








# Project Management Tools for Site Remediation and Risk Management Projects

Presented by

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# Presentation Plan

-  Parties involved
-  Introduction/context
-  Project Management vs.  
Contaminated Site Management
-  Project Management Tools  
Overview
-  Conclusion

# 1. Parties Involved

- Public Works And Governmental Services Canada (PWGSC)
  - Contaminated Sites Management Working Group (CSMWG)
  - Federal Contaminated Sites Action Plan (FCSAP) Secretariat
  - Treasury Board of Canada Secretariat
  - Golder Associates Ltd.
  - Franz Environmental Inc.
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## 2. Introduction / Context

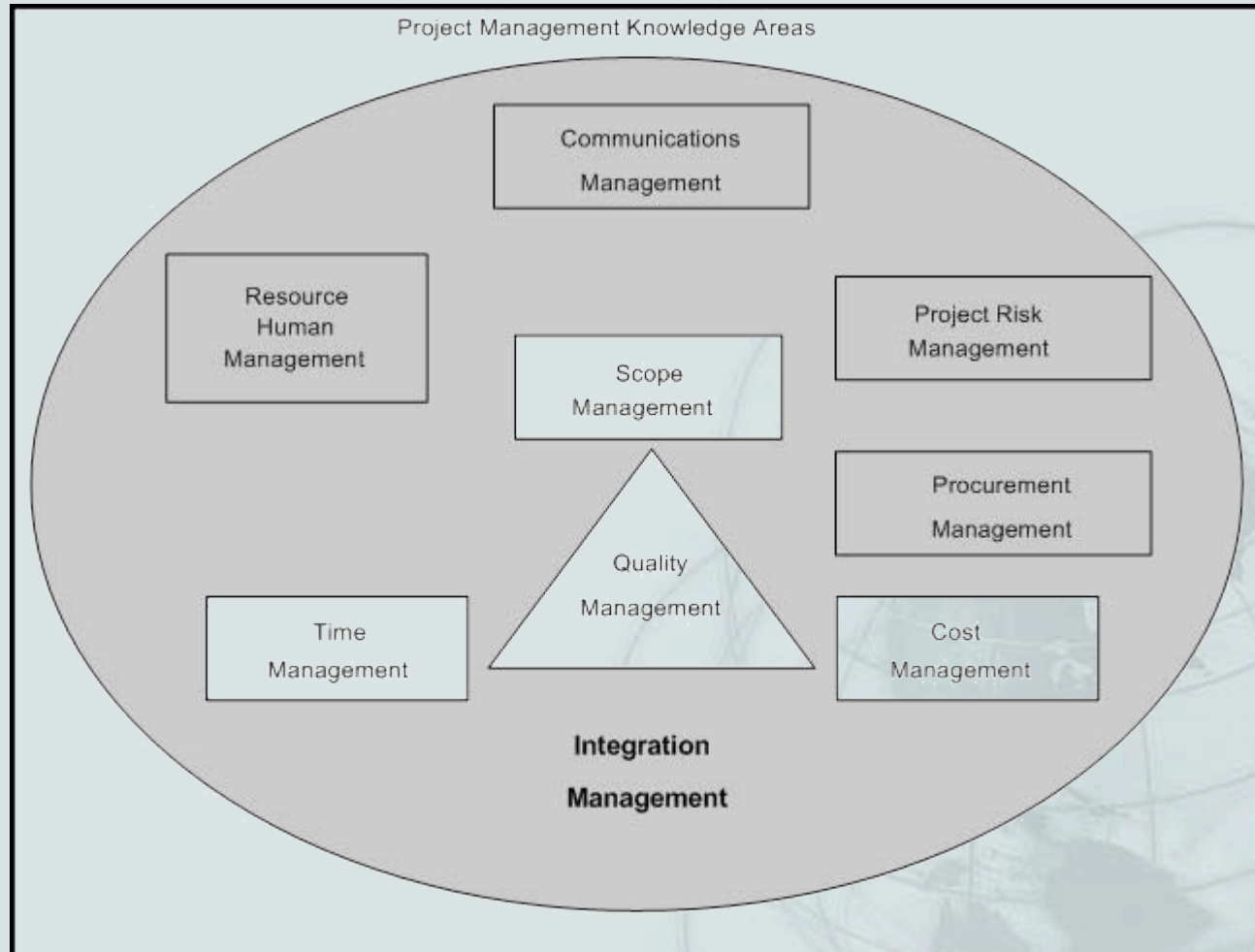
- Poor planning = risk of project failure
- PWGSC has an expert support role in the FCSAP community
- Initial Needs Assessment 2006:
  - high priority: strengthening and improving the knowledge areas of scope, time, cost and risk management
  - medium priority: developing quality and communications knowledge areas
- Tools and techniques contained in the Project Management Body of Knowledge (PMBOK®) Guide adapted to contaminated sites projects and FCSAP's requirements

