RISK AND ISSUE MANAGEMENT GUIDELINE

Nova Scotia Department of Seniors and Long-Term Care

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REVISION HISTORY

Ver.	Description	Approved By	Date
0.0	Initial Release		30 September 2025
1.0	Final Version		20 November 2025

PART 1 – INTRODUCTION

1.1 OBJECTIVE

The objective of risk and issue management in the Seniors and Long-Term Care (SLTC) bed builds program is to identify, assess and track risks in the project in order to:

- Support the success of the projects in being on time and on budget.
- Identify issues and risks that should be discussed with the Project Sponsor (SLTC).

The purpose of this document is to introduce project risk and issue management to Service Providers, set out minimum requirements for the management and reporting of risks and issues by Service Providers' Project Managers, and share guidelines on the risk and issue management process for the understanding of Service Providers and their partners and Project teams. For those Service Providers who have not recently completed a major capital project, *Part 2* of this document also serves as a background on effective integrated change control.

As Project Sponsor, SLTC is responsible for ensuring that Service Providers understand and implement effective risk and issue management practices. The Project Sponsor provides the foundational tools, templates, and guidance necessary to support this process, including the *Risk Register* and *Monthly Status Report (MSR)* (see Appendix B)). The Project Sponsor also reviews risks and issues raised by Service Providers, especially those that may impact project timelines, budgets, or require escalation. By maintaining oversight and offering strategic support, the Project Sponsor helps ensure that risks are proactively managed and that issues are addressed in a timely and transparent manner, contributing to the overall success of the bed builds program.

Service Providers should expect that their Project Manager will bring with them their own detailed risk management processes. *Part 2* of this document is intended to lay out leading practices that would be expected for projects of this level of complexity and should align with the processes of the chosen Project Manager. It is the purview of the Service Provider to determine the level of specificity included in your *Request for Proposal* (RFP) documents for the Project Manager for their risk management process. At a minimum, the Project Manager RFP documents should include the minimum requirements stated in this document to ensure their pricing includes the deliverables and accountabilities detailed in the Facility Development Approval Process (FDAP).

1.2 APPLICATION

This *Risk and Issue Management Guideline* applies to all SLTC projects, unless otherwise specified.

1.3 MINIMUM REQUIREMENTS

At a minimum, the Project Sponsor expects Service Providers and their Project Manager to:

• Actively maintain the Risk Register within the *Integrated Project Management Package* (IPMP) (see Appendix B).

Report on risks to the Project Sponsor by the monthly submission of the IPMP and its output, the Monthly Status Report (MSR). As a part of the FDAP documentation, the Project Sponsor has provided a standardized template for the *Risk Register* within the IPMP (see *Appendix B*). A common template is important for the Project Sponsor to be able to compare and report on risks in a common format at a program level for senior SLTC leadership, and to ensure lessons learned can more easily be consolidated and shared between projects. The standardized treatments are highlighted below and described in more detail in *Part 2 – Risk & Issue Management Process*.

1.3.1 Standard Risk Categories

The supplied Risk Register template has the following standardized Risk Categories:

- Policy
- Management / Organization
- Contractor / Vendor
- Site / Zoning
- Cost / Economy / Market Conditions
- Operations
- Technical
- Reputational
- Health & Safety
- Other

Additionally, the Risk Register also includes the following standardized Impact Categories:

- Scope
- Schedule
- Cost
- Quality
- Safety
- Resources
- Commercial / Legal

1.3.2 Standard Risk Ratings – Risk Matrix

The *Risk Register* template uses a 5x5 risk matrix as shown in Figure 1 (and detailed further in section 2.3 below). The matrix assigns 5 levels of probability (<20%, 20-40%, 40-60%, 60-80%, 80%+) and 5 levels of impact (either by schedule or project cost). Above 100% and the risk is converted to an Issue (a realized risk).

Multiplying the probability and impact gives a risk rating. That rating corresponds to a level of red, orange, yellow or green, which drives how the Project Sponsor expects that risk to be managed and reported by the Service Provider and its Project Manager as shown in Table 1.

