

Guidelines for Preparing Business Cases: Overview

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The Province of British Columbia sets out its approach to capital project governance, risk management, planning, capital plan process & approvals, performance measurement and other related topics in the 2002 publication “Capital Asset Management Framework” (CAMF). http://www.fin.gov.bc.ca/tbs/camf_guidelines.pdf

The B.C. Ministry of Transportation and Infrastructure (MoTI) has developed project business case guidelines with the objective of placing the principles outlined in the CAMF into the context of our business: planning and delivering transportation infrastructure.

This is an overview to MoTI’s approach. Five separate appendices go into detail on what is required in transportation project business cases. They are oriented toward highway projects, which are our main activity.

MoTI Capital Program Board Release #06-01 provides direction on the importance of business cases:

- *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 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.*

A business case can be prepared at various stages of the project development process:

- initial planning (making the case for more detailed project planning)
- completion of project planning (making the case for design)
- design (making the case for construction and related property acquisition)

There are 2 main components of a business case: a recommendation (which includes an implementation plan), and justification for the recommendation.

Recommendation Component

For a business case prepared early in project development, the recommendation should include:

- a funding request for a detailed project planning study
- a description of what the study will entail, and where the problem is located
- an estimate of the study's cost, and a schedule
- details on how the study will be carried out: in-house or consultant
- the proposed approach for stakeholder consultations
- the organizational structure of the study team

For a business case prepared after project planning or in design, the recommendation should include:

- a funding request for design, further design, or construction of the recommended option
- a description of the recommended option and where the project is located
- an estimate of the design or construction cost, and a schedule
- details on how design will be carried out – in-house or consultant
- a description of how construction will be delivered – day labour, conventional design and tender, design-build, etc.
- the proposed approach for stakeholder consultations
- the organizational structure of the team carrying out the design or construction

Justification Component

This describes why decision makers should approve the recommendation. It should identify and define the problem(s), develop and evaluate alternative options, and discuss uncertainty and risk. Refer to the five online appendices dealing with this.

A business case should:

- after initial planning, have strong problem identification with an outline of the causes, show that a viable option exists based on a high level evaluation of costs and benefits, and show that impacts, uncertainty and risks are likely to be manageable;
- after project planning, fully define the cause(s) of the problem(s), develop and evaluate all reasonable options, and focus on a recommended option's scope, schedule, costs, benefits and impacts plus any associated uncertainty and risks;
- after design, update the scope, schedule, costs, benefits and impacts of the recommended option, and refine the uncertainty and risks associated with construction of the project.

Procedure for Preparing Business Cases

Ideally the business case process starts with timely 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 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.

There are five key steps of preparing business cases:

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

More detail follows, with references to the online appendices.

1. Identify the problem(s) using appropriate performance indicators.

- MoTI sets quantitative problem thresholds for safety and mobility.
- The project area's performance is assessed using these indicators and thresholds.
- Other types of problems may be identified based on quantitative data but without firm thresholds (e.g. reliability), or through the use of qualitative data only.
- See Appendix 1.

2. Describe what is causing the problem(s).

- This is “problem definition”.
- This ensures that the improvement options will address the problem(s) which have been identified.
- Various data sources can be used to establish the problem causes. For example, MoTI’s Collision Information System database can be used to define safety problems.
- See Appendix 2.

3. Identify and adequately develop potential improvement options.

- This starts with the “do minimum” option. This often involves operational actions, possibly together with ongoing maintenance and/or rehabilitation.
- Each option must be shown to address the cause(s) of the problem(s), and its scope needs to be adequately described.
- Options which involve partnership funding are of particular interest, as are options which can be timed to occur with ongoing rehabilitation.
- At the earliest phase of project development where funding for further planning is necessary, MoTI expects to see that there is at least one cost effective solution.
- In subsequent phases many potential options or sub-options may be apparent. If so, they need to be narrowed down showing the reasoning used before carrying out a detailed multiple account evaluation.
- See Appendix 3.

4. Evaluate the options and select a preferred option.

- “Multiple account evaluation” (MAE) is used.
- MAE systematically looks at 4 accounts: financial, customer service, environmental, and social. A fifth account, economic development, might apply.
- The financial account summarizes the present value of agency costs (capital less salvage, maintenance and rehabilitation) over a 25 year analysis period for each option.
- The customer service account summarizes the present value of road user costs (travel time, safety and vehicle operating costs) over a 25 year analysis period for each option.
- 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 from MoTI is required regarding this account.
- Cost-effectiveness is not always the deciding factor. There may be other reasons for proceeding with a project, such as regional equity, public or stakeholder support, the availability of partners to fund the project, or government policy. The business case must present the facts objectively.
- See Appendix 4.

5. Consider the preferred option's risks and sensitivities.

- Most projects have a degree of uncertainty (inability to determine or quantify risks) as well as known risks, and these can make the difference between a poor investment and one which delivers value for money. It is very important to be objective and as thorough as possible about sources of uncertainty and risk.
- Of particular concern to MoTI is risk that the option may not be appropriately scoped to the previously defined problems and/or that the cost estimate is unreliable.
- If costing information is suspect due to lack of info on geotechnical, environmental, property, utility or other factors, then appropriate contingencies must be included in the cost estimate, stating all assumptions. See the MoTI Project Cost Estimating Guidelines at:
<http://www.th.gov.bc.ca/publications/planning/index.htm>
- The publication “Risk Management Guideline for the BC Public Sector” sets out the principles for assessing project risk.
http://www.fin.gov.bc.ca/pt/rmb/ref/RMB_ERM_Guideline.pdf
- Risks should be reviewed by experienced staff, consultants and stakeholders familiar with the project location.
- See Appendix 5.

Performance Measures

Performance measurement is the process by which completed projects are measured against intended objectives and expected benefits.

As part of the Province’s commitment to accountability under the Capital Asset Management Framework (CAMF), MoTI is expected to measure and report on the performance of completed capital projects. http://www.fin.gov.bc.ca/tbs/camf_guidelines.pdf

To support this commitment, performance measures must be developed for the recommended option at the planning and programming stage of a project and summarized in the project business case. Actual performance then needs to be measured and reported on post construction.

See Appendix 6.

Business Case Refinement and Updating

As the proposed project moves from planning based on looking at conceptual options, preferably refined based on some preliminary design, through design (where the preferred option and sometimes other options are better defined) to construction, the business case must be updated.

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 problem definition.

Appendix 3 deals with option development.

Appendix 4 describes option evaluation, specifically “multiple account evaluation”.

Appendix 5 provides guidance on project cost estimating and risk analysis.

Appendix 6 performance measures

Ministry Contacts

If any questions remain after reading the five appendices, the following Ministry staff can provide more information about the preparation of business cases:

General Business Case Queries:

- Chuck Hutchinson, Sr. Highway Planning Engineer (250-356-9442)
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Option Evaluation: MAE Economic Development Account

- Mark Lynch, Manager, Economic Analysis (250-356-0626)
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Cost Estimating:

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