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
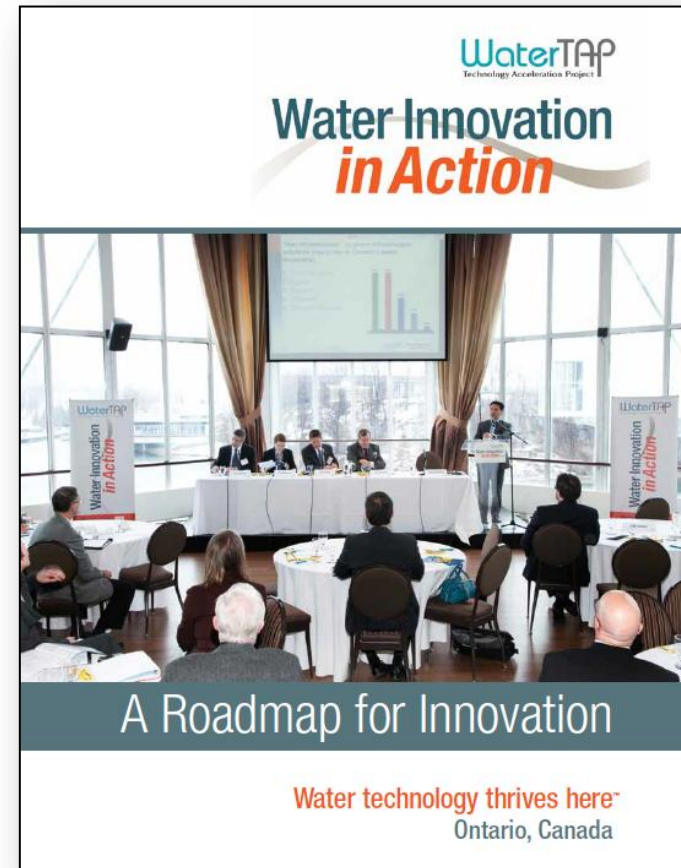
Water Companies

- Help build better businesses

Utilities

- Connect end users to solution providers at the right time

Government

- Create an environment for innovation

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Barriers to Innovation

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

Ontario Clean Water Agency

ONTARIO CLEAN WATER AGENCY
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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

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

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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.
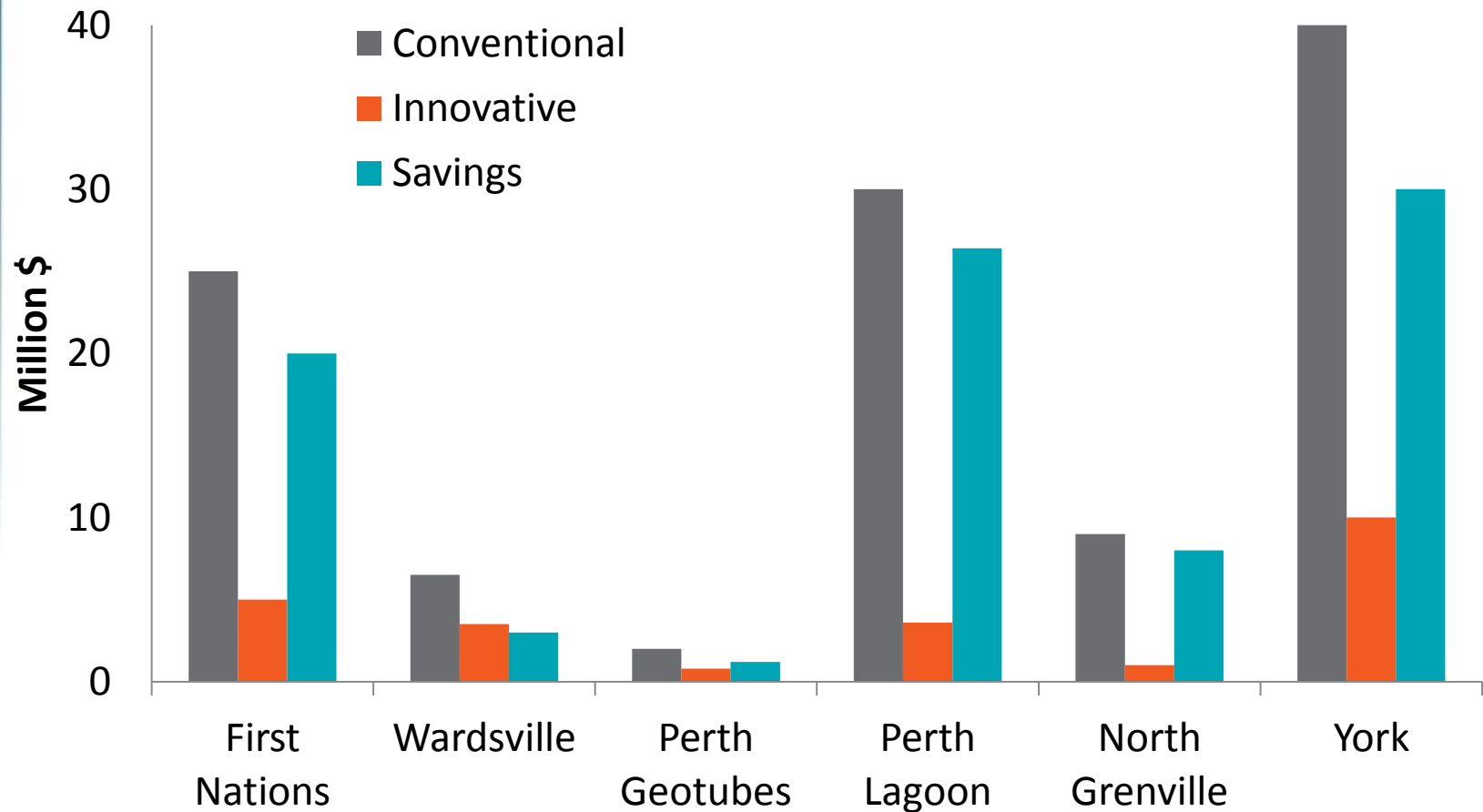

The Ontario Greenhouse Alliance

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

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

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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

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Water technology thrives here

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