



Tapping into Tomorrow: Exploring Opportunities in Canadian Water Innovation

2023 National Water and Wastewater Conference

Heather Crochetiere,
Director, Industry Innovation
November 14, 2023



**Our Goal:
Canada to be the
first G7 country to
reach **net zero.****

To accelerate the transition, we need to rapidly launch, commercialize, and scale climate solutions.

With the support of our Helix 5 partners – innovators, industry, investors, government, and academia – Foresight is relentlessly driving cleantech innovation in Canada.



waterNEXT is Canada's **Water Technology Network**

We bring together stakeholders from across the water innovation ecosystem to accelerate the commercialization and adoption of technologies for the world's most pressing water challenges.

waterNEXT works to advance the Canadian water technology ecosystem through:

1

**Acceleration
Programs**
for Water Tech
Startups

2

**Industry and Investor
Matchmaking**
for Established
Ventures

3

**Innovation
Partnerships**
with Technology
End Users

4

**Stakeholder
Engagement**
Across Water-Related
Sectors

5

**Global Showcase
Opportunities**
for Canadian
Water Tech



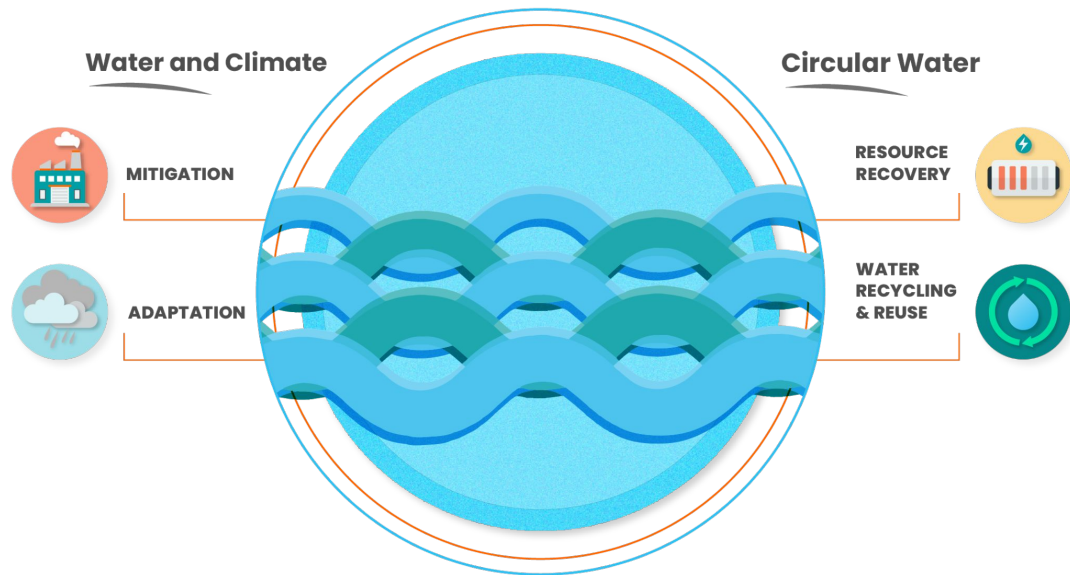


waterNEXT is Canada's water technology network, operated as an initiative of Foresight Canada. We work across multiple sectors – from resources to utilities – to accelerate the commercialization and adoption of innovative technologies for the world's most pressing water challenges.

- **75** active waterNEXT companies
- **140+** ventures supported to date
- **1120+** network reach



Key Focus Areas



**Our goal is to achieve less than 10%
municipal and industrial water loss
by 2033**

waterNEXT will work with major utilities and tech company partners to demonstrate how Canadian water systems can deploy Canadian innovation to improve their operating efficiency, significantly reduce losses, and cut energy waste.

**Water is not a
technology issue,
but technology is a
critical part of the
solution.**

Turn to your neighbour!

- How are you thinking about innovation?
- What gaps are you facing?
- How are you identifying technologies or solutions?



