



An Introduction to Risk Management in a Public Private Partnership

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An Introduction to Risk Management in a Public Private Partnership has been developed to assist public sector agencies in understanding essential risk management issues pertaining to infrastructure procurement, and in particular public private partnerships. This document was developed jointly between Partnerships BC and the Ministry of Finance (Risk Management Branch).

What is Risk?

Risks can apply to all levels of an organization or project. Corporate risk is typically reflective of the aggregate of all potential negative events or opportunities across an entire organization. Corporate risk is most commonly referred to as enterprise-wide risk. Project risk, on the other hand is defined as the chance of an event happening which would cause the actual project circumstances to differ from those assumed when forecasting project benefits and costs. These events could have either positive or negative impacts on the project.

Risk is defined by the Province of B.C.'s Enterprise-Wide Risk Management Policy as "the chance of something happening that will have an impact upon the achievement of objectives." Risk can be practically defined as the product of the probability of an event occurring and the consequences if the event does occur. Depending on the amount of information available, risk can be measured qualitatively or quantitatively.

A risk event specifically links the risk to the asset; for example, Force Majeure risk could be identified and the risk event could be an earthquake causing the bridge supports to collapse.

To fully define a risk it is necessary to understand its two component elements:

- The likelihood of a particular risk actually happening; and
- The impact or consequences if it happens.

Risk is inherent in every project, yet unlike most other

procurement issues such as construction costs, bid prices, and maintenance costs, risk has historically not been explicitly described or accounted for. The B.C. government is hoping to change this trend.

The B.C. government's Enterprise-wide Risk Management Guideline¹ (ERMG) and the Capital Asset Management Framework (CAMF) both place a heavy emphasis on the identification and valuation of risks and consider this process a necessary practice in developing an acceptable contractual relationship between the public and private sectors in a public private partnership.

What is Risk Management?

Risk management is the process of identifying, analyzing and addressing significant risks on an ongoing basis. It is a process that can help avoid negative outcomes, and help recognize emerging opportunities. The outcome for a project team in committing to a risk management process is the development of an action plan, that when taken, may help to mitigate the probability of a risk happening and the consequences of a risk when it happens.

In all projects, there are a number of ways to allocate risks:

- Transferred risks (risks transferred to contracting party);
- Retained risks (risks retained by the public sector agency); and
- Shared risks (risks shared between the contracting party and the public sector).

The risk management process must include the identification, analysis, and management plan of all three types of risks.

Risk management in a public private partnership procurement model is especially important as this model affords government an opportunity to share or transfer risks to the private sector. In order to optimize

¹ Enterprise-wide Risk Management Guideline
<http://www.min.fin.gov.bc.ca/pt/rmb/erm/index.stm>

the benefits from such an opportunity, project teams must thoroughly understand the risks associated with the project and the likelihood and consequence of such risks.

Risk management in public private partnership procurement, however, does not simply translate to avoiding risk by transferring it to the private sector. Effective risk management is the transfer of risks to the party best able to manage them.

What are the Benefits of Risk Management?

Undertaking the risk management process in a structured manner provides the project team with an opportunity to maximize value for money in several ways.

Effective Risk Management can lead to:

- Improved strategic management through:
 - Better selection of strategic objectives and associated targets as a result of risk identification, analysis, evaluation, treatment and monitoring process;
 - Greater ability to deliver against realistic and achievable objectives and targets;
 - A shared common understanding of objectives and the way opportunities can be harnessed;
 - A transparent process wherein risks and actions taken to treat and monitor them are clearly visible to key decision makers; and
 - The identification of each party's tolerance of risk.
- Improved governance and operational management through:
 - A balance between risk responsibility and ability to control that risk;
 - Higher standards of accountability;

- Promotion of innovation;
- Improved capacity to manage risk in the face of competing obligations;
- Enhanced managerial control and less reliance on crisis management; and
- A process based on continuous improvement.
- Improved financial management through:
 - Better informed financial decision making on scenarios or option analysis;
 - Enhanced financial control;
 - Reduction in financial costs associated with losses due to service interruption, litigation, poor investment decisions; and
 - Effective allocation and use of public and private sector resources.

The end result of an effective allocation of risk between the contractual parties is a maximization of the project's value for money.

When Do You Undertake Risk Management?

The risk management process is undertaken throughout the lifecycle of a capital asset. The CAMF describes the lifecycle of a capital asset as including the following four phases:

- Planning;
- Implementation;
- Operations; and
- Renewal or disposal.

The risk management process forms a core component of the project team's activity throughout these four phases. The risk management process is a repetitive and iterative process that requires a high degree of detail and rigour, taking into consideration the complexity and objectives of a public private

partnership procurement.

Key milestone points in the project planning lifecycle are the:

- Feasibility Analysis / Strategic Options Analysis;
- Business Case;
- Procurement (e.g. Expression of Interest, Request for Proposal); and
- Contract Award.

At each of these points, project teams should demonstrate that significant risks have been taken into consideration in the development of the project, and risk management strategies, or analysis and subsequent allocation to private sector, can be put in place to manage the impact of the risks.

What is involved in Risk Management during the Project's Lifecycle?

The following summarizes the risk management objectives at various points in the Partnerships BC's process.

1. Feasibility Analysis / Strategic Options

Analysis: the risk management objective involves the preliminary identification and assessment of project risks, primarily based on qualitative analysis.

2. Business Case:

the risk management objective is to thoroughly identify, analyze, and quantify the risks to determine appropriate risk treatment strategies.