### Project Management vs. Contaminated Site Management

- Contaminated site management = investigation, remediation of a contaminated site
- 10 Step process of CSMWG document: A Federal Approach to Contaminated Sites
- Federal Guidance documents  $\neq$  Guidance on project management
- Project = “A temporary endeavour undertaken to create a unique product, service or result”

# 4. Project Management Tools Overview

8 Project Management Knowledge Areas → 12 Project Management Tools + Independent Learning Modules



# 4.1 Project Initiation

- Series of activities that facilitate the formal authorization to start a new project or project phase. Includes:
  - Objectives of the project
  - A Preliminary Project Plan (PPP)
  - Identification and evaluation of options
  - Identification of approvals and resources needed
  - Project approvals from within the custodian organization An application for FCSAP funding
- Value and Benefit: clear understanding of project parameters and timely and appropriate approvals

## 4.2 Project Charter

- Formally authorize the existence of the project
- Provides the project manager with the authority to apply resources to the project activities
- Written agreement between project sponsor and manager
- Also includes:
  - description of the project team
  - main stakeholders, and the policies and requirements that shape the project
  - dispute resolution mechanism between the project sponsor and project manager

## 4.3 Project Scope Management

- Ensure that the project includes all of the work that is required and only that work
- Scope planning and scope definition tool:
  - ➔ Work breakdown structure (WBS)
- WBS = individual work packages that can be scheduled, cost estimated, monitored and controlled
- Scope monitoring = reviewing each deliverable
- Scope control = controlling changes to the project

# 4.4 Project Time Management Planning

- Sequence of activities, estimates of their duration and baseline schedule
- Programming of dependencies between the activities
- Network diagram: critical path = total project duration
- Methods of schedule compression:
  - crashing: decreased duration through resources increase
  - fast-tracking: execution of normally sequential tasks, simultaneously

# 4.5 Project Cost Management

- Cost estimation, budget development, and cost control
- Estimation methods:
  - **Expert judgment**
  - **Analogous estimating**
  - **Unit Cost and Quantities**
  - **Parametric estimating**
- Budget = aggregation of cost estimates for all scheduled activities over the duration of the project

## 4.6 Project Quality Planning

- Quality assurance (QA) = processes monitoring
- Quality control (QC) = project deliverables inspection
- Inputs: scope statement, client-specific requirements, regulations, rules and standards
- Outputs: quality plan, quality metrics, checklists, process improvement plan...
- Good quality planning avoid: rework, wasted resources and loss of reputation

