CiT | CRITICAL INDUSTRIAL TECHNOLOGIES

Building the future of industry in Ontario

CRITICAL INDUSTRIAL TECHNOLOGIES

Where Next Happens

Ontario

About us

A not-for profit organization established by the Government of Ontario in 1987

HQ in Toronto with Business Development Managers throughout Ontario

Deliver innovation programs for the Province with SME focus

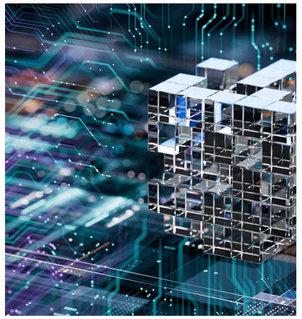
CIT Overview

4 Sectors

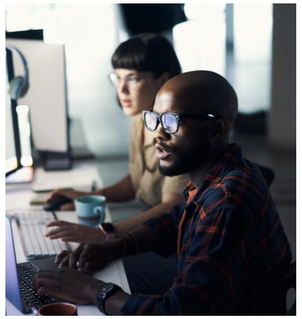
6 Critical Technologies

5G/Advanced Networks

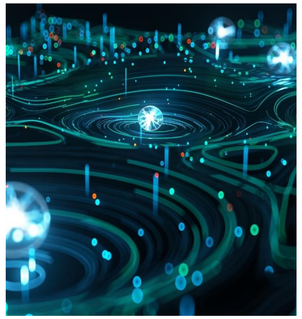
AI/ML



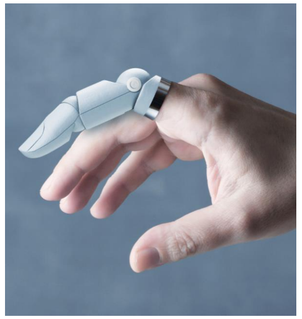
Blockchain



Cybersecurity



Quantum



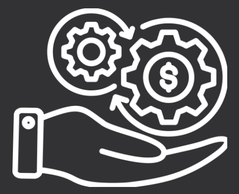
Robotics

CIT Opportunities

Open to Collaborate with Ecosystem Partners

Small and Medium Enterprises	CIT funded projects, partnering on projects, talent opportunities
Large Enterprises	Partnering, adoption of critical technologies
Industry Organizations	Partnering, value add for existing client offerings
Other Organizations	Partnering, up/reskilling, adoption of critical technologies, value-add for clients
Academia	Partnering, source of interns, upskilling training
Industry / Technology Experts	COR Reviewer Panel to evaluate incoming CIT project applications

CIT Programs

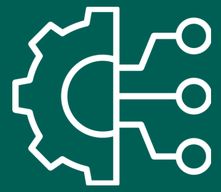


Talent Development Internships:

Subsidized intern support

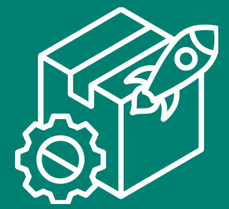
Future Ready:

Expert support to upskill/reskill existing staff for strategic business growth



Technology Access:

Validate existing solutions, potentially in new environments



Development and Commercialization:

De-risk and offset costs of new product development

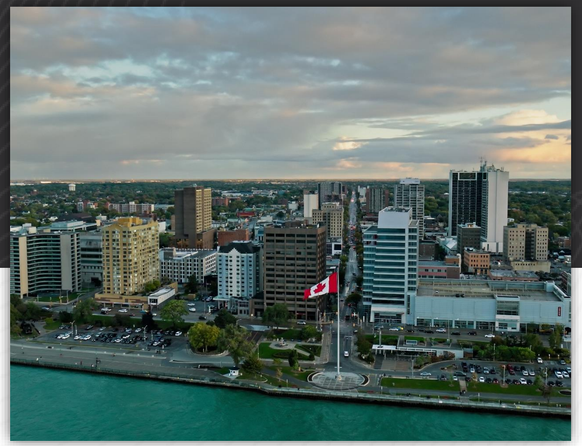
Sector Adoption:

Innovate with a company consortium to create solutions for widespread industry challenges

Minimum Eligibility for CIT Programs

Small/Medium Enterprises
(less than 500 employees)