- Risks that are quantifiable are included in the project's financial models, in order to make these as comparable as possible with the private sector proposal.
- Ultimately, the business case will reflect a risk adjusted public sector cost of the project.

3. Procurement:

the risk management objective is the further refinement of the risk management analysis and strategy based on feedback and input on the project and risk transfer issues from the private sector.

- During the solicitation process the risks are analyzed and negotiated between the parties.

4. Contract Award:

the risk management objective is the refinement of the risk analysis undertaken, taking into account the negotiated positions of the public sector and the private sector on risk allocation and treatment.

5. Contract Management:

The public sector agency will need to administer the contract over the life cycle of the project. The public sector will also require a retained and shared risk management plan that can be drafted with the assistance of Risk Management Branch and Partnerships BC.

What is involved in the Risk Management Process?

The ERMG describes the model and steps project teams should utilise in undertaking or refining their risk management process. The model describes this sequence of steps as:

1. Establishing the context / basis from which risk and risk management for the project is conducted;
2. Identifying the risks;
3. Analyzing the risks;
4. Evaluating the risks;
5. Developing the risk mitigation strategy;
6. Monitoring, implementation periodically reviewing the risk mitigation strategy;
7. Quantifying the risks, if possible; and
8. Consulting and communicating the risk management issues to key stakeholders.

These steps should occur in a sequential manner, but because the procurement process is rarely a linear process, project teams should expect that the risk management process will accordingly be an iterative process of identifying, analyzing and evaluating risk as the project progresses in its development.

Risk management is a continuous process and completion of one of the steps should not prevent a project team from going back to apply the same steps in instances where a new issue has arisen or to gain further insight into a particular risk.

What are the Tools for the Risk Management Process?

Risk Register

A risk register is a key tool for the risk management process and forms the basis from which a project's risk management plan is developed.

A risk register helps the project team to understand the true nature of the risks involved in a particular project and to thoroughly consider all events that could impact the project through the procurement phase, the design and construction phase, and even the operations phase.

The risk register records and identifies risks in a structured manner to facilitate the assessment and evaluation of risks, and provide a transparent and comprehensive tool for communicating the risks to key stakeholders and decision makers.

For a public private partnership procurement, the risk register also provides a tool which project teams can use to explicitly identify and manage risks. It provides a structure to record detailed information on risks, mitigation options and financial impact so that project teams can treat them in a manner most appropriate for the project and the parties involved.

As mentioned above, the output from the risk register is built into the project's financial models; estimated values for risk are determined by either probability calculation or Monte Carlo simulations, and Multiple Criteria Analysis (qualitative decision making tool).

The risk register should be modified and/or updated at each step of the project's lifecycle to address the additional information requirements at each of the key decision points in the process. As a result, the risk register should evolve and expand in detail throughout the procurement process and following phases.

Project teams have the option to release an abbreviated version of the risk register to proponents during the procurement phase to clearly communicate the risks identified by the project team to potential proponents. This abbreviated risk register should include a high level description of the identified risks, their categorization and initial allocation.

Risk Workshops

An effective means to facilitate a team approach to the risk management process is through a workshop environment. Partnerships BC experience has shown that bringing together team members with the appropriate experience in a workshop stimulates dialogue about risks (what was encountered on past projects) and can result in a wider exploration of possible risks.

Time Required, Scope and Complexity

Before the workshops are held, the project team needs to establish the context of the risk analysis; for example, to set out the scope, time frame and stakeholders involved. This is extremely important to the risk identification process.

Experts are required at the risk workshop to explain the risks associated with the project; for example, technical, business, risk managers (i.e. insurance), and financial. The risk register includes risks from all phases of the project such as: procurement, design, construction, and operations and maintenance. Risks associated with overall government policy and risks associated with financing (if included in the scope) should be discussed and analyzed as well.

The risk register includes possible mitigation techniques for each risk as well. This is very important to clearly understand, especially when the team is deciding if the risk should be transferred to the Concessionaire or retained by the Agency.

The table below summarizes an example of a workshop program for risk identification.

Sample Approach

Workshop Steps	Actions
Session 1 Brainstorming Session	The facilitator reviews the purpose of the meeting, what the risk matrix is to ultimately used for, and reviews the following: <ul style="list-style-type: none"> • Constraints • Matrix Assumptions • Stakeholders in project It is important to determine next steps before the meeting is concluded.
Session 2 Workshops to deal with Specific Risks	Individual projects may include risks that may require special meetings with smaller groups to completely identify and understand such risks.
Session 3 Comprehension Check	The results of the first sessions are reviewed to ensure that the risk identification has been as comprehensive as possible. This is usually carried out in an open brainstorm type session with a smaller group. Quantification of risks, where possible, is a high priority at this stage.
Session 4 Expert Clarification (as required)	An important factor in the identification is a clear understanding of the risks. If needed, advisors can be used to explain the details and specific risks.
Ongoing	Arrange periodic risk meetings throughout the procurement process. As more people become familiar with the project, more risks will be identified and can be quantified and allocated appropriately. The risk tolerance, treatment and follow-up on risks should be documented.

At the end of the workshops, the risk matrix will be a valuable tool that will be used throughout negotiations and the drafting of various required legal agreements.

Next Steps

Each capital project varies substantially in complexity and scope and therefore presents unique circumstances to be addressed in the risk management process.

For further in-depth guidance to the risk management process please refer to the Province's Governance Service Delivery Risk Management Accounting Report – Capital Asset Management Framework and the Enterprise-wide Risk

Management Policy.

For further guidance in relation to specific risk management issues related to the procurement of a public private partnership please contact Partnerships British Columbia.