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Canadian Laboratory Consortium

2025 Conference for Project Management Professionals

May 13-14, 2025

Canada

LabsCanada's Vision

- ✓ Nation-building partnerships where key sectors are supported by science
- ✓ See industry, academia and all levels of government deliver collaborative science outcomes
- ✓ Lay the groundwork for made-in-Canada innovation solutions in diverse areas that build on Canada's science strengths and key interests, from critical minerals to AI
- ✓ Address complex challenges, drive economic growth, and enhance national security, strengthening Canada’s productivity

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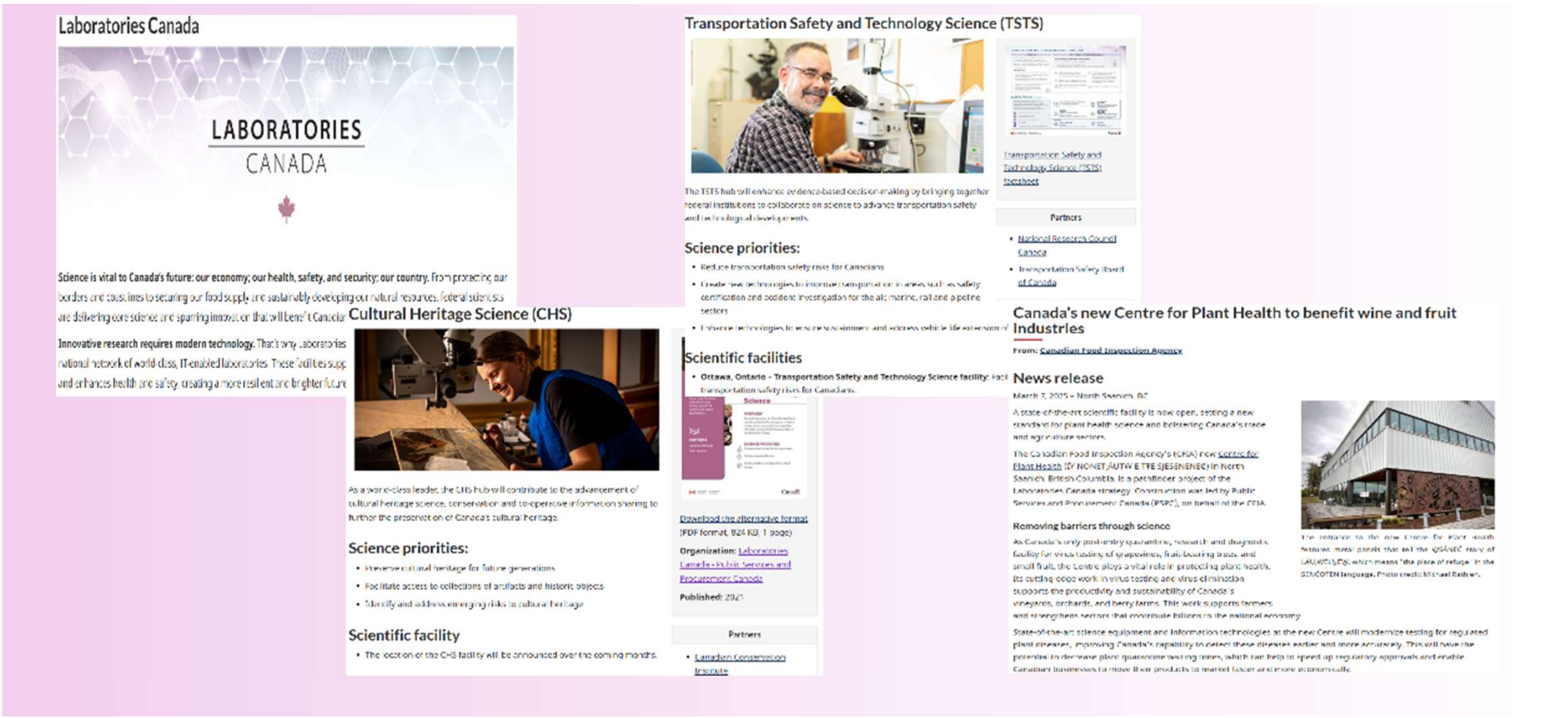
Laboratories Canada – Online Communication