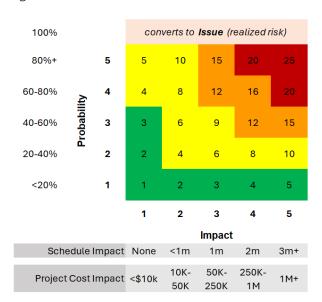


Figure 1. Standardized Risk Matrix

Table 1. Risk Rating, Response and Actions

Rating	Service Provider / Project Manager Response	Reporting Action
Issue	Active mitigation	Report to the Project Sponsor (weekly status meetings)
Critical	Treat as facts - must be planned for	Report to the Project Sponsor (weekly status meetings)
High	Review regularly - require approved mitigation plan	Inform the Project Sponsor (monthly MSR)
Medium	Actively monitor - require approved mitigation plan	Inform the Project Sponsor (monthly MSR)
Low	Monitor regularly	Monitor at project level

1.4 APPLICATION THROUGH THE FDAP LIFECYCLE

As shown in Figure 2, the risk management process spans the full lifecycle of a new or replacement build project. The risk and issue management process, as detailed in *Part 2* of this document, is an iterative and continuing process that requires active management of the *Risk Register* by the Project Manager.

Figure 2. Risk and Issue Management Across the FDAP Lifecycle



Specific risk and issue management requirements throughout the FDAP lifecycle are as follows:

- The preliminary *Risk Register* is to be developed after the on-boarding of the Project Manager after the conclusion of Step 2.
- The IPMP (and its resulting MSR output) is expected to include the *Risk Register* within one reporting cycle of the Project Manager's involvement. In consultation with the Project Manager, considerations for a Risk Management Plan should be noted within the *Project Charter /* Plan deliverable required for Step 3. The *Risk Register*, as a part of the *IPMP*, is available for review by the Project Sponsor on a monthly basis.
- The *Risk Register* will be reviewed in detail as a part of each Step and Gate review from Step 3 onwards. Project Managers are expected to keep the *Risk Register* up to date from Step 3 and onwards.
- At the conclusion of Gate 12, the Project Sponsor will incorporate information from the *Risk Register* to facilitate consolidation of Lessons Learned.

1.5 ROLES AND RESPONSIBILITIES

Individual activities and responsibilities for implementing risk management as shown in Table 2.

Table 2. Roles and Responsibilities

Activity	Actions	Responsible Party
Identify Project	Consult project team members to identify project	Project Manager
Risks	risks	(for Service
	 Consult with the Project Sponsor (SLTC) to 	Provider)
	incorporate lessons learned from other projects	
	Determine the number of risk workshops and their	
	timings	
	Hold risk workshops	
Develop Risk	Identify / brainstorm risks	Project Manager
Register	 Assign Risk Categories and Classification 	(for Service
	Rate each risk for likelihood and impact	Provider)
	Calculate overall risk rating	
	 Describe and quantify consequences of risk materialization 	
	Assign treatment measures and provide status	
	Assign resources to monitor and address risk items	
	Determine cost and / or schedule allocation against	
	each risk	
	Must include risk response, incident management	
	and escalation sub-plan	
	Get approval on assigned risk response measures	
Present Risk	Ensure a complete review is completed at each Step	Project Manager,
Register at Gate	or Gate	Service Provider
Review		
Update <i>Risk</i>	Based on changing status of risks, Project Sponsor	Project Manager
Register	feedback stemming from the monthly submission of	
	the IPMP, or formal feedback stemming from	
	Step/Gate reviews	
Report on Risk	Report on risks though the monthly submission of	Project Manager
	the IPMP, and the flow of that information into the MSR	

PART 2 – RISK & ISSUE MANAGEMENT PROCESS

2.0 RISK & ISSUE MANAGEMENT

In general, a risk is an uncertain event or condition that, if it occurs, influences at least 1 of the project objectives. Risk is unavoidable, and every organization needs to take action to manage risk to a level that is tolerable. Risks not only represent the possibility of a disruptive event but also include failure to take advantage of an opportunity from which the organization could benefit.