For-profit organization



Registered operations in Ontario

Adoption of Critical Technologies part of roadmap

Serving end users in 4 core sectors

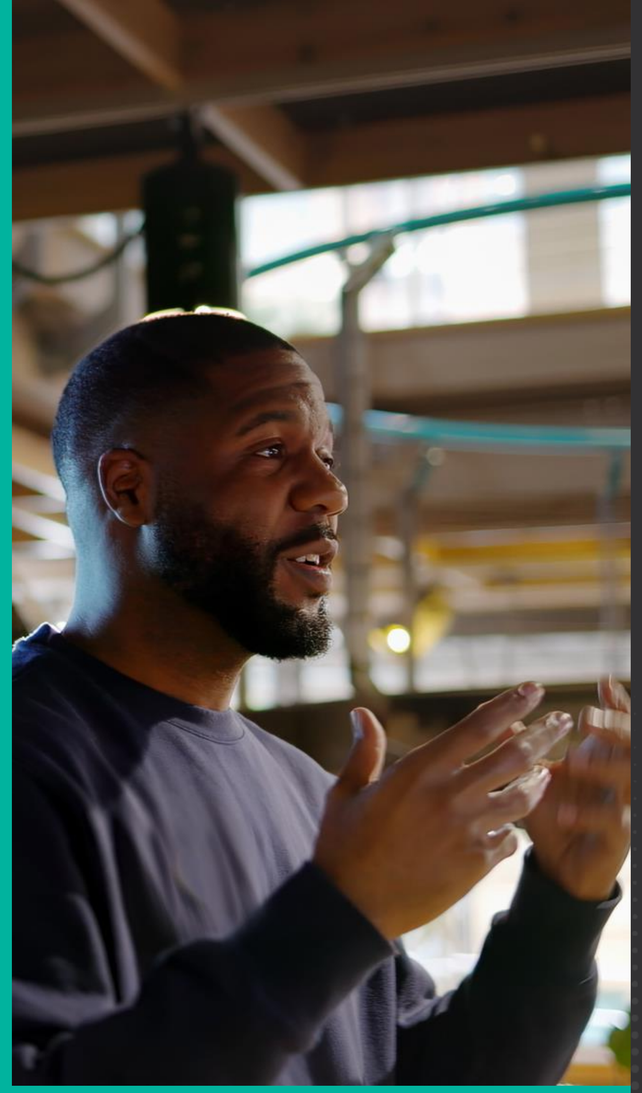
- Advanced Manufacturing
- Agri-Food
- Construction
- Mining

CRITICAL INDUSTRIAL TECHNOLOGIES

Talent Development Internships – (TDI)

- Support to bring on additional talent
- Recent graduates from a post-secondary institution (within the last 3 years)
- Must be involved with one of critical technologies
- 4-month internship (up to 2 units x 4 months each) per company
- OCI will fund up to $10,000 per 4-month internship
- SME to match funding 1:1
- Rolling Intake – open now

Hire new talent with up to $20k in 1:1 matched funding



Future Ready - (FR)

- Support to bring in a skilled expert for employee training
- Curriculum to include at least one of the named critical technologies

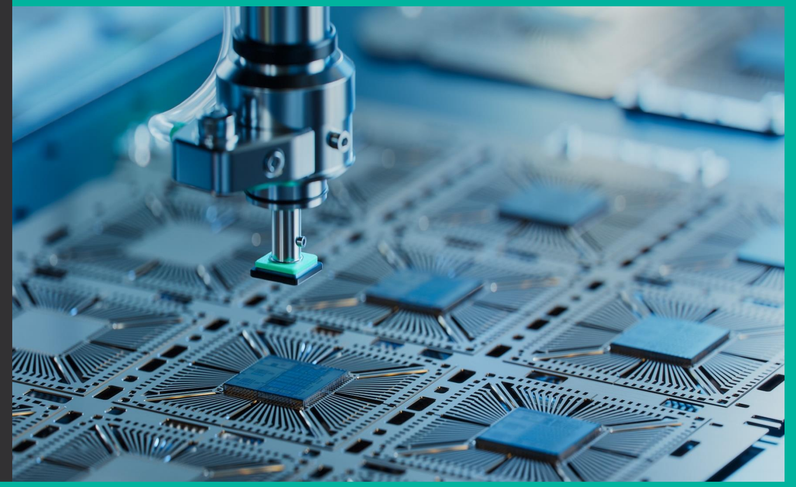
Hire an expert for staff training with up to $10k in 1:1 matched funding

