

**Real Property Institute of Canada**  
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**Workshop**

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**Integrating Sustainability and the**  
**Project Life Cycle System**

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# Outline

- Sustainable development
- Seven questions to sustainability
- Site specific goals and criteria
- Project life cycle systems
- Integrated approach to remediation

# Sustainable Development

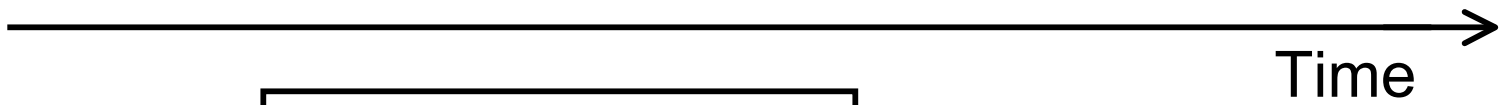
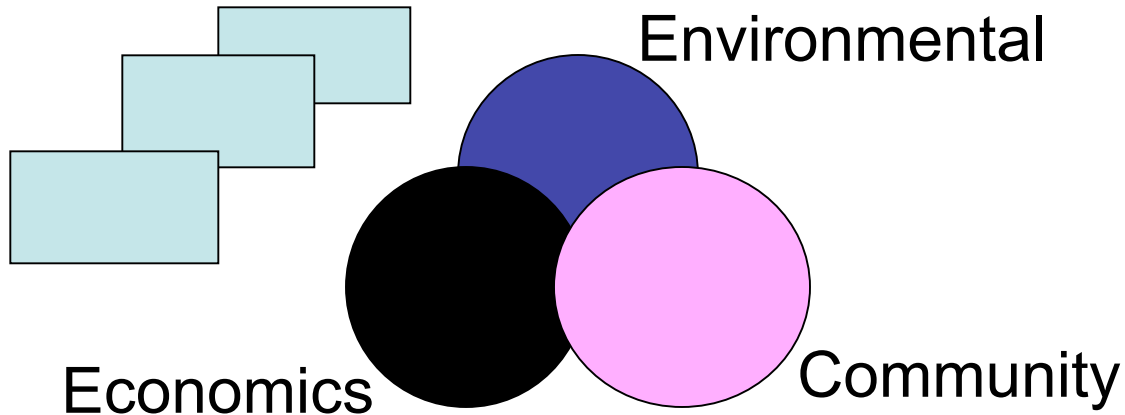
*“Humanity has the ability to make development sustainable – to ensure that it meets the needs of the present without compromising the ability of future generations to meet their own needs.”*

*Our Common Future*, The World Commission on Environment and Development, Oxford University Press, 1987

Needs not Wants

**Technology**

Scale: local, regional, national



**Multi-Generational**

Paradigm of Change

# Sustainability Concepts

- Efforts to operationalize sustainability:
  - Triple bottom line
  - Three pillars to sustainability
  - Three legged stool
  - Etc.

# Remediation Projects and Sustainable Development

- How the project planning, implementation, etc. can contribute to sustainable development
- Long-term sustainability of the remediation

# Seven Questions to Sustainability

- Developed during the Mining, Minerals and Sustainable Development project  
[www.iisd.org/mmsd/publications.asp](http://www.iisd.org/mmsd/publications.asp)
- Objectives:
  - To develop a set of practical principles, criteria, and/or indicators that could be used to guide or test the exploration for, design, operation, closure, post-closure and performance monitoring of individual operations, existing or proposed, in terms of their compatibility with concepts of sustainability; and
  - To suggest approaches or strategies for effectively implementing such a test/guideline.