Water in Canada

\$7B+

Export revenue from Canadian water solution providers
(Statistics Canada)

600+

Water technology companies serving a range of sectors and markets
(waterNEXT)

79%

Canadian water technology companies in Canada that are exporters
(Trade Commissioner Service)

\$1T

Estimated worth of the global water market
(Merrill Lynch Global Research)

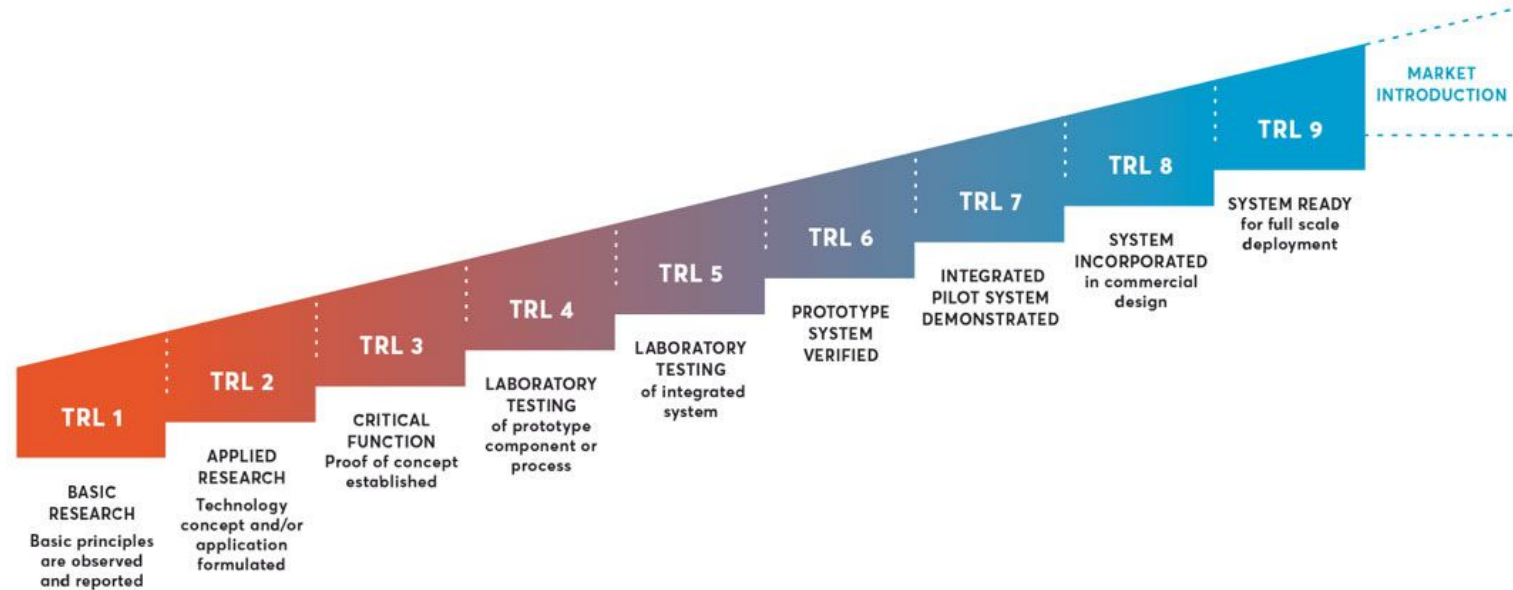
150+

Research chairs with water as part of their focus funded by the Canadian government.
(Trade Commissioner Service)