In a capital-intensive program like the SLTC bed builds program, technical risks such as unexpected construction conditions or technology issues should be considered along with risks relating to the broader project environment, such as partner communications, political change, or insolvency of contractors, which can impact successful project outcomes. Risk management addresses uncertainty in assumptions across all these facets of a project, throughout a project's full lifecycle.

The goal of risk management is to protect and enhance what an organization is primarily there to do. The aim is to deliver maximum service and organizational effectiveness within the constraints of the resources provided to do it. Taken in the context of capital projects, the corporate project risk management objectives are therefore to maximize opportunities and minimize negative events to a tolerable level to successfully achieve the objective of delivering all projects within the capital program within the assigned budget and schedule, while managing scope and quality.

Risk management provides a clear and structured approach to identifying risks. Having a clear understanding of all risks allows an organization to measure and prioritize them and take the appropriate actions to reduce losses. Benefits of managing risk include:

- Saving Resources: Time, assets, income and property are all valuable resources that can be saved. People and the environment are also resources that can be saved from harm.
- Saving Reputation: The reputation and public image of the Service Provider is a highly valuable asset that needs to be protected.
- Legal Liability: Preventing or reducing legal liability and increasing the stability of operations.

- Supplier Relationships: In order to achieve the best possible value, appropriate relationships must be developed and maintained with suppliers. This means dealing with vendors fairly, professionally, and with integrity and courtesy.
- Clearly Defining Needs: This will allow competition between potential suppliers to focus on meeting your needs and allow you to manage risk more effectively by transferring it to the parties best equipped to manage it.

These benefits can only be realized if the following general criteria for project risk management success are met:

- Organizational recognition of and commitment to the value of risk management.
- Individual commitment and responsibility of the Project Sponsor, Project Manager and project team members for risk management.
- Open and honest communication amongst project team members about project risks.
- Risk efforts that are appropriately scaled to the projects.
- Full integration with project management, where risk management permeates all project decision-making.

In the instance a risk cannot be mitigated or avoided, and it becomes realized, it becomes an issue.

2.1 RISK MANAGEMENT PROCESS

There are two types of risk, known and unknown. Known risks, sometimes called known unknowns, are risks that the project team is aware of, can be analyzed and can be planned for. These are the risks accounted for in the *Risk Register* within the IPMP (see FDAP Appendix B) discussed later and dealt with by the *Risk and Issue Management Guideline*. Unknown risks, sometimes called unknown unknowns, are the risks that haven't been identified in advance. Being too difficult to plan for, they are typically outside the scope of risk management.

Risk Management is a cycle that applies throughout the project, and includes the following Steps (see Figure 3):

- **1. Plan Risk Management:** Deciding how to approach and plan the risk management activities for the project.
- 2. **Identify Risks:** Determining which risks are likely to affect a project and documenting the characteristics of each.

- **3. Perform Risk Analysis:** Prioritizing risks for further analysis or action based on assessing and combining their probability of occurrence and impact (qualitatively) and numerically estimating the effects of the identified risks on overall project objectives (quantitatively).
- **4. Plan Risk Responses:** Taking steps to enhance opportunities and reducing threats to meeting project objectives.
- **5. Monitor and Control Risks:** The process of implementing risk response plans, monitoring identified and residual risks, identifying new risks, evaluating the effectiveness of risk strategies throughout the life of the project, and when risks are realized, managing the resulting Issues.

Figure 3. Risk Management Cycle



2.1.1 Plan Risk Management

Risk Management is an iterative process throughout the project lifecycle, meaning early risk planning coincides with early project planning, leading to Step 3, in the Functional Program Step of the FDAP. The level of risk exposure is at its maximum at the earliest stages of a project, while the information on those risks is at a minimum. This situation means that there may be different ways of approaching a project that have different risk implications, and these can be identified through the risk management process. Risk planning involves determining the timeframe and frequency of risk management activities, the people involved in the process and how risks will be recorded and tracked.

