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**LOCAL GOVERNMENT AND MAIN ROADS WORKING
TOGETHER FOR QUEENSLAND ROAD USERS**

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LOCAL GOVERNMENT AND MAIN ROADS WORKING TOGETHER FOR QUEENSLAND ROAD USERS

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Abstract

Local Government and Main Roads are both faced with the challenge to provide Queenslanders with adequate roads that are safe, reliable and affordable. This is in an environment where road user expectations and demands are increasing and road funding is under pressure. The issue confronting both organisations is how to deliver value-for-money roads and satisfy government, road user and community expectations. This paper deals with two recent MR initiatives - project+ and improving road maintenance delivery through partnerships - both specifically aimed at ensuring road projects deliver the right solution, are affordable and meet expectations. Project+ provides a framework with supporting systems to identify the problem and manage project scope, cost, time and quality. Improving road maintenance delivery through partnerships focuses on how to strengthen collaboration and reduce administrative cost. The paper discusses key elements of each initiative and their relevance for local government, and suggests strategies for working together to progress them.

Key Words

Contract; Cooperation; Local Government; Maintenance; RMPC; Road Infrastructure; Project+; Project Management; Queensland Department of Main Roads

Introduction

- Local Government and Main Roads are both faced with the challenge to provide Queenslanders with adequate roads that are safe, reliable and affordable.
- Road user expectations are increasing in an environment where funds in real terms are diminishing.
- The challenge is how to provide an acceptable level of performance for a cost that represents value for money (VFM).
- This paper deals with two recent Main Roads initiatives specifically focussed at improving VFM for road projects and road maintenance activities.

Project +

Background

- This initiative relates to recent activities within MR to improve the reliability of project delivery, particularly in terms of outturn cost vs budget.

- The underlying issue is that needs far exceed budget provisions and so solutions must be carefully engineered to address the real issues, be appropriate for the circumstances and be affordable.

- Project+ is an initiative focussed on improving the way projects are developed and implemented. At its core is the application of a consistent project management methodology.

MR project management methodology

- Main Roads policy is that it will adopt a consistent approach to project management.
- The methodology is based on the premise that project success depends on managing a number of elements throughout the project lifecycle. The elements and their inter-relationship are shown in Fig.1.

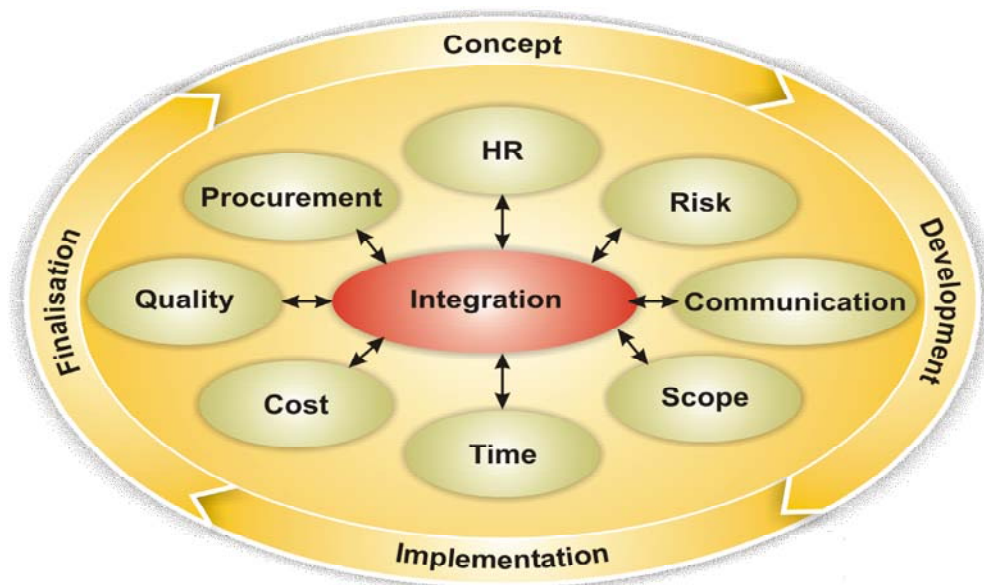


Figure 1. Project elements

- The project lifecycle is shown in Figure 2.