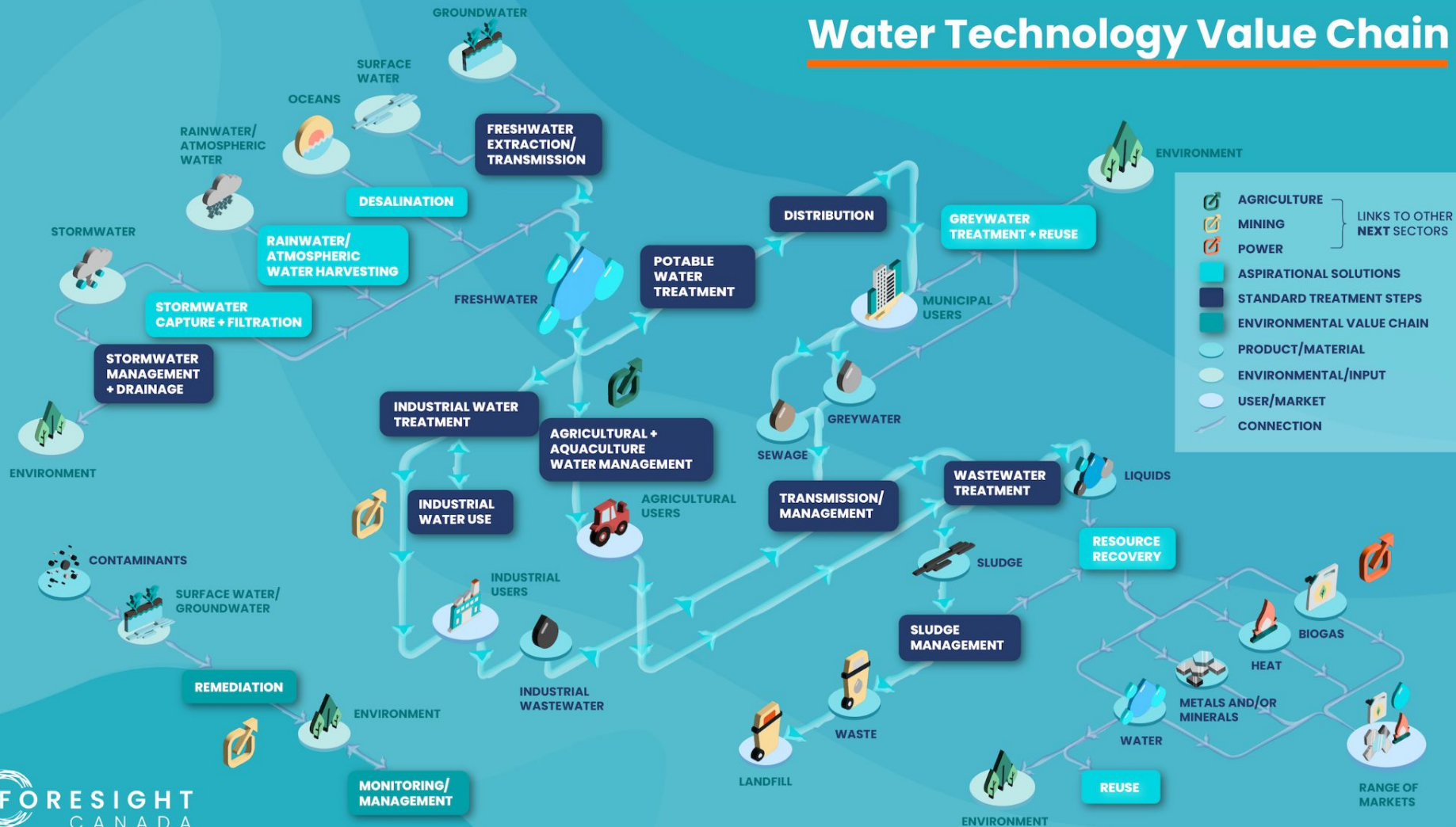
>10%

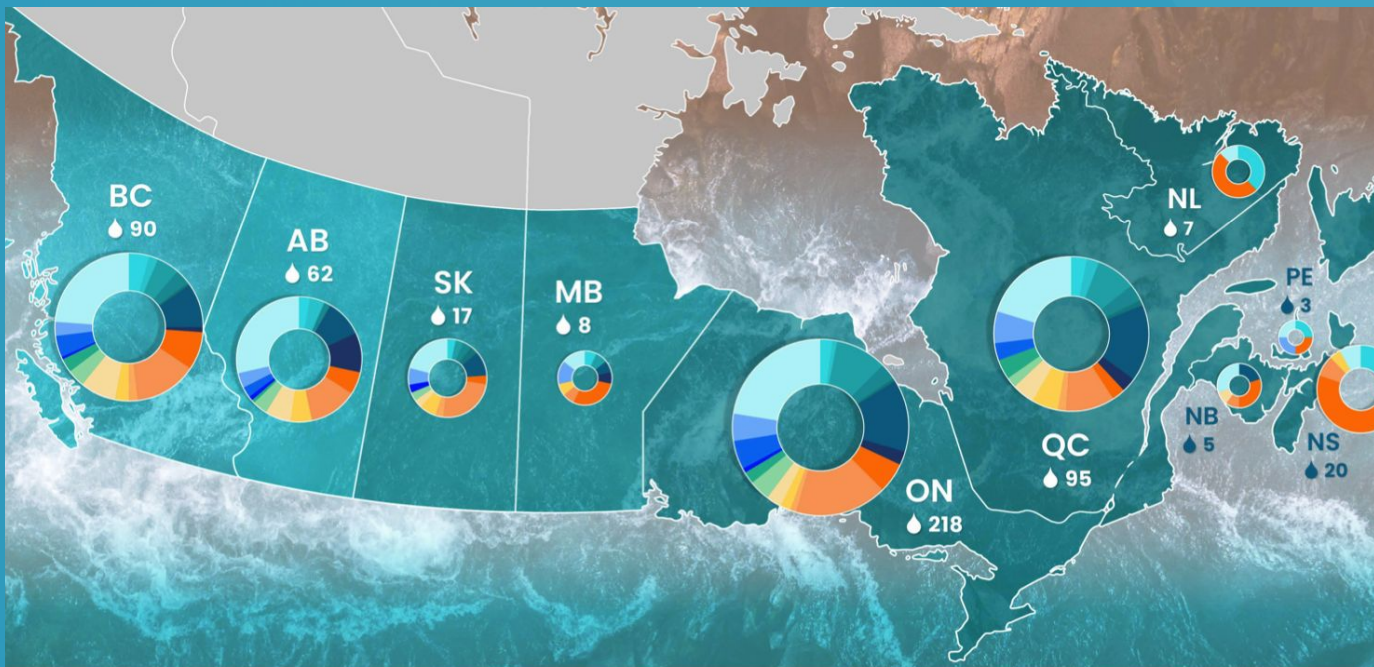
Global greenhouse gas emissions from water-related categories
(Deutsche GIZ)

Technology Readiness Level



Water Technology Value Chain





💧 Total Number of Water Companies



- **525 companies assigned**
- **Well – distributed value chain**
- **Treatment represents the largest concentration**
- **Wastewater treatment and monitoring / management in all provinces**

Water Technology in Canada

Adoption & Export