This aspect of risk planning is captured in the *Project Charter*, as a requirement of Step 3 approval, and later translated into a *Project Plan*. At a minimum, this initial planning should:

- Identify the subset of partners that will be involved in risk management.
- Identify milestones for major risk management activities like risk workshops and detailed reviews.
- Confirm the risk reporting tolerances for the project (for both Service Provider and Project Sponsor purposes).
- Confirm the method, cadence and audiences of risk reporting (using SLTC and Service Provider requirements).
- Set up the Risk Register as the repository for risk information on the project.

As the project evolves, the needs of the risk management plan should evolve with it, meaning the planning of risk management should be revisited prior to each FDAP Step and Gate to ensure prior plans still apply (see Table 3).

Table 3. Risk Management Plan: Activities and Outputs

Activities	Outputs
Identification of risk planning in <i>Project</i> Charter	Preliminary risk management plan within Project Charter (Step 3)
Risk planning meeting	Risk management plan within <i>Project Plan</i> and Charter (Step 3 onwards)

2.1.2 Risk Identification

Every project is inherently exposed to risk during every phase of its lifecycle. It is the Project Manager's responsibility to empower every member of the project team to take ownership of risk identification, and the proactive communication of potential changes to risk exposure on the project.

Risks can generally be split into broad categories of common or specialized risks.

Common risks are those where the impact is known enough to have existing mitigation strategies (e.g., a design quality control procedure mitigating the chance of design errors), while specialized risks have less certain mitigation measures and mean greater reliance on contingency (e.g., extreme weather). Both of these categorizations are applied through risk workshops when risks are identified and will impact how the risks are managed going forward.

It is the Project Manager's responsibility to identify, track and manage risks on a project, and to be knowledgeable of the standard mitigating procedures for managing common risks. The functional experts within the project team and broader partner groups are key resources who must aid the Project Manager through the risk workshop, in categorizing the types of risks, and continually ensuring ongoing risk identification and treatment is in place.

Different Project Managers may bring their own ways of categorizing risk for a Service Provider, but this makes it challenging for the Project Sponsor to effectively roll-up reporting of risks at a program level and extract and share on important lessons learned. As a result, the Project Sponsor's *Risk Register* template includes its own Risks Categories (see section 1.3.1), which allows common naming of risks. Using standard categorization means over time the Project Sponsor will build a repository of risk information across projects that will help the Department and Service Providers to plan better in the future for projects with similar risk profiles to those that have come before. What is clear from the variety of risk categories above is that the Project Manager will need to solicit input from a variety of partners to help them identify as many risks as they can. Some of this information will come from working experience, while others will come from project deliverables like the scope baseline, cost estimates and draft schedules. The Project Manager will use brainstorming in the risk workshops to help identify all relevant risks and use that information to populate the first iteration of the *Risk Register* at Step 2.

A project *Risk Register* is a commonly used tool that facilitates the development, monitoring and documentation of a risk management plan, by facilitating a systematic process in identifying risks (see Table 4). The standard template for the *Risk Register* can be found within the IPMP (see FDAP Appendix B).

Table 4. Risk Identification: Activities and Outputs

Activities	Outputs
Risk workshops	Risk Register (identified risks)

2.1.3 Perform Risk Analysis

Risk Analysis is an iterative process, beginning with a qualitative assessment of likelihood and impact, allowing an initial ranking and prioritization, followed by quantitative assessment. Risks are continually reanalyzed and ranked as the project progresses, risk treatment strategies are implemented, the nature of the work changes and / or external project factors change.

2.1.3.1 Qualitative Analysis

To rank risks and prioritize the development of treatments to manage the risk and the assignment of resources, the likelihood and impact of each risk need to be assessed and scored. This assessment can be qualitative in nature, based on professional judgement from Subject Matter Experts (SMEs) and / or quantitative in nature, based on data from past projects and significant analytical work. Typically, the more complex the project the more effort is spent on quantitatively assessing risks. The likelihood reflected in the *Risk Register* is shown in Table 5.