**Quality is planned, designed and built into the project – not inspected**

# 4.7 Project Procurement Planning

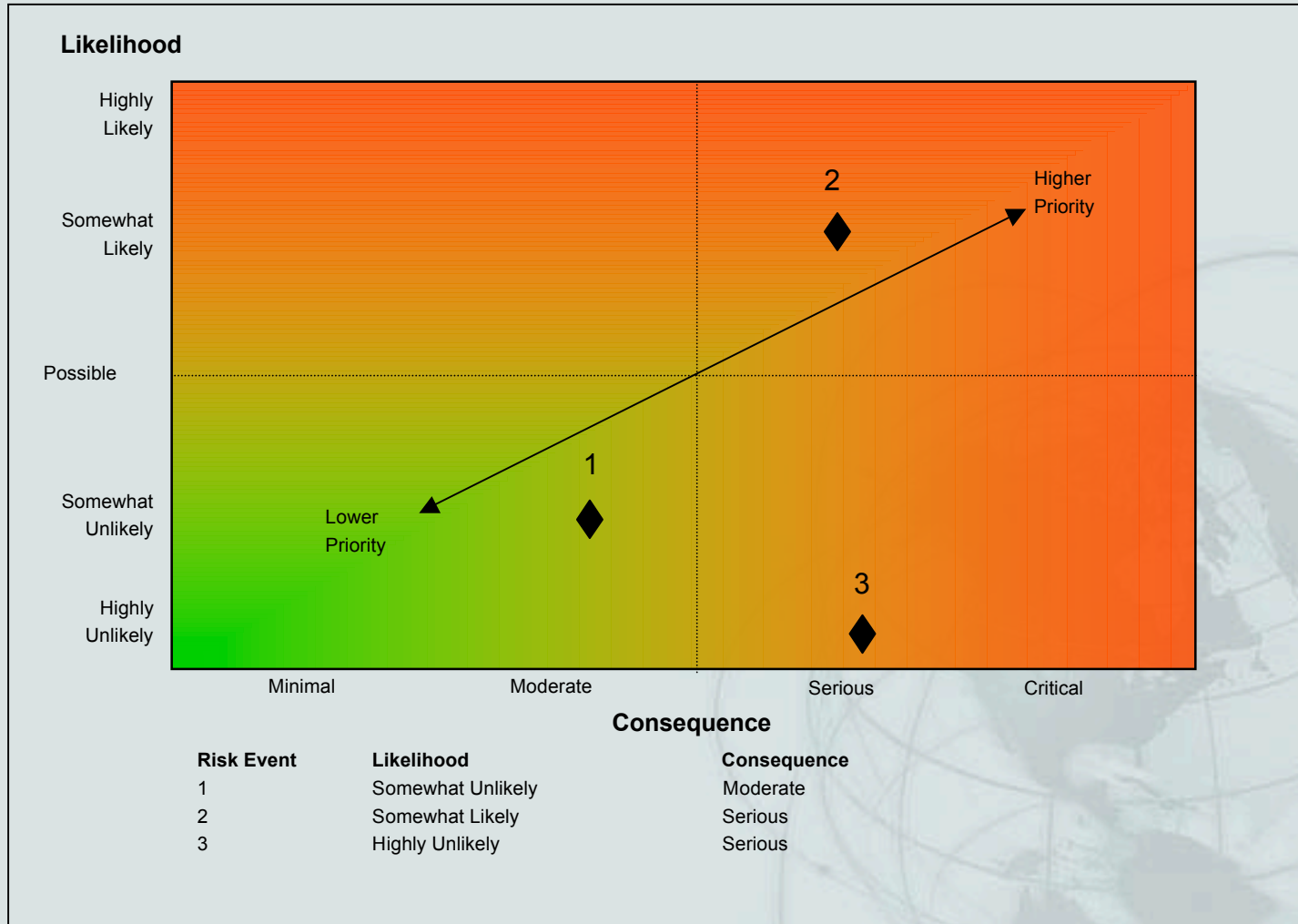
- What to purchase or acquire, when and how
- Inputs: activity sequences (WBS), estimated costs of the activities, Potential suppliers
- Specific considerations for federal contaminated site procurement planning :
  - Incertitude
  - Seasonal nature of fieldwork;
  - Special expertise requirements for large, complex sites
  - Environmental regulatory context
  - Health and Safety.
- Outputs: procurement plan, statements of work for procured elements

## 4.8 Project Risk Management

- Risk = potential adverse impact on one or more project constraints
- Three components : event, likelihood, consequence
- Identification of risks for each constraint
- Prioritization of risks via “Likelihood vs. Consequence Matrix”
- Risk responses: avoidance, transference, mitigation or acceptance
- Risk monitoring and control : risk register, tracking leading indicators of risk events, risk responses

# 4.8 Project Risk Management

## Likelihood vs. Consequence Matrix



## 4.9 Project Status Reporting and Integrated Change Control

- Status reporting = project's actual status compared to its planned baselines for budget, schedule and deliverables
- Earned Value Management (EVM), measures:
  - Project's cost performance;
  - Project's schedule performance;
  - Project's efficiency (expenditures → deliverables)
  - Schedule use efficiency

