Ontario, Canada—Perspective and Approach to Water Technology Testing

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Ontario Water Assets

- **102 water-related research institute, groups and centres**

- **42 Canada Research Chairs dedicated to water**

- **22,000 private and public sector jobs in water-related industries**

- **680 drinking Water Treatment facilities**

- **466 waste water treatment facilities**

- **> 900 Companies in the sector**

- **Provincial Support**

Provincial Assets: Approaches to Testing Technologies

Technology Acceleration

Water Companies

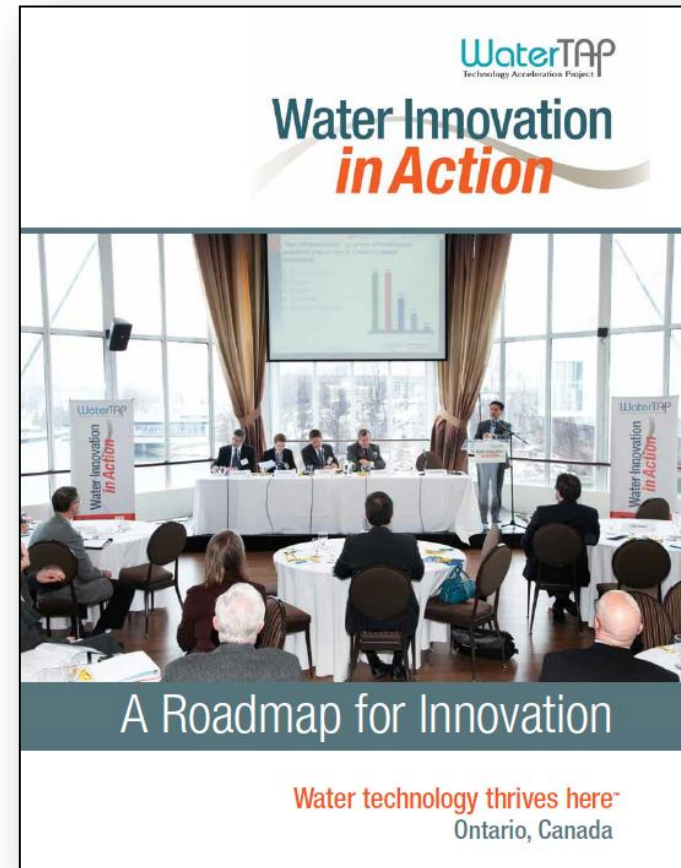- Help build better businesses

Utilities

- Connect end users to solution providers at the right time

Government

- Create an environment for innovation

Barriers to Innovation

- Access to Testing Facilities
- Financial
- Regulatory
- (perceived) Risk of Implementation

Ontario Clean Water Agency

**ONTARIO CLEAN WATER AGENCY
AGENCE ONTARIENNE DES EAUX**

Access to Facilities

- **Approximately 200 municipal customers, and operates >500 facilities**

- tracking 60+ companies with innovative technologies and services, and matching to client needs

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What's the big idea?

Access to Facilities

8 Universities

70 Supporting Companies

3 Municipalities

+ GRCA, new partners…

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Partner Universities

Platform for Water Innovation

SOUTHERN ONTARIO WATER CONSORTIUM

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The Nodes

1. Water treatment

2. Wastewater treatment

3. Ecotoxicology

4. Watershed management

5. Sensor development

6. Water and wastewater analysis

Showcasing Water Innovation

Ontario's $17 million program to promote innovative and cost-effective management of community water resources

Funding 32 projects led by municipalities, water utilities, non-profits, conservation authorities, watershed management organizations, and Aboriginal communities

Partnering with water technology and service companies, universities, and colleges to showcase and test products