Table 5. Risk Likelihood Determination

Risk Likelihood Determination Likelihood	Probability / Chance of Occurrence	Probability Rating
Almost Certain	80% in the next 6 plus months	5
Likely	60% - 80% in the next 3 – 6 months	4
Possible	40% - 60% in the next 1 – 3 months	3
Unlikely	20% - 40% in the next 2 – 4 weeks	2
Rare	< 20% in the next 2 weeks	1

The impact of a realized risk is typically influenced by 3 major factors:

- **Effect:** To what extent is the project's success negatively affected if the risk were to occur. For example, this could be in the form of higher construction costs, need to additional or changed scope, or impacts to how operations may be delivered in the future.
- **Timing:** When and at which phase of the project lifecycle a risk occurs also alters its impact. For example, a construction project delay during the development of a new facility has significantly different effect than that of a delay during the operations phase.
- Severity of Impact: The severity of the same risk may be drastically different depending on the unique project characteristics. For example, in the context of government approvals, failing to adequately meet a documentation policy may delay a project by a few weeks, however, not satisfying environmental and heritage requirements may delay a project by years if not force a project cancellation altogether.

The risk rating is calculated by multiplying the risk likelihood/probability rating by the risk impact rating, allowing an objective method of ranking risks. The Project Sponsor is

responsible for giving directions to the Project Manager with respect to risk tolerance for the project (i.e. what is the acceptable upper limit for ranked risks in order to proceed with the next phase of the project). The risk rating matrix shown in Figure 4 is reflective of the *Risk Register*.

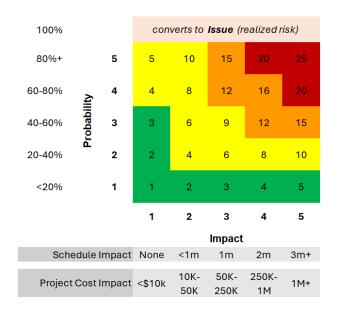


Figure 4. Risk Rating Matrix

2.1.3.2 Quantitative Analysis

The quantitative analysis gives a numerical impact to the risk, whether that is schedule, cost or in many cases, both. After all, time is money in construction projects. Quantitative risk analysis is usually very lengthy and difficult and hence done for only high priority risks. Low priority risks are kept in watchlist and may qualify for quantitative analysis in future. That is why a careful periodic review of risk watchlist is necessary.

Quantitative risk analysis relies on SMEs opining on what the cost or schedule impacts might be for a given risk. For this reason, the risk workshops are the primary venue to get this information from your project partners.

There are different levels to which quantitative analysis can be completed, which can include:

- A simple calculation of impact used to validate, at a high level, whether the standard contingency percentages applied for those projects would be sufficient to cover the risks in the project.
- A more sophisticated probabilistic risk quantification used, such as Monte Carlo analysis, to support a bottom-up risk-based calculation of contingency.

2.1.4 Plan Risk Response

There are four strategies for dealing with negative risks (Avoid, Mitigate, Transfer, and Accept, as shown below). Each risk treatment approach will likely have a cost, schedule, quality and resource consequence, which needs to be thought through and explicitly listed and accounted for in the *Risk Register*.

- **Avoid:** The best thing you can do with a risk is avoid it. If you can prevent it from happening, it won't hurt your project. The easiest way to avoid this risk is to walk away from the cliff, but that may not be an option on a given project. Examples of avoidance include:
 - o Changing the *Project Plan* to eliminate the risk
 - Clarifying project requirements to avoid discrepancies
 - Using a proven methodology rather than a new approach
- Mitigate: If you can't avoid the risk, you can mitigate it. This means taking some sort of action that will cause it to do as little damage to your project as possible. Examples of mitigation include:
 - Adding activities to the project to reduce the risk probability or impact
 - Simplifying the processes within the project
 - o Completing more tests on the project work before implementation
- Transfer: One effective way to deal with a risk is to pay someone else to accept it for
 you. Project success and cost savings are realized through the strategic allocation of
 risk between Service Providers and your consultants, contractors and vendors. To
 inform the procurement process, within the risk workshops, risk allocation should
 identify the party best able to manage each risk within a procurement. Examples of
 transfer include:
 - Using Fixed-priced contracts
 - Insurance
 - Performance bonds or guarantees
 - Warrantees
- Accept: When you can't avoid, mitigate, or transfer a risk, then you have to accept it.
 But even when you accept a risk, at least you've looked at the alternatives, and you
 know what will happen if it occurs. If you can't avoid the risk, and there's nothing you
 can do to reduce its impact, then accepting it is your only choice. Passive acceptance
 requires no action, with the project team dealing with the risks as they occur. Active