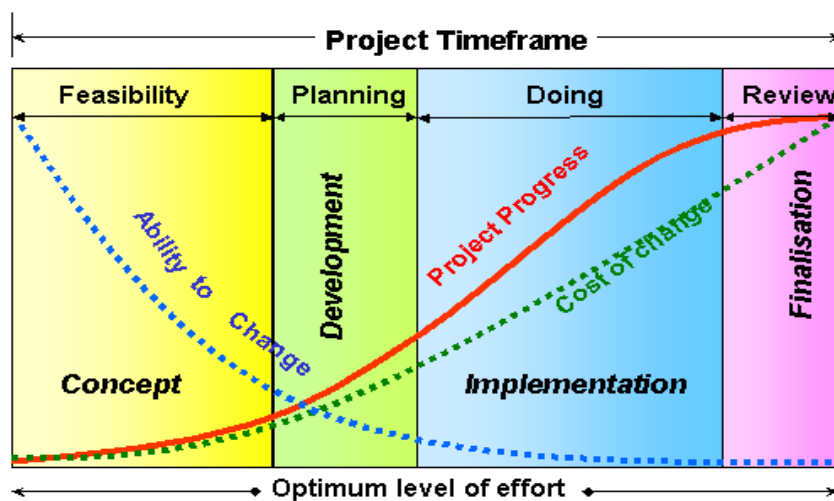


Figure 2. Project lifecycle

- The methodology is underpinned by the following project management principles:
 - **Planning:** plan, then do, in a focused set of sequential and progressive stages
 - **Reciprocal commitment:** between the sponsor and the project team to ensure a viable project
 - **Success:** measures for success (process/ outcome) defined and agreed upon in the concept phase.
 - **Trade-off:** project time, budget, quality and scope mutually consistent and attainable
 - **Control:** established policies and procedures for conduct and control of the project commitment
 - **Single-point responsibility:** single channel of communication between sponsor and project manager for all decisions affecting scope.
 - **Relational and learning culture:** provision of an informed, supportive and relational organisational environment for effective project management
- A key aspect of the methodology is the importance of developing and maintaining strong relationships between all the parties

The challenge

- Deciding where best to allocate funds comes from an assessment of demand in terms of achieving government objectives (eg regional development, safety, local access etc) and provision of performance standards (eg flood immunity etc) appropriate for the road in question.

The issue

- How to balance the competing demands and provide the right transport solutions that deliver VFM outcomes.

Current state of project delivery

- Increasing frequency of projects exceeding budget and scope.
- Underestimating the implications of:
 - complex environment – often dealing with conflicting requirements – interfaces/approvals beyond Main Roads' control
 - unclear project definition – objectives and functional requirements not identified - hence project scope (' the what') is not tied down
 - risk and its consequences
 - the work activities required to develop and deliver a project, particularly external approval processes
 - inconsistent estimating practices
 - sound project management.

- Projects are approved / committed on the basis of optimistic estimates (sometimes to get the best Benefit Cost Ratio).

The desired future state (where we need to be)

- Projects will exhibit:
 - excellent time and cost outcomes
 - excellent achievement of non-cost objectives
 - win:win for stakeholders
 - optimum lifecycle costs
 - enduring relationships and learning



Figure 3. Thomson River Bridge

The strategic shift

- All projects to be managed through a formal project management methodology.
- Projects eligible for entry to Main Roads' Roads Implementation Program must be supported by a business case.
- Risk is assessed and quantified in terms of likelihood and consequence across the project lifecycle.

- Designs are cost effective (design to a cost).



Figure 4. Flinders Highway 5.5m wide

- Design standards are adequate for the road class and function (fit for purpose).
- Estimates will be subject to formal approval and review processes.



Figure 5. Flinders Highway 8m wide

Choices to ensure VFM outcomes

- The key to a VFM outcome is to ensure that the following choices are carefully considered.
 1. Ensure that the problem is understood and defined eg. is the problem associated with the need to improve the operating efficiency for freight-efficient vehicles (FEVs) or is it safety etc.