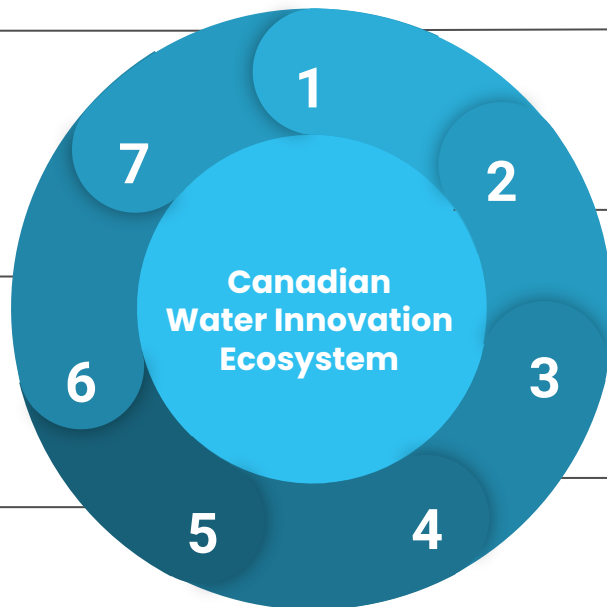
- Adoption: CWWA, WaterNEXT
- Export: EDC, GAC/TCS
- Regional and sector-specific organizations (e.g. COSIA)

Commercialization & Growth

- WaterNEXT, NRC IRAP
- Regional and sector-specific organizations (e.g. CDL)

Pilot & Validation

- AquaAction (AquaEntrepreneur), NRC IRAP
- Regional and sector-specific organizations (e.g. ACWA)



Water Issues

- A range of problem holders, including utilities, industry, municipalities, Indigenous communities, non-profit organizations, etc.

