

Guidelines for Preparing MoT Business Cases

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Overview

In January 2006 the B.C. Ministry of Transportation (MoT) Capital Program Board Release #06-01 provided direction on the importance of business cases. The following excerpts underline their expectations:

The Board has significant concerns with respect to business case practices; including, but not limited to:

- *Projects being undertaken or proposed that have no business case;*
- *Significant revision to projects making them inconsistent with the business case justification;*
- *Business cases that do not demonstrate the merits of the investment or support proposed scope modifications or budget increases; and*
- *Limited analysis that does not withstand scrutiny.*

Business cases provide the foundation for a rational, defensible and transparent program development and implementation process. Business cases establish the basis for investment and must be incorporated into the life cycle of a project; from conception through implementation, to define investment drivers, objectives and outputs with respect to guiding to option selection, scope definition, budget requirements and implementation considerations and providing the basis for post-implementation reviews. Of particular interest is the linkage between expansion, rehabilitation and operating costs.

Business cases must be complete, representative and developed based on accepted practices. The business case is not restricted solely to economic indicators (i.e. Net Present Value, Benefit/Cost Ratio) as it is recognised it is not possible or appropriate to quantify all benefits, but the preponderance of the evidence presented must support the conclusions of the business case.

The responsibility for the preparation and submission of business cases and ensuring that recommendations are supported by, and consistent with the business case, lies with the project sponsor. There is also a need to satisfy federal business case requirements for projects that may be candidates for funding under federal cost sharing programs.

The expectation of the Capital Program Board is that business cases will be done and done well.

These “Guidelines for Preparing MoT Business Cases” are intended to assist project managers, MoT staff and consultants to prepare solid business cases. They consist of a general outline of required procedures, and information on MoT contact staff. Detailed Appendices contain specific information on how to prepare and present a business case.

Procedure for Preparing Business Cases

Developing a project for the Ministry's capital program requires planning, design, construction, and typically property acquisition. All these phases involve investing money, and consequently must be justified. A project business case is required to do this. It has to relate to all of the phases. Ideally it starts with planning and evolves through the subsequent phases. This is because the role of planning is to link problems to improvement options and to judge cost-effectiveness at a fairly high level, and consequently at relatively low expense. In some cases design or even construction may be contemplated without previous phases in place. In these cases a full business case must still be developed in order for the project to be credible.

What follows is a set of guidelines for preparing business cases. Appropriate references are made to material in the appendices to guide you further. There are 5 steps:

1. Identify the problem(s).
2. Describe what is causing the problem(s).
3. Identify potential improvement options.
4. Evaluate the options and select a preferred option.
5. Consider the preferred option's risks and sensitivities.

These are now described in more detail, with references to guiding material:

1. Identify the problem(s).
 - Most problems relate to safety or mobility or both.
 - MoT has developed performance indicators to show where problems are worse than average.
 - Compare your project area's performance to these indicators.
2. Describe what is causing the problem(s).
 - This is also called "problem definition", and is critical.
 - Without it you cannot be sure that the improvement options will address the problem(s).
 - Safety problems may involve roadway factors (e.g. geometry, clear zone, surface, signing etc.) and almost always involve human factors.
 - Mobility problems may involve roadway factors (e.g. number of lanes or available passing opportunities) but are often related to high traffic volumes.
 - There are too many potential causes of performance problems to list them in an appendix. The business case must be supported by discussion of problem definition.

3. Identify potential improvement options.

- Always consider the “do minimum” option. This often involves operational actions, possibly together with ongoing maintenance and/or rehabilitation.
- Show how each option addresses the causes of the problems.
- Discuss the scope of each option and why it is appropriate, neither overkill nor insufficient.
- The TAC approach to design emphasizes reliance on finding the standards most appropriate for each problem location rather than on following a set of ideal standards. This kind of thinking should be used when developing improvement options.
- At the earliest phase of project development where funding for further planning is necessary, you need only show that there looks to be at least 1 cost effective solution. In subsequent phases many potential options or sub-options may be apparent but these should be narrowed down showing the reasoning used.