acceptance entails developing a contingency plan should the risk occur and monitoring the effectiveness of that plan.

It is also important to be mindful of opportunities (risks with positive impacts), which if triggered will either reduce costs, reduce schedule, reduce resource requirements, improve quality or improve reputation. Approaches should be developed and steps taken to enhance the likelihood that these opportunities will occur, which means working closely with your partners and incentivizing your consultants and contractors to bring forward these opportunities.

2.1.5 Monitor, Control, and Escalate Risks

2.1.5.1 Monitor and Control Risks

Risk monitoring and control is the process of:

- Implementing risk response strategies
- Tracking identified risks for signs that they may be occurring
- Monitoring residual risks
- Looking for new risks that may develop during project phase.
- Risk monitoring and control also is concerned with the documentation of the success or failure of risk response plans, reviewing that project assumptions are still valid, ensuring risk and issue management guidelines are followed and monitoring contingency reserves.

2.1.5.2 Escalate Risk

Risk escalation typically happens when the Project Team is unable to manage the risk effectively within its own authority or capability, or when a risk threatens to significantly impact the broader organizational objectives. The Project Team should escalate risks to the Project Sponsor based on the criteria below:

1. Risk Status

When analyzing the *Risk Register* through monthly submission of the IPMP and its MSR, and when reviewing at each Step and Gate review, risks should be managed according to Table 6, depending on the risk rating calculation detailed in *Section 2.3*.

Table 6. Risk Rating, Response and Actions

Rating	Service Provider / Project Manager Response	Reporting Action
Issue	Active mitigation	Report to the Project Sponsor (weekly status meetings)
Critical	Treat as facts - must be planned for	Report to the Project Sponsor (weekly status meetings)
High	Review regularly - require approved mitigation plan	Inform the Project Sponsor (monthly MSR)
Medium	Actively monitor - require approved mitigation plan	Inform the Project Sponsor (monthly MSR)
Low	Monitor regularly	Monitor at project level

2. Dependencies Outside the Project's Control

If a risk involves external partners, dependencies on other projects, or organizational units, escalation is necessary. The Project Sponsor may have greater authority to coordinate with external parties to address such risks.

3. Resources Required Beyond the Project Team's Authority

Escalation is necessary if the project team does not have sufficient resources, authority, or decision-making autonomy to mitigate the risk effectively. For instance, a risk requiring additional funding, a reallocation of provincial resources, or authorization to modify strategic objectives would need the Project Sponsor's involvement.

2.2 ISSUE MANAGEMENT

As noted previously, an issue is a risk realized. An issue is an event arising during the performance of the project that has not been accounted for in the *Project Plan*, and that will necessitate a deviation from the plan with respect to time, cost and/or quality. It is a previously unanticipated event that will happen or is happening, which may have a detrimental effect on the project objectives. Left unresolved, an issue can impede or prohibit progress or development by delaying or suspending work effort.

If a risk materializes, the impact must be assessed, and the resulting issue (or issues) must be logged and managed via updates to the *Risk Register*. The *Risk Register* should be updated (via the 'Status' field) to reflect the fact that it is no longer a risk, and the left-most 'Issues Management' columns used to detail the recommendations for resolution and cross reference a PCR (as required).

PART 3 – APPENDICES

• FDAP Appendix B: Integrated Project Management Package (IPMP)