Research & Data

- Non-profits: IISD, Living Lakes Canada, DataStream, WWF Canada, Swim Drink Fish
- Networks: Canadian Water Network, Global Water Futures
- Universities and government research organizations
- Regional and sector-specific organizations (e.g. Atlantic Water Network)

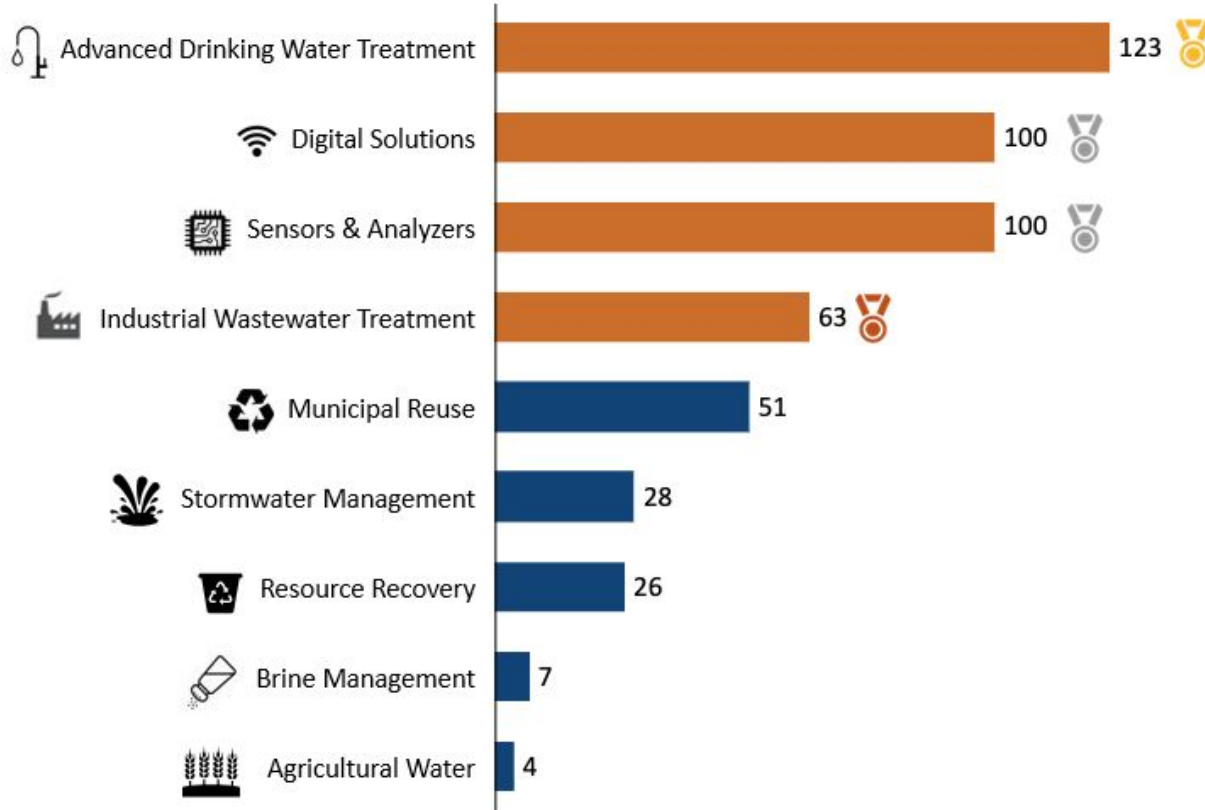
Ideation & Innovation

- AquaAction (AquaHacking), Waterlution (Water Innovation Lab)
- Regional and sector-specific organizations (e.g. Rain It In)

Technical Development

- NRC IRAP
- Regional and sector-specific organizations (e.g. OWC)

Canada's Water Sector



Prioritizes **advanced drinking water treatment** and **tech-driven solutions**, with growing focus on **wastewater treatment** and **municipal reuse**.