Financial Support

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Project Examples

City of Thunder Bay

Full-scale installation of Lakehead University technology that uses light and electrical current to remove contaminants in water.
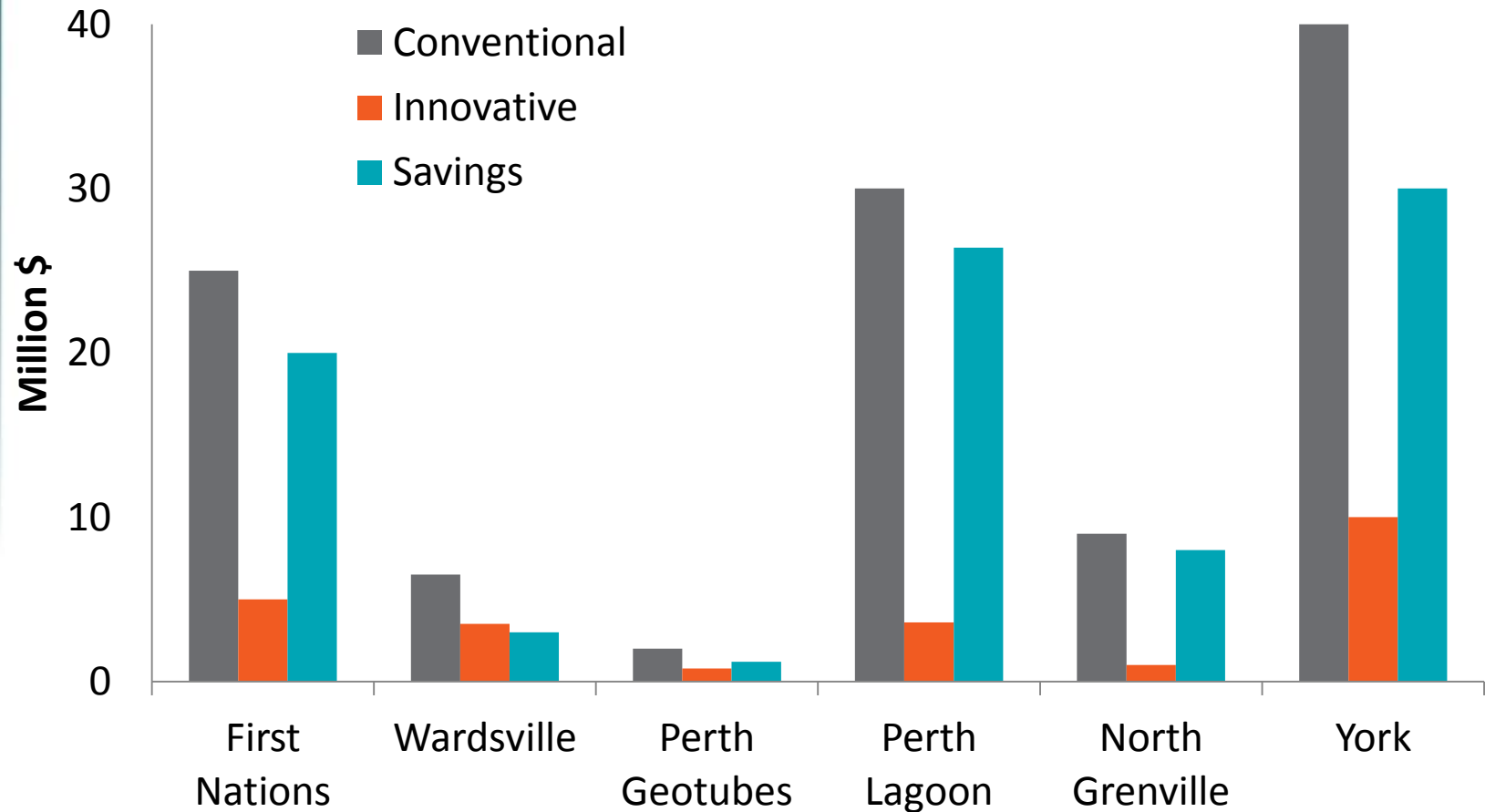

The Ontario Greenhouse Alliance

Develop and test technologies for economical recycling of nutrient-bearing water used in greenhouses.

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Innovative projects save money

Multi-site Approval

Regulatory Support

Previous Process

- Pilot test or demo is an "alteration to a facility" requiring **owner** to seek approval from MOE

- Extra work for owner

- Risk MOE re-examines Environmental Compliance Approval (ECA) for facility

New Process

- Based on multi-site approvals for mobile treatment facilities

- Technology proponent holds ECA

- Facility owner produces a letter authorizing test and acknowledging effluent limits will still be met

Comprehensive Certificate of Approval (Limited Operational Flexibility)

Previous Process

- C of A must be amended or replaced whenever a change is made to a facility, even if these changes are minor, low risk or environmentally insignificant

- Large backlog of approvals

New Process

- Pre-approved activities under CCA:

- Schedule A: generic works/ minimal engineering…

- Schedule B detailed engineering…

- Prior to implementation notice is given

- 30 day turn around

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SOWC Approvals

1. Companies and researchers can access facilities with no ECA requirement

   - Amendments to ECA for Guelph and London
   - Guelph test facility is outside existing plant but is closed loop
   - London test facility is within existing plant

2. Multi-site approvals held by tech companies can be used

Regional Public Works Commissioners of Ontario

1. Identification of common pain points
2. Sharing of best practices

Reduced Risk

Reflections

- Death by Pilot
- Under communication, under utilization
- Duplication of efforts
- The power of the peer to peer groups
- Protocols for tests (a common language for innovation)

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Conclusion

One of WaterTAP's roles is to help coordinate efforts in the water sector

- Creating visibility for tech companies and end users about opportunities to perform test and to share results

- Helping to foster better communications among end users to de-risk adoption of new technologies

Water technology thrives here

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