# Seven Questions to Sustainability

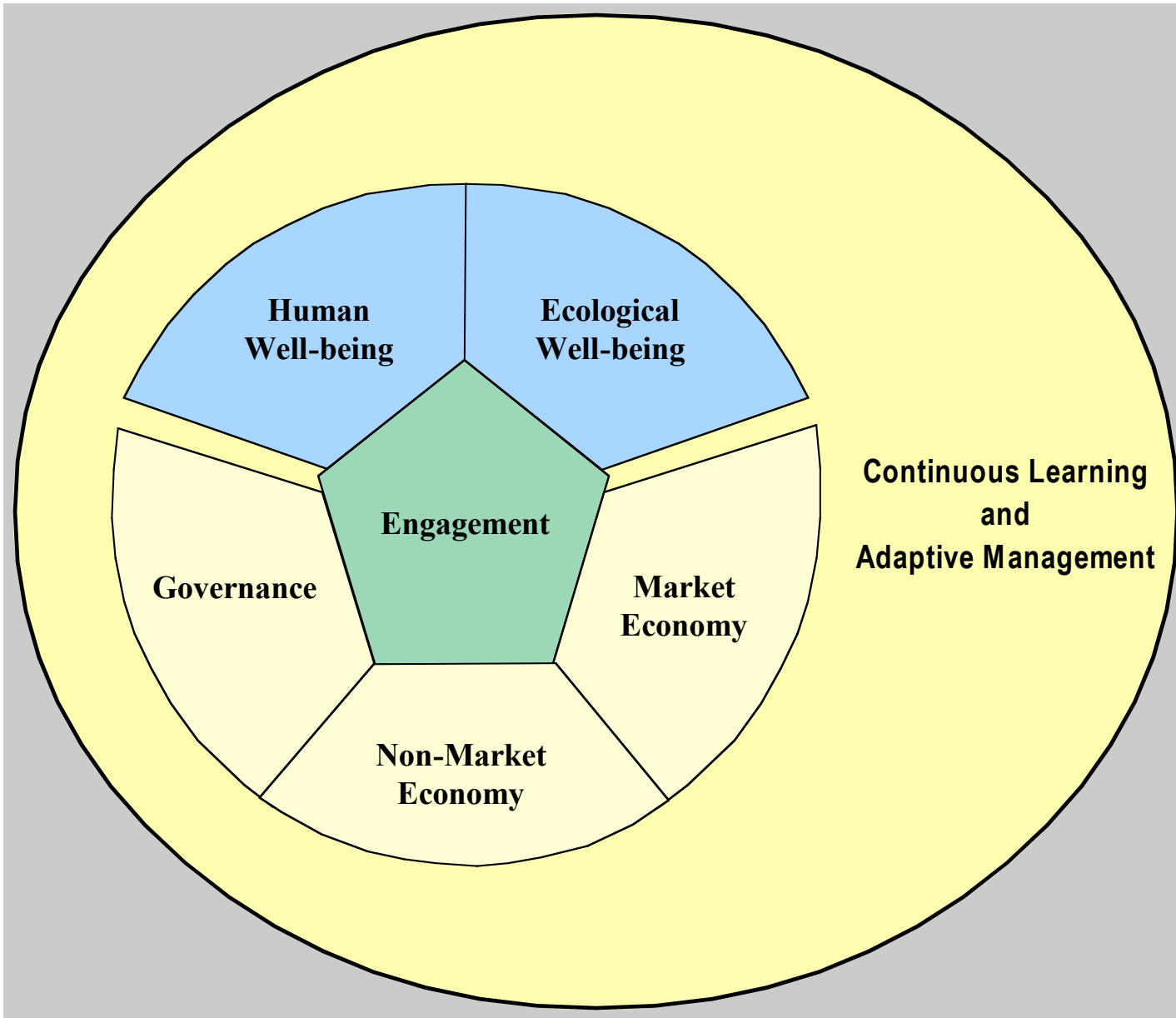
1. **Engagement.** Are engagement processes in place and working effectively?
2. **People (Human Wellbeing).** Will people's wellbeing be maintained or improved during and after the project or operation?
3. **Environment (Ecological Wellbeing).** Will the integrity of the environment be taken care of in the long term?

# Seven Questions

4. **Economy (Market Economy)**. Is the economic viability of the company assured; is the community and regional economy better off not only during operation but into post-closure?
5. **Traditional and Non-Market Activities (Non-Market Economy)**. Is the viability of traditional and non-market activities in the community and surrounding area maintained or improved with the project or operation?

# Seven Questions

6. **Institutional Arrangements and Governance.** Are the rules, incentives, and capacities in place now and as long as required to address project or operational consequences?
7. **Synthesis and Continuous Learning (Continuous Learning and Adaptive Management).** Does a synthesis show the project to be net positive or negative for people and ecosystems; is the system in place to repeat the assessment from time to time?