The Science and Infrastructure Ecosystem is Changing

New Opportunities to attract and retain talent that advances fact-based decisions and science key to supporting national priorities

Fiscal Pressures are leading to re-prioritization and could refocus infrastructure investments

Economic Imperatives for GDP growth and digital transformation could shift strategic investments in scientific research

International Competition is driving governments to direct science investments where they can position themselves as key players in critical sectors

Geopolitical Reset creates opportunities for new partnerships, both within Canada and with like-minded nations

Security Interests are increasingly important in research and are escalating needs for strong infrastructure and safe IM/IT

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Laboratories Canada – Helping Canadians

- Laboratories Canada | International Day of Women and Girls in Science

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Strategic Outlook

Strengthening Canada's Economy: driving Canada's productivity through evidence-based decision making and bolstering science and desired outcomes amongst departments, industry, academia and other governmental partners to support national priorities like public health, natural resources development, manufacturing, and regulatory enforcement

Building Canada: building and upgrading science facilities with partners to support faster processes and develop a digitized environment to dive scientific research, IT security, and mission-critical capabilities

Securing Canada: strengthening security and safety by supporting the science needed to enable earlier detection of emerging threats secure borders, and enhance our response to crises (e.g. pandemics, cyber-attacks and environmental disasters)

Transformative Delivery: LabsCanada is changing the way scientists work, share, and collaborate from labs to offices to IT systems, spurring better outputs and productivity

"Canada must prioritize its commitment to supporting scientific advances, or risk permanent damage to our productivity, national security, and our way of life."

– Donna Strickland
Professor, Dept. of Physics and Astronomy, University of Waterloo
Nobel Prize in Physics 2018

Laboratories Canada Strategic Outlook – Communication

- *Strategic Outlook* highlights recent accomplishments and emphasizes the broader impact of science hubs, showcasing the scientific contributions that benefit Canadians.
- Completed Labs: Terra Hamilton, Terra Mississauga, RSS Sidney - Centre for Plant Health.
- Construction work initiated on ASEC in Moncton; design advancing for TerraCanada NCA, RSS Main, and TSTS; CHS site selected.

LabsCanada to Date

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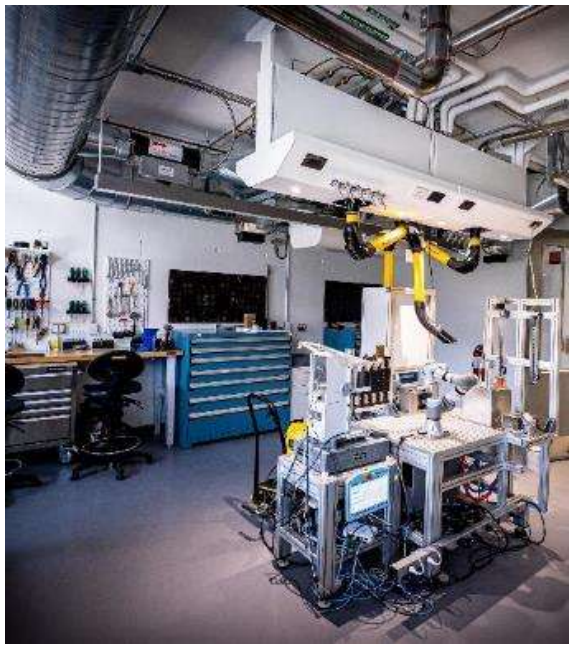
LabsCanada is a $3.7B investment addressing Canada's aging and siloed science infrastructure and **delivering purpose-built facilities** for select science priorities. These projects are a model of **digitally-integrated, adaptable, and energy-efficient labs.**

LabsCanada stood up **five science hubs** where scientists from **14 departments and agencies** work together on priorities and challenges facing Canadians' health, safety, resources, and economy.

