Roads. His current area of responsibility covers the enhancement of the department's technical capability through its programs in R&D, technical training and technical knowledge transfer. He also has a key responsibility for improving the department's works delivery policies and systems including its contractual and prequalification systems for contractors and consultants, and works in close association with road construction industry bodies.

Postal Address: Dennis Wogan
Executive Director (Capability & Delivery)
Capability & Delivery Division
Department of Main Roads
GPO Box 1412
Brisbane Qld 4001

E-mail: <mailto:dennis.s.wogan@mainroads.qld.gov.au>