CRITICAL INDUSTRIAL TECHNOLOGIES

Technology Access Program (TAP)

Innovative SME Solutions + **Technology Development Sites**

Sector Validated Solutions



OCI Where Next Happens Ontario

- **No cost access to a Technology Development Site(s)**
- **Sites provide sector-related facilities**
- **SME has up to 6 months access**
- **No partner required**
- **Rolling Intake – now open**

CRITICAL INDUSTRIAL TECHNOLOGIES

Ontario

Development and Commercialization- (DC)

Innovative SME Solutions + **Technology Development Sites** + **Funding Support**

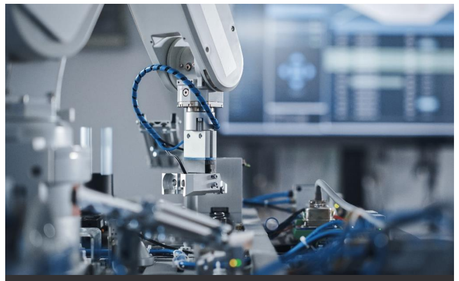
Commercialized Solution

No cost access to a Technology Development Site(s)	SME has up to 6 months access	Partner preferred but not required	$50k - $200k funding to SME with 1:1 match	**Rolling Intake – now open**

Technology Development Sites – (TDS)

Technology Development Sites (TDS) offer strategic testing services in operational environments that mimic the 4 CIT industrial sectors and use of the 6 critical technologies.

SMEs can access a TDS in 2 ways:



Technology Access Program

Development and Commercialization Program

Through these CIT partnerships, SMEs products hit the market faster and with greater momentum

- Gain access to facilities otherwise unavailable to them
- Develop solutions faster and for less out-of-pocket cost
- Validate new applications of their product in operational environments
- Technology Development Sites list is growing

Centre for Meat Innovation & Technology

CIT CRITICAL INDUSTRIAL TECHNOLOGIES | OCI Where Next Happens | Ontario

The centre for Meat Innovation and Technology (CMIT) is driven to advance and strengthen the Canadian meat processing industry. We are the leading Canadian meat hub powering industry collaboration and innovation.

CMIT is dedicated to showcasing the world's leading technology for our industry and helping Canadian processors adopt these innovations to become more competitive.

What We Offer:

- Space for SMEs to test, validate & prototype technologies.
- Orientation to Meat and Poultry Processing Sector
- Guided interviews/engagement with targeted meat and poultry processors
- Live meat processing environment to demonstrate new technologies
- Expert feedback on technology feasibility/viability for the sector

Best Suited For:

- Technology companies that want to explore applications in meat processing
- Companies looking to explore new uses for their technology
- Organizations looking for opportunity to conduct demonstration and training of their products to a wide range of meat processing businesses.

Contact a CIT Sector Manager or OCI Business Development Manager for next steps.
Access the OCI Business Development Directory here.

vineland
RESEARCH & INNOVATION CENTRE

CIT CRITICAL INDUSTRIAL TECHNOLOGIES | OCI Where Next Happens | Ontario

Vineland Research and Innovation Centre is a uniquely Canadian results-oriented organization dedicated to horticulture science and innovation. We deliver innovative products, solutions and services through an integrated and collaborative cross-country network to advance Canada's research and commercialization agenda.

As a TDS, Vineland can support you by offering:

- Prototyping, testing & validating your technology
- Consulting on sector expertise in the horticultural sector
- Engaging with the sector
- Expert feedback on technology feasibility/viability for the sector

Opportunity to work in our Infrastructure including:

- Growing Facilities including controlled environment (i.e. greenhouses, convirons, growth rooms); precommercial Venlo greenhouse, retractable roof greenhouse, Fields, Orchard Operations
- Office and Collaboration Space
- The Hanger, Prototype and manufacturing facility
- Analytical lab services (genomics, biochemistry, pathology, soil health/substrates)

Why work with us?

We help SMEs explore applications in the horticultural sector, access Market Intelligence Services, engage in product development and validation services, and demonstrate or showcase their technologies.