Laboratories Canada is Driving Partnership, Catalyzing Innovation, and Building a Better Canada

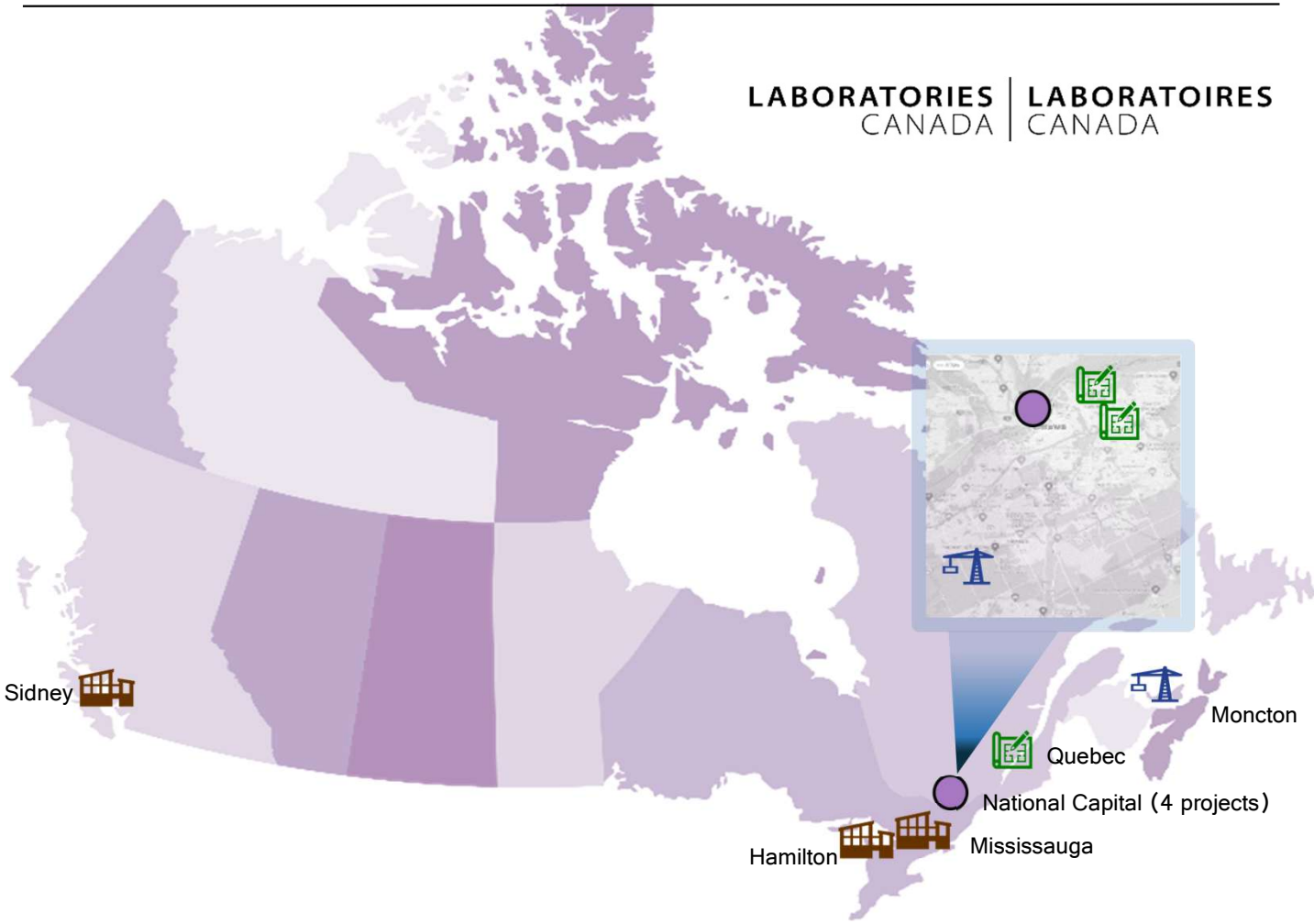
- Single investments supporting multiple science outcomes and partners
- Driving new technological development and piloting new IT solutions with SSC
- Prioritizing Canadian supply chains while driving domestic innovation and productivity
- Creating and applying the Repeatable Labs Design Framework to drive efficiencies to deliver flexible, inclusive, sustainable and secure laboratories
- Creating world-class environments that will attract top scientists, STEM talent, and external partnerships



Revitalizing Federal Science Buildings

Activities Underway Across Canada

- Completed labs in Hamilton, Mississauga, and Sidney, BC
- Construction activity underway in Moncton and Ottawa (west end)
- Design underway for 2 Ottawa projects (east end) and 1 in Quebec
- Planning and procurement launched for a location in Gatineau



