	Guidelines and Standards: Project Risks
Carleton UNIVERSITY **Canada's Capital University**	*Project Management Office (PMO)*

What is Risk?

Risk is an uncertain event or condition that if it occurs, has a negative impact on a project.

Risk Management Processes

There are 5 main processes in the management of risk:
1. Risk Identification
2. Risk Management Planning
3. Qualitative Risk Analysis
4. Risk Response Planning
5. Risk Monitoring and Control

1. Risk Identification

Provide a description of the risk. An identification statement could be written as: As a result of <a definite cause> an <uncertain event> may occur, which could lead to <effect on objectives>.

2. Risk Management Planning

When initiating a risk plan, a review of lessons learned should be undertaken to assist in identifying potential risks.

The Risk Management Plan is outlined in the main Project Management Plan document. The initial risks are identified during the initiation phase of a project and are described in the Project Charter.

The risk management information is input in the appropriate "risk category" and kept up to date in Eclipse under each project's risks and issues tab. This information is considered the risk log.

Risk categories:
- Resources – Carleton resource availability or skill levels
- Technology – Performance of technology, introduction of new technology
- External – Vendors, contractors, suppliers
- Project Management – Plans , estimation, communication
- Internal – Stakeholders, other projects
- Other – Organization, regulatory, policies, security

All risks under the Risk Management Plan are evaluated based on the criteria outlined in the risk analysis below.

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3. Qualitative Risk Analysis

Risk analysis involves analyzing the probability and the impact of the risk in order to come up with risk rating. This risk rating will be used as an input in the development of the risk response plan. Use the tables below to guide this analysis.

Risk Probability and Impact

Probability Risk will Happen		*Impact (Schedule and/or Budget)*	
Unlikely	Not expected to occur	Minor	Event may impact the Schedule and/or Budget
Possible	Could occur at some time	Moderate	Event will impact the Schedule and/or Budget
Likely	Will probably occur in most circumstances	Major	Event will impact the Schedule and/or Budget and threaten the successful execution of the project
Almost Certain	Expected to occur in most circumstances	Severe	Event will render the successful execution of the project impossible

Risk Rating (Risk Impact x Probability = Risk Rating)

	Probability Level			
Impact Level	*4 – Almost Certain*	*3 -Likely*	*2 - Possible*	*1 - Unlikely*
IV - Severe	Extremely High	Extremely High	High	Moderate
III - Major	Extremely High	Extremely High	High	Moderate
II - Moderate	High	High	Moderate	Low
1 - Minor	Moderate	Moderate	Low	Low

Risk Responsibility (Who is responsible / what to do)

	Impact			
Probability	*Severe*	*Major*	*Moderate*	*Minor*
Almost Certain	To be managed by Senior Management with a detailed Plan	To be managed by Senior Management with a detailed Plan	Detailed Management planning and attention is required	Need Senior Management attention
Likely	To be managed by Senior Management with a detailed Plan	To be managed by Senior Management with a detailed Plan	Detailed Management planning and attention is required	Need Senior Management attention

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Possible	Detailed Management planning and attention is required	Detailed Management planning and attention is required	Need Senior Management attention	Manage by routine procedures
Unlikely	Need Senior Management attention	Need Senior Management attention	Manage by routine procedures	Manage by routine procedures

Definitions:

<u>Managed by Senior Management with a detailed Plan</u> **–** Project Manager notifying the Sponsor and Project Director and producing a detailed strategy to handle the risk, indicating who will do what. This may also include the CIO.

<u>Detailed management planning and attention is required</u> – Project Manager notifying the Project Director and/or CCS Technical Manager and producing a detailed strategy to handle risk and who will do what.

<u>Need Senior Management attention</u> – Meeting with Project Director or CCS Manager and to produce a detailed strategy and notifying the Sponsor of the risk and plan to move forward.

<u>Manage by routine procedures</u> **–** Project Manager manages risk as he/she deems appropriate and captures details where appropriate; i.e., Eclipse, Status Reports.

4. Risk Response Planning

Risk response should take into consideration the following and develop a plan accordingly:
1. Avoidance – where strategies are revised to avoid exposure to the risk
2. Mitigation – where measures are taken to reduce the probability and/or the impact of the risk
3. Acceptance – where allowances are made in the project plans to deal with the risk when it occurs
4. Contingency Planning – developing a predetermined response plan in case the trigger or risk occurs

1. <u>Avoidance</u>
   - Eliminate the conditions of the risks or conditions or isolate the project objectives from its impact
   - Can the project be declined?
   - Reduce the scope/requirements/ deliverables?
   - Change the technology?
   - Revise the strategy?

2. <u>Mitigation</u>
   - Reduce the monetary value of a risk by lowering the probability of occurrence or reduce its effect
   - Tighten project controls
   - Regular formal risk reviews
   - More testing, design, development, etc.
   - Develop redundancies
   - Establish contingencies

3. <u>Acceptance</u>
   - Accept the risk – no action will be taken

4. <u>Contingency Planning</u>
   - Develop contingencies
   - Develop "contingency reserves" in the budget and schedule

5. Risk Monitoring and Control

For each risk define a risk owner. Their role is to be looking for the triggers which will activate the risk response plan.
- Keep track of the identified risks and assumptions
- Monitor and ensure the risk plans are being executed
- Constantly look for the triggers
- Analyze the contingency reserves for ongoing relevance
- Communicate risks, status, and plans as required
- Respond to the actual risk event by implementing the planned response (or for an unplanned response, use a workaround)
- Respond to potential new risks by performing risk analysis again
- Keep the Risk Management Plan up to date
- Evaluate and document the risk responses and develop lessons learned to be added to the PMO lessons learned list

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