The Seven Questions to Sustainability

# Project Design Goals and Criteria

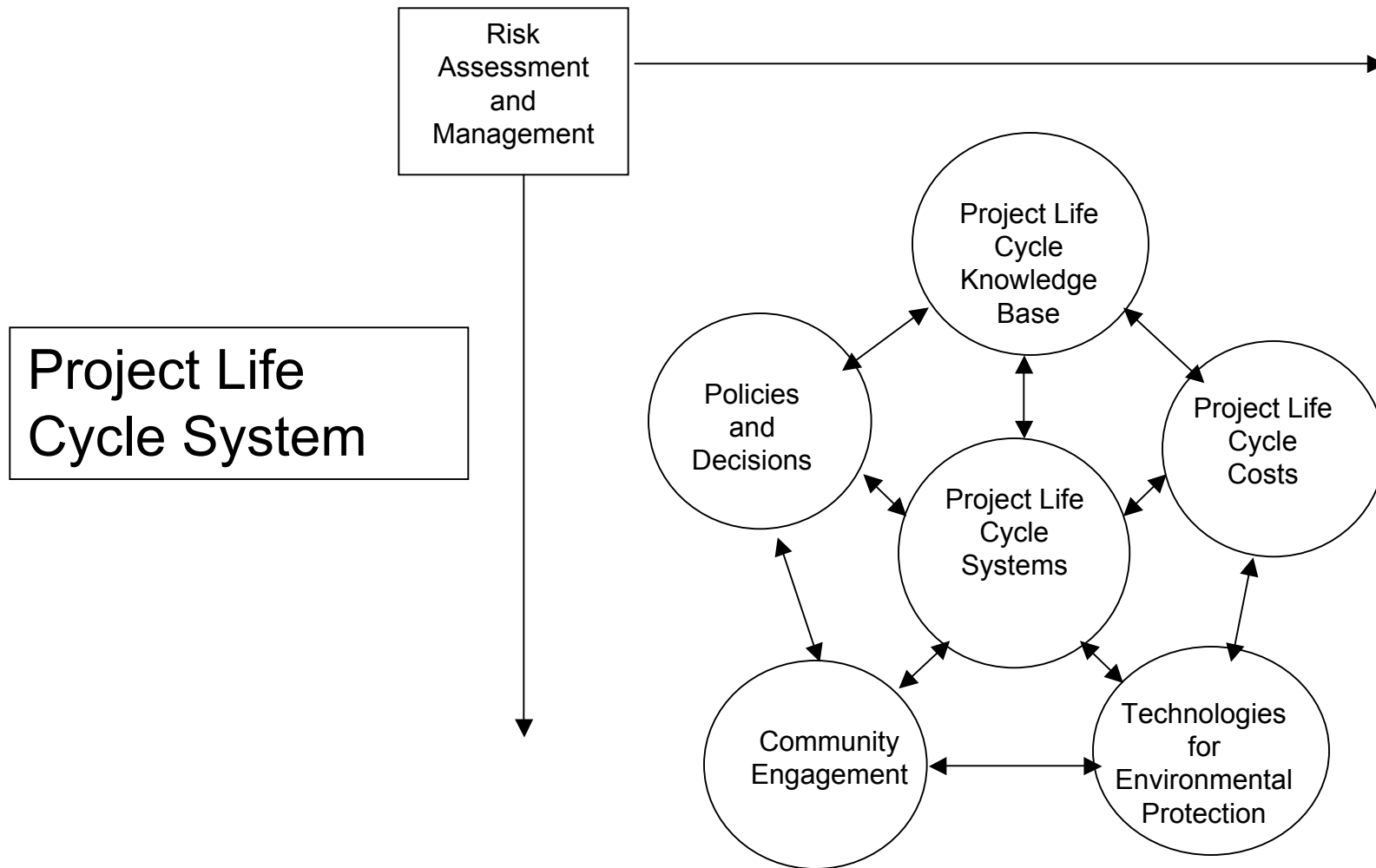
- Prescribed criteria – regulatory criteria and decisions
- Non-regulatory stakeholder desires
- Other performance criteria, e.g.
  - Final landform
  - Post-project land use

# Develop Project Specific Design Goals and Criteria

- An approach to establish a more complete set of site specific design goals and criteria
  - Review the seven questions/themes and their implications for a project
  - Compile a table of seven questions and project life goals considering site specific issues
  - For large projects the table can include considerations for specific project facilities, and can then be aggregated for the whole site

# Project Life Cycle Elements

- Project life cycle knowledge base
- Project life cycle cost
- Technologies for environmental protection
- Community engagement
- Policies and decisions
- Risk assessment and management



# Proposed Design Process that Addresses the Life Cycle Components

- Develop the design based on the site specific goals, including sustainability goals
- Compile a list of site specific design and project development approaches for each of the project life cycle elements

# Some Final Comments

- The contributions that the project activities make to SD are important and so is the long-term sustainability of the remediation
- Best practice remediation project design requires an integrated approach of sustainable development and project life cycle systems
- While technology is important it is not the main driver for the 21<sup>st</sup> century
- Remediation project managers are systems thinkers, facilitators and implementers!