New Completed Laboratories

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TerraCanada Hamilton: Opened Summer 2022

Advancing Our Steel and Metals Manufacturing Sectors

Using **AI-driven robotics** to increase the experimental pace of discovery of novel minerals, materials and structures **between 10X & 1000X vs traditional techniques**

TerraCanada Mississauga: Opened Spring 2024

New Materials Discovery and Advanced Manufacturing Science

AI-driven novel materials and **manufacturing** (*e.g.*, solar power, battery tech, biotech) in partnership with universities/industry

"You can see when you walk through the [TerraCanada Mississauga] facility how it has been explicitly set up to allow for the kind of cross-pollination, that germination of ideas across different fields to come up with those breakthroughs that we know can happen when you bring in interdisciplinary science.

- Drew Leyburn, ADM Energy Efficiency and Technology, NRCAN

Laboratories Canada – Design and Impact of New Lab

[First Look: Advanced Material Manufacturing Centre | A Canada FIRST Joint Venture | HOK]

New Completed Laboratories (Con't)

Sidney (BC) Centre for Plant Health:
Opened Winter 2025

Protecting Crops & Growing Trade in Agriculture and Agri-food

Protecting Canada's borders and food through Canada's quarantine and diagnostic lab for **import testing** and **export certification** for vine, fruit and berry crops

Supports the productivity and sustainability of Canada's vineyards ($1.6B per year in total revenues and $223M in domestic exports), and fruit from orchards and berry farms (farm gate value of over $1.3B and fruit exports valued at $1.1B in 2023)

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Projects Under Construction

Atlantic Science Enterprise Centre: Moncton, NB

Sustainably Advancing Canada's Blue Economy

Protect aquatic resources and ecosystems while leveraging **big data and Indigenous partnerships**

Regulatory & Security Science: Ottawa, ON

Safeguarding our borders, health, and food supply

Combat animal and plant diseases, prevent food-borne illnesses, and **strengthen borders** to safeguard the health of our food supply, drive economic growth, and prepare for emergencies

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Laboratories Canada (ASEC) – Onsite Communication

Projects in Design

Transportation Safety & Technology Science: Ottawa

Safer & better transportation by air, marine, rail, and pipeline

Reducing the transportation safety risks while **advancing new safety technologies for air, marine, rail and pipeline** sectors

TerraCanada: Ottawa

Driving transformation to a low-carbon economy

Developing the **potential of resources and critical minerals** in a sustainable manner

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Projects in Design (Con't)

TerraCanada: Quebec City

Driving transformation to a low-carbon economy

Supporting sustainable **resource development**, **groundwater** and **geoscience**

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Project in Planning

Cultural Heritage Science: Gatineau, QC

Conserving Canadian heritage and advancing reconciliation

Protecting nationally historic objects and places for the next generation while advancing **reconciliation goals**

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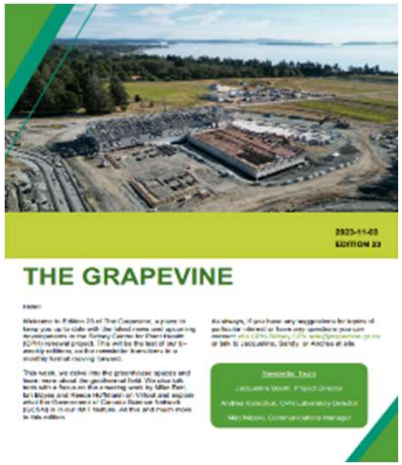
Communication with future occupants

RSS-Centre for Plant Health – Newsletter



CHS – Extensive Gcpedia site

TSTS – banners and posters design concepts in high traffic areas

ASEC – mock-up LabsCan laboratory

Terra – Virtual Science Event

Driving Outcomes for Canadians

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~$6B	**GDP** **Economic Impact from Infrastructure Spend**
½ Mt	**GHG Reductions** (tCO2eq) **Over 40-year lifecycle**
50,000+	**Person-Years of Employment** **In architecture, engineering, trades, clean tech, & manufacturing**
$250M	**to Indigenous Business & Communities** **Advancing reconciliation goals through partnerships & opportunities**

Creating universal accessibility to foster equity & diversity through inclusion by-design in all new facilities