4. Evaluate the options and select a preferred option.

- Use “multiple account evaluation” (MAE) to do this.
- MAE systematically looks at 4 accounts: financial, customer service, environmental, and social. Occasionally a fifth account applies: economic development.
- Benefit-cost analysis is the foundation for comparing road user benefits to project costs. The preferred tool is MicroBENCOST, a software program specifically designed for this; however, other tools are generally acceptable as long as the ministry’s standard default values are used.
- The environmental and social accounts contain all relevant information on impacts to the environment and to people, communities, and businesses.
- The economic development account only applies if improvements would have a positive effect on the larger economy (or if failure to do them would have a negative effect). Direct guidance is required if this account is thought to apply.
- Options which involve partnership funding are of particular interest, as are options which can be timed to occur with ongoing rehabilitation.
- Is cost-effectiveness always the deciding factor? Not always. There may be other reasons for proceeding with a project, such as regional equity, or the need to act while we have public or stakeholder support, or the availability of partners to fund the project, or government policy. However that is for senior decision makers to decide. The business case has to lay out the facts objectively.

5. Consider the preferred option's risks and sensitivities.
- Every project has risks and these often make the difference between a poor investment and one which delivers value for money.
 - Foremost is risk that the option may not be appropriately scoped and/or that the cost estimate is unreliable.
 - Risk may also involve the degree (or lack of) co-operation from people and organizations affected by the problem or the proposed solution.
 - The importance of being objective and as thorough as possible can't be overstated. It's unacceptable to knowingly underestimate costs and/or to overstate benefits in order to get a project approved.
 - If costing information is suspect (often due to lack of info on items like geotechnical conditions or property impacts) then you have to identify appropriate contingencies in the cost estimate.
 - Senior decision makers will look for evidence that risks were audited through review by experienced staff, consultants and stakeholders with knowledge of the constraints present at the project location.

Business Case Refinement and Updating

As the proposed project moves from planning based on looking at high level options (usually based on limited information) through design (more precise options based on better information) to construction, the business case must be updated. This becomes the basis for the funding that you request to do the next phase of work.

Senior decision makers will expect to be able to view an updated business case at key milestones in the project development process.

The Appendices

Appendix 1 contains information on identifying performance problems.

Appendix 2 describes multiple account evaluation.

Appendix 3 provides a template for business cases, with reference to an actual business case.

Appendix 4 contains information on business case content in the context of the stages of MoT capital program development.

Appendix 5 provides guidance on project cost estimating.

The appendices often provide guidance on different aspects of the same subject. For example, Appendices 3 and 4 both provide guidance on option development. For this reason you should familiarize yourself with all of the appendices.

Ministry Contacts

This is a list of Ministry of Transportation staff that can provide assistance in the preparation of business cases:

General Business Case Queries:

1. Avi Ickovich, Manager Program Development and Monitoring, Program Development and Monitoring Branch (250-356-2023) Avi.Ickovich@gov.bc.ca (Appendix 3)
2. Jon Conquist, Manager, Highway Planning, Highway Planning Branch Jon.Conquist@gov.bc.ca (Appendix 1)
3. Chuck Hutchinson, Senior Highway Planning Engineer, Highway Planning Branch (250-356-9442) Chuck.Hutchinson@gov.bc.ca (Appendices 2 & 4 and benefit-cost methodology)
4. Mark Lynch, Manager, Economic Analysis, Highway Planning Branch (250-356-0626) Mark.Lynch@gov.bc.ca (Appendix 2, MAE economic development account)

Cost Estimating Queries:

5. Mike Hallas, Manager, Estimating Services, Program Management Support Services (250-356-9328) Mike.Hallas@gov.bc.ca (Appendix 5)

Ministry of Transportation
Historical Construction Cost Data
http://hce.th.gov.bc.ca/cost_est/index.htm

Submission of Business Cases:

6. David Marr, Executive Director, Program Development and Monitoring, and Secretary to the Capital Program Board, David.Marr@gov.bc.ca