2. Consider whether the outcome can be achieved through a change in use, provision of more capacity, installation of safety measures etc. Often the form of the solution will be through a consideration of a combination of these characteristics.
3. Develop the technical option that will best deliver the transport solution. Here the scope, functionality and likely cost (budget) of the technical solution is developed and tested for strategic fit in terms of meeting government objectives, priority and affordability (cost v funds available)
4. Determine the appropriate delivery method that will best manage the risks
5. Develop relationships that will facilitate effective delivery of the project

The importance of sound relationships

- Sound relationships, based on trust, with all parties working in good faith, form the basis of an *integrated* approach to project development and delivery.
- Main Roads has identified in its strategic plan that relationships, both internal and external, are built on shared values that are integral to success.
- Sound relationships will contribute to a no-blame culture with its emphasis on utilising innovation and intelligent risk-taking strategies to find optimum project solutions.
- Sound relationships allow the adoption/use of open-book accounting where all parties are fully aware of and commit to estimates, contingencies, allowances – and there are no surprises.
- Project+ emphasises the importance of trustworthy behaviour and open and honest communication.



Figure 6. Port Motorway Team Building

Progress to date

- A formal project management methodology is being implemented across Main Roads for all projects. This initiative is project+.
- A vertical slice of senior and middle managers has been formed to drive and guide the project+ strategic vision .
- Emphasis is on:
 - department-wide awareness/training in project+ processes

- clear problem definition, options analysis and project justification through a business case
- "new" estimating and preconstruction processes manuals
- implementation of formal risk management processes
- performing project and estimate reviews at regular stages throughout the project lifecycle
- formal competency-based project management training
- strengthening estimating capability
- commencement of benchmarking activities.

Key messages for LG

- The delivery of VFM projects is not negotiable.
- The application of consistent processes to manage the development and delivery of projects is the cornerstone for the reliable delivery of VFM projects.
- Project+ is the vehicle for consistent project and work management activities.
- The successful implementation of project+ is highly dependent on changing the organisational culture in Main Roads and local government.
- Main Roads is committed to building strong relationships with local government to efficiently deliver projects.

RMPC Review

Background

- The second initiative relates to a review of Road Maintenance Performance Contracts (RMPCs), which have been in operation for about 10 years. Their purpose was to improve the delivery and quality of maintenance through the introduction of a contract approach to the assessment, programming, planning and delivery of maintenance services by local government and Main Roads service providers.
- The "contract" arrangements recognised the variable nature of routine maintenance and were drafted to provide flexibility for the road owner and the service provider.
- The intent of the RMPC was and still remains to provide an adequate level of maintenance to ensure that roads are safe, functional for their circumstances (useable) and of a good appearance where this was needed.
- Main Roads has recently been reviewing its RMPC delivery in collaboration with its internal provider (RoadTek) and has identified key areas to improve the VFM delivery of maintenance services.

The challenge

- The underlying issues are not dissimilar to those associated with the delivery of road projects.

- Budgets are tight and so maintenance solutions must address priority needs, be suitable for the circumstances and affordable (that is, the cost reflects the budget).
- The issue is how to reduce cost, meet expectations and maintain the road system in a functional condition – fit for its intended purpose.

The issue

- How to drive the maintenance dollar further and maintain the flexibility needed to deal effectively with changing maintenance demands – improve VFM.

VFM

- The key is to understand what constitutes VFM and how to measure it.
- VFM maintenance occurs when:
 - roads provide a service that is safe and useable as per the road function..
 - costs are affordable in terms of the budget.



Figure 7. Laying hot-mix asphalt

- maintenance work is appropriate for the circumstances and meets the specified quality standards – not gold-plated or of a quality that requires rework.
- VFM can be measured through:
 - benchmarking
 - productivity of key activities
 - input costs and overhead and profit structures
 - outturn costs for key activities.
 - outturn cost vs budget

- safety record for workers, road users (motorists, pedestrians, cyclists) and the works
- network condition ie are the priorities right – safety, useability and appearance; is the standard adequate for the road function
- audit of management and work processes, material and product quality.