## 4.9 Project Status Reporting and Integrated Change Control

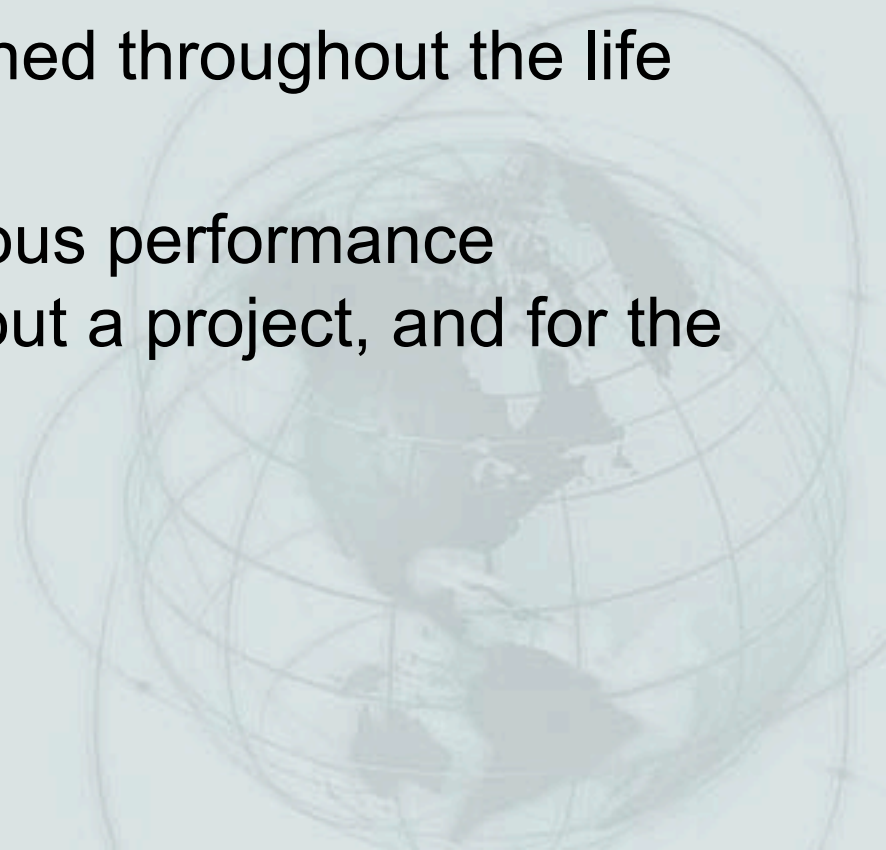
- Produce other indicators such as:
  - Cost performance index
  - Schedule performance index
- And predictors such as:
  - Estimated project duration
  - Estimated cost at completion
- Change Control: A change request form should show how all three main project constraints will be affected by any change, and provide the reason for the change

## 4.10 Project Communications Management

- The tool assists a project manager to determine the communications needs of the stakeholders: Who? Type? When? How? Means?
- Contains a list of potential stakeholders
- determine what information each stakeholder should get, not over-communicate by giving a stakeholder more information than is required
- Plan methods of delivering communication

