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Excellence

THE ROLE of CLEAN TECHNOLOGY in REMEDICATION

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(WORKING TITLE)

**Integrating Sustainable Innovative
(Green)) Technology and Process' into
Your Brownfield Redevelopment
Projects**



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**WHY YOUR
GREEN TECHNOLOGY
BROWNFIELD PROJECT
IS ABOUT TO GET A
WHOLE LOT**

MORE COMPLEX*

* All Recognition to Mr. Jeff Rubin



PRESENTATION OUTLINE

- OCE and Innovation (Green Technology)
- Ontario Brownfields Innovation Partnership
- Brownfield Innovative Technology Challenges
- Conditions for Green Technology Success
- Innovative Green Technology Path Forward
- Sustainability Drivers

OCE and Innovation

- OCE Centre for Earth and Environmental Technologies
- Funded by Ontario Government
- Commercialization of Cutting-edge Research
- Fosters Next Generation Innovators through Partnering with Universities, Colleges, Industry and Government
- Development, Piloting, Demonstration and the Commercialization of Innovative Technologies in Support of Sustainable Communities in Ontario, Nationally, Internationally



Ontario Brownfields Innovation Partnership

- Three Main Barriers to Brownfield Redevelopment in Ontario
- Initiative Launched in 2006 to focus on Developing Innovative Technology in Ontario (new or demonstrated)
- Utilized Series of Stakeholder “Think Tanks”
- OCE Supported Creation of OBIP Advisory Committee and Provided Project Management and Research Funding
- Initial Identification of 10 Initial Pilot Projects
- Ontario and Dutch NSP Collaboration

Brownfield Innovative Technology Applications are Challenging

- Major Challenge in moving R&D Innovation Projects on to Brownfield Pilot Site Properties
- Technical and Approval Challenges
- Lead Times / Project Coordination - Players
- Practicable Business Economic Case Development
- Municipal / Ownership Engagement (Community)
- Funding Mechanisms Complicated
- Other Issues (Offsite, Liability, Certainty)

Conditions For Green Technology Success in Brownfield Remediation Projects

- Sustainability Must Drive Project – Economic Costs Recognize Standards
- Integration with Risk Management Approaches
- Municipal Planning Role - Regulatory Support
- Partnership Frameworks – End Use
- Integrated Management Strategy Mega Sites



Innovative / Green Technology Path Forward

- Simple Frameworks/Templates That Encourage Standardized Green Based Technology Applications (80/20)
- Unique / Complex Brownfield Projects Must Recognize Sustainability Drivers
- Risk Management
- Wide Area Planning Encourages Usage of More Creative Brownfield Cleanup Technology
- Coordinate Research and Development of Clean Technology Including Applications (Continuous Improvement)

Sustainability Drivers For Green Technology

- Incorporate Sustainability in Planning and Project Best Management Practices (Governance))
- Economic and Environmental Cost Balance
- Regulatory Roles – Consistency “Pull”
- Broader Definition of Sustainability – Re-wealth Principles
- Risk Management Approaches
- Focus on Brownfield Property End Uses
- Green Technology Process Approach
- Real Sustainability Standardization - Sustainability Standards (ASTM E50.04 – CSA Business Market Need, ISO)