The current state of RMPC delivery

- The review has revealed that the current focus is predominantly on cost, not VFM.
- A direct consequence of this is a lack of trust between the parties that has manifested itself through:
 - a focus on maximising individual positions at the expense of the "main game"
 - carrying out maintenance activities at the expense of stewardship and proper project management
 - increased control and supervision with duplication of resources ("man marking"), not collaboration and joint problem solving (loss of flexibility)
 - over-specifying outputs (eg increasing numbers of supplementary specifications) and not seeking the right solution for the circumstances.

The desired future state (where we need to be)

- The desired position is to have a focus on VFM outcomes for the road user through:
 - enduring partnerships between the road system owner and contractors ie a risk embrace rather than risk transfer
 - alignment of goals and collaboration between the road system owner and contractors
 - contractors empowered to deliver the right solution
 - fair compensation for contractors.

The strategic shift

- The view is that the RMPC framework is sound and that the key to improving maintenance delivery centres on rebuilding relationships to re-establish an environment of trust and co-operation.
- The expectation is that this environment will allow existing organisational and structural differences between the parties to be resolved collaboratively and so open the way for VFM delivery of maintenance services.
- The strategies being considered are:
 - establishment of formal partnering arrangements, with an emphasis on agreed mutual objectives, a "one team" approach and joint problem-solving (solutions, not problems)
 - identification of organisational and structural blockages and actions to remove or mitigate them (ie resource sharing to remove duplication – "man marking")
 - exchange of key information (eg cost structures, overheads and profit margins)
 - implementation of joint benchmarking reviews

- rotation and training of key staff.

Features of the "new" RMPC relationship

- The desired relationship will have the following features:
 - overall strategic and operational management of RMPC through partnerships
 - information sharing and joint problem-solving through an open book approach to project management (eg time, cost, quality, scope etc)
 - equitable sharing of risk
 - best-for-project approach to resource allocation (ie integration and rotation into key roles).

Progress to date

- Actions underway or completed are:
 - clear definition of the problem
 - exchange of information on cost structures (including application of competitive neutrality charges)
 - review of risk allocation
 - joint review of RMPC documentation to remove constraints and enhance flexibility.

Key messages for LG

- Delivery of maintenance services is a balance between need/deficiency, priority (safety/useability/appearance) and affordability (cost vs budget) – VFM.
- The existing RMPC framework is sound; however the existing organisational structures and relationships are not aligned to delivery of VFM outcomes.
- The solution lies in establishing an environment where trust and trustworthiness is the norm.



Figure 8. Bruce Highway, North Queensland

Conclusions

- Local government and Main Roads have to work together if Queensland road users' expectations are to be met at a realistic level.
- Local government and Main Roads have to adopt an integrated approach to road construction and maintenance if they are to provide an acceptable level of performance that represents VFM.
- Strong relationships built on trust are a characteristic shared by the two initiatives outlined today.

- Main Roads acknowledges that its initiatives – project+ and RMPC – will depend on its ongoing commitment to working with local government for the benefit of Queensland road users.

Author biography

Derek Skinner is currently the Executive Director of the Queensland Department of Main Roads' Project Development office, which has been set up to facilitate the development of the department's capability to deliver projects within scope, time and budget. He holds a B.E.(Civil) and is a Registered Professional Engineer in Queensland.

Derek has worked with Main Roads for over 34 years. He has acquired a unique understanding of project development and delivery in Main Roads through his roles as Deputy District Engineer in regional centres, and project manager/project director of major projects.

As Director (Major Projects) and subsequently Executive Director (Project Management Services), Derek has been involved in the project management and delivery of a number of complex major projects. He has held significant roles in the Pacific Motorway and, more recently, the Port of Brisbane Motorway. A particular interest has been the implementation of alliance contracting in Main Roads.

In his current role, Derek has involvement in a range of significant projects across the state including Kuranda Range, Tugun Bypass and the Gateway motorway duplication. Derek's key focus is now on improving the reliability of Main Roads project delivery.

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