SMEs can also leverage our expertise in our specialized fields:

- Biochemistry
- Bioinformatics
- Breeding
- Consumer Science
- Engineering (Data Science, Robotics, Vision, Systems Integration)
- Entomology
- Environmental Sustainability
- Food Science
- Genomics
- Market Intelligence
- Pathology
- Plant Production
- Plant Science
- Soil Science
- Software Engineering

Contact a CIT Sector Manager or OCI Business Development Manager for next steps.
Access the OCI Business Development Directory here.

uOttawa IBM

OCI Where Next Happens | CIT | CRITICAL INDUSTRIAL TECHNOLOGIES

uOttawa-IBM

Cyber Range

Cybersecurity
Technology
Development Site

Creating competitive advantage by de-risking your business and protecting your customers

The uOttawa-IBM Cyber Range is a unique training, learning, and research facility where individuals and organizations can practice comprehensive cybersecurity crisis management in a realistic, immersive environment.

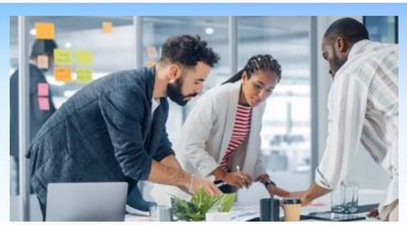
11 services available:

What information security exposure do I have?

1. Information Security Health Check
2. Secure Application Development Assessment
3. Cloud Security Assessment

Am I safe?

4. Pen Testing - Entry Application Test
5. Pen Testing - External Network Penetration Test
6. Pen Testing - Wifi Penetration Test
7. Social Engineering - Standard human phishing
8. Attacker Reconnaissance/OSINT
9. Dark Web Analysis



How do I respond?

10. Incident Response Plan
11. Tabletop Exercise

Additional training:

What happens during an attack?

I. IBM X-Force Business Response exercise to test and guide your people, process, and technology.
II. uOttawa Technical penetration testing immersive simulation fine-tuned for SMEs.

Contact a CIT Sector Manager or OCI Business Development Manager for next steps.
Access the OCI Business Development Directory here.

University of Waterloo RoboHub powered by Rogers 5G

The University of Waterloo is working with Rogers to advance 5G technology research and develop 5G applications with potential commercialization opportunities. As Central Canada's first 5G smart campus, innovators can build applications and explore how 5G can leverage next-generation networking for real-world impact with applications that include robotics and automation.

5G-Enabled SMEs

SMEs will benefit from access to Rogers' comprehensive 5G network infrastructure at the University of Waterloo, covering all major 5G spectrum bands. This program aims to drive the adoption, integration, and commercialization of critical technologies by SMEs in areas such as agrifood, advanced manufacturing, public safety, smart city infrastructure, mining, construction, and mobility.

RoboHub

SMEs will also benefit from access to the University of Waterloo's state-of-the-art RoboHub robotics facility. This 5G environment combined with its world-renowned team of researchers, dedicated domain experts, and fleet of robots facilitates research and testing across four core research themes: control, planning, perception, and interaction. The Waterloo RoboHub also offers a comprehensive Professional Partnership Program designed to promote research, innovation, and industry collaboration in robotics. It provides access to expertise, infrastructure and additional services on an a la carte basis.

Technical specifications and capabilities

The Rogers 5G network on the UW campus offers •Indoor small cells that broadcast on the 3.5GHz spectrum. •Outdoor macro cells providing 2.5 GHz, 600 MHz, and 3.5 GHz. •Non-commercial 28 GHz small cells, providing SMEs with early access to mmWave.

- SMEs will be provided with technical support and SIM Cards and/or devices to access to the Rogers 5G network at the University of Waterloo testbed.

The RoboHub facility includes

- High-precision indoor positioning system, theatrical lighting, electrically switchable privacy
- glass, 2x3 meter in-floor magnetic levitation system Dedicated control center, network infrastructure, and shared software licenses to facilitate visualization and telemetry for on-site and remote observation. Off-board computational resources and network infrastructure for algorithm execution. Fleet of fixed-base, walking, rolling, and flying robots, including full-
- size humanoids, unmanned aerial and ground vehicles (UAVs and UGVs), human-scale single-or dual- armed mobile manipulator, magnetically levitated carriers, and many collaborative robot arms (for a list see https://uwaterloo.ca/robohub/about/fleet).

Contact a CIT Sector Manager or OCI Business Development Manager for next steps.
Access the OCI Business Development Directory here.

Application Process – Rolling Intake Programs

Future Ready - (FR)

Talent Development Internships – (TDI)

Discussion with Business Development Manager → Completion of Online Application → Review Process

Technology Access Program (TAP)

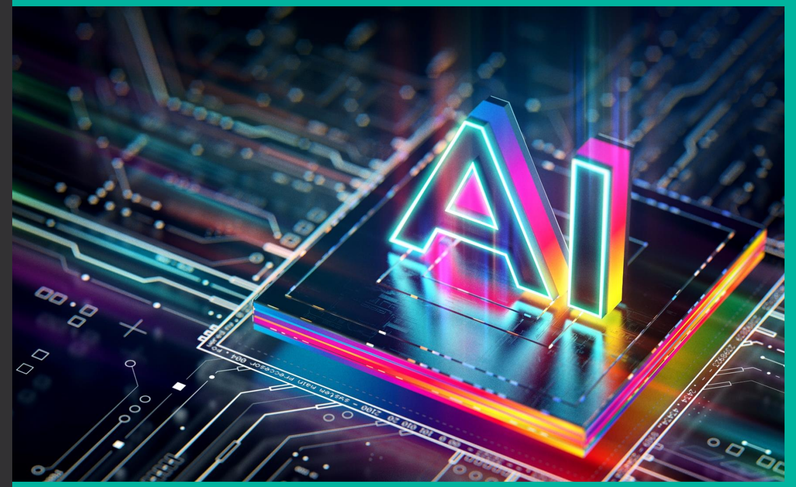
Development and commercialization (DC)

Discussion with Business Development Manager → Discussion with Technology Development Site Representative (for TAP and DC programs only) → Completion of Online Application → Review Process

CRITICAL INDUSTRIAL TECHNOLOGIES

Sector Adoption-(SA)

- Applications by consortium:
  -Core: 1 SME lead applicant and 1 Primary Partner
  -Additional partner(s) as needed
- Projects up to 1 year in length
- New venture – not previously established
- Funding for innovation/ commercialization/ adoption (not regular operations)



Up to $1M in funding to SME with
2:1 matching required

Active Sector Adoption Challenge

In the era of Industry 4.0, robotics technology stands as a cornerstone of industrial transformation. Ontario's key sectors – Advanced Manufacturing, Agri-Food, Construction, and Mining present unique opportunities for pioneering robotics applications. This challenge calls upon Ontario-based SMEs to spearhead consortia-driven projects that leverage advanced robotics to revolutionize sector-specific processes, enhance operational excellence, and catalyze widespread adoption across these critical industries. We seek projects that implement advanced robotics applications, with a clear focus on scalability real-world deployment, and sector-wide impact that disrupts the status quo.

Sector Adoption Consortium Key Roles

Lead Applicant	Primary Partner
SME (Ontario-based) **Lead Applicant on project** Technological solution Market Fit	**Demonstrated Market Pull** Does not have to be Ontario-based or an SME Fund-matching capacity Strategic Resourcing for the Project (e.g. equipment, advisory, marketing)
Required for Sector Adoption	

Secondary Partner(s)

Fill strategic gaps not fulfilled by SME and Primary Partner

Optional

e.g. community-expertise, provide resourcing needs not provided by SME or Primary Partner

*Project activities to take place in Ontario.
**Partners with financial contributions to project sign Letter of Support & Funding Agreement

CRITICAL INDUSTRIAL TECHNOLOGIES

Sector Adoption - Primary Partner

- Directly participates in challenge and shows market ‘pull’
- Operations of significance in sector
- Arms-length relationship with SME
- SMEs, National Enterprises, MNEs, municipalities, NFPs representing industry, Indigenous communities, Academia (as client only)
- Does not need to be Ontario-based but project must be in Ontario
- Must sign OCI Letter of Support and Funding Agreement

Sector Adoption Eligibility - Other Partners

- Organizations directly contributing and/or participating in the project
- Does not require an arms-length relationship with SME
- SMEs, National Enterprises, Multi-National Enterprises, municipalities, Not-For-Profits representing industry, Indigenous communities, Academia (as client only), Crown Corporations
- Does not need to be Ontario-based
- If supplying matching leverage must sign OCI's Letter of Support and Funding Agreement

Sector Adoption - Eligible Expenses

- Costs and activities directly related to achieving the objectives for which the funding was granted
- Actual costs directly attributable to and necessary for the completion of the project – not wholly or partially for another purpose
- Must be documented through invoices, receipts or records
- Costs outside Ontario ineligible unless approved by OCI
- Capital costs – depreciated value for term of project use

Sector Adoption – Budget Example