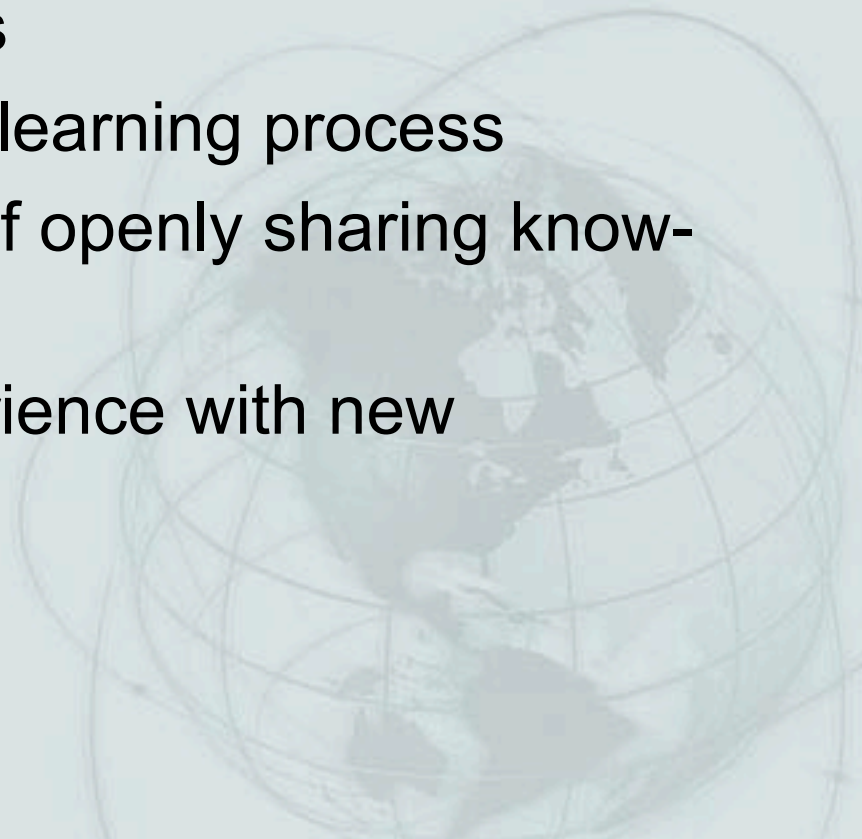
# 4.11 Lessons Learned

- A Lessons Learned process:
  - Focuses on a project's successes and failures
  - Identifies lessons learned throughout the life cycle of the project
  - Is a means of continuous performance improvement throughout a project, and for the next projects

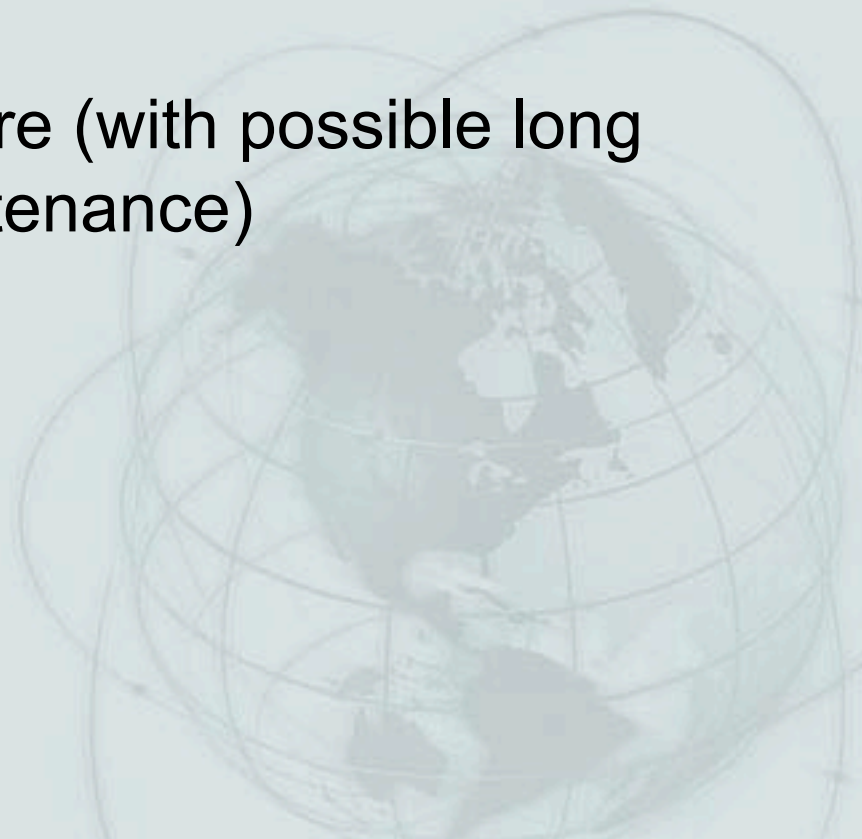


# 4.11 Lessons Learned

## ➤ Value and benefits:

- Improves quality through reduced risks of repetitive deficiencies
  - Provides a collective learning process
  - Encourages culture of openly sharing know-how; and
  - Communicates experience with new technologies.
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# 4.12 Project Closure

- Formalizes and Documents the achievement of the remediation or risk management project
  - It includes:
    - Contaminated site closure (with possible long term monitoring or maintenance)
    - Contract closure
    - Administrative closure
    - Record of Site Condition
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# 5. Conclusion

- Expected benefits of the Project Management tools:
  - Adoption of a 'common language'
  - A better rate of delivering projects on budget and on schedule
  - Easier hand-over of projects from one project manager to another
  - Defensible justification for amendments and accountability
  - Earlier prediction and better corrective response to deviations in scope, budget or schedule
  - Improved client satisfaction and less rework
  - Reduction of the occurrence and impact of risk events on projects
  - Improved communication with all stakeholders
  - Ever-improving effectiveness of project managers

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**Thank you for your attendance.**

**Questions?**