BCNZIN Water Cluster



- Water tech in BC is a growing ecosystem, with **100+** water and ocean tech companies working on solutions from desalination to digital technologies.
- **Cluster goal:** Strengthen BC's capacity to develop and deploy sustainable water solutions across communities, utilities, and industry.
- **Cluster focus areas:**
 - *Water & Climate:* Mitigation & adaptation
 - *Circular Water:* Resource recovery & water reuse
 - *Smart Water:* Digital solutions including sensors, software, and analytics

Innovator Spotlight: SENTRY

- **SENTRY** is enabling better, more timely decisions about treatment process performance
- **Mission:** Make biological processes intuitive, simple, and controllable.
- **Solution:** A robust real-time biological monitoring platform allowing operators to understand imbalance and optimize their processes
- **Projects:** 150 probes installed globally



SENTRY 

Innovator Spotlight: Novion

- **Novion** was founded in 2021 by a team of engineering students from SFU
- **Mission:** Reduce urban flooding by helping cities adopt and manage green stormwater infrastructure
- **Solution:** Climate intelligence platform to help municipalities manage and monitor their green infrastructure
- **Projects** include Project Greenlight pilot with City of Vancouver



The background is a solid teal color with a dense pattern of white, out-of-focus light spots (bokeh) of various sizes scattered across the entire surface.

Your innovation journey

Buyers are **clear** about their challenges.

We hear from critical stakeholders and rightsholders in roundtables, peer-to-peer groups and 1:1s what is *really* holding them back.

Budget Constraints 1	Ecosystem Supports 4
Low Risk Tolerance 2	Knowledge Gaps 5
Capacity Issues 3	Red Tape Barriers 6

And they are all at different stages in their efforts.

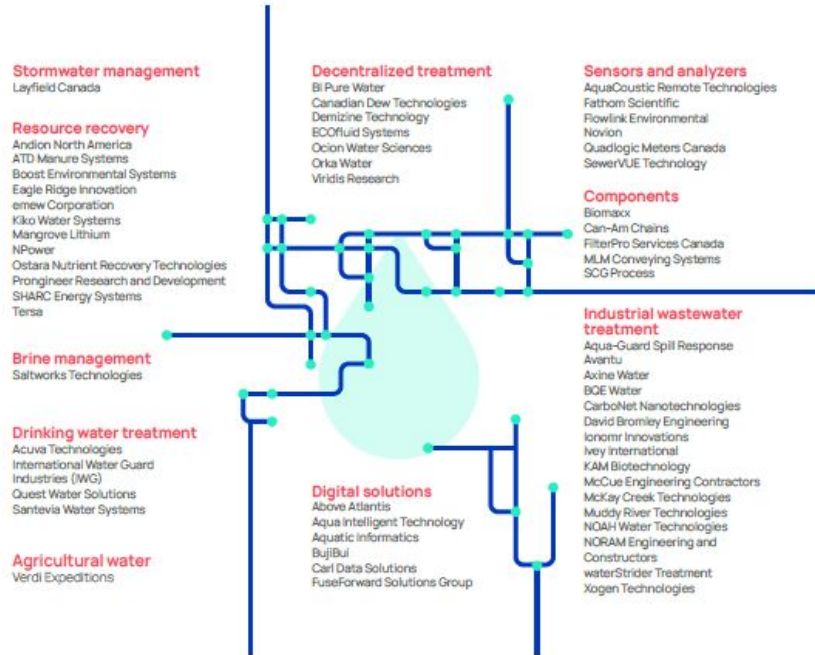
Cleantech Adoption Platform (CAP)

This set of market-drive programs accelerates connecting supply and demand with supports that bridge the **adoption gap**.

- 1 Best-in-class database** to profile pilot projects, products and services.
- 2 Technology pathways and business cases** to ease capacity barriers.
- 3 Opportunities** for coordinated bulk purchasing to ease cost barriers.
- 4 Guidance on leveraging** federal and provincial resources.
- 5 Network and training** for knowledge sharing across decision makers.
- 6 Sustainability metrics** and targets to circumvent greenwashing.

This is all about **action and execution** – the hardest part!

Collaboration with Invest Vancouver

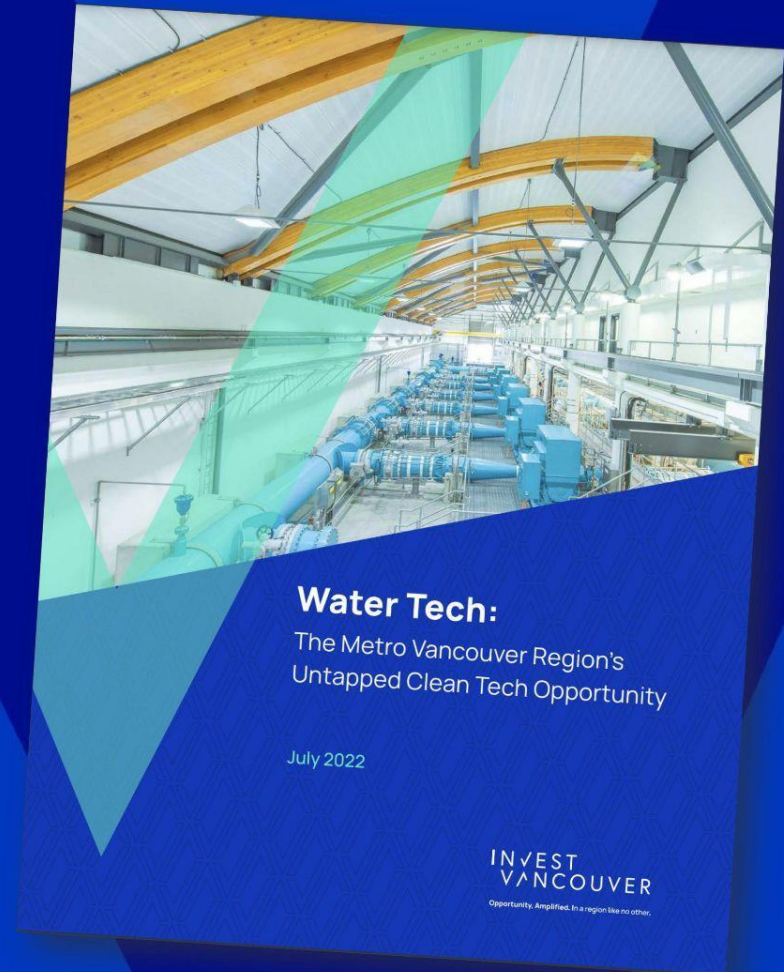


In its recent Water Tech Opportunities report, Invest Vancouver identified nearly **60** Metro Vancouver-based, export-oriented firms involved in water technology innovation, research, design, or development

Read the Full Report:




Report link




Metro Vancouver

Sustainable Innovation Fund

- Metro Vancouver's [Sustainable Innovation Fund](#) supports projects that contribute to sustainability and innovation around water and waste. Active projects include:
 - Advanced resource recovery from sludge (hydrothermal processing + anaerobic digestion research, pilot, and demonstration facility)
 - Greywater reuse and rainwater harvesting demonstration
 - Intelligent water systems – making use of sensors and big data analytics
 - Next generation water supply and demand planning tool
- 

SDG Connect: United Utilities

- **Partners:** United Utilities, one of the largest water/wastewater companies in England, with support from the Canadian Trade Commissioner Service (TCS) and High Commission of Canada to the United Kingdom (UK).
 - **Focus:** Combined Sewer Overflows and Water Quality
 - **Goal:** Explore Canadian technology solutions that address water quality issues (such as nutrients, contaminants, flow monitoring, source protection, and treatment processes), and solutions to improve their ability to avoid overflows of their combined sewer system.
- 

Work With Us

Canada's largest water technology network

- Technology scouting
- Market research
- Project development
- Ecosystem Access



waterNEXT

<https://foresightcac.com/waternext>

Heather Crochetiere
hcrochetiere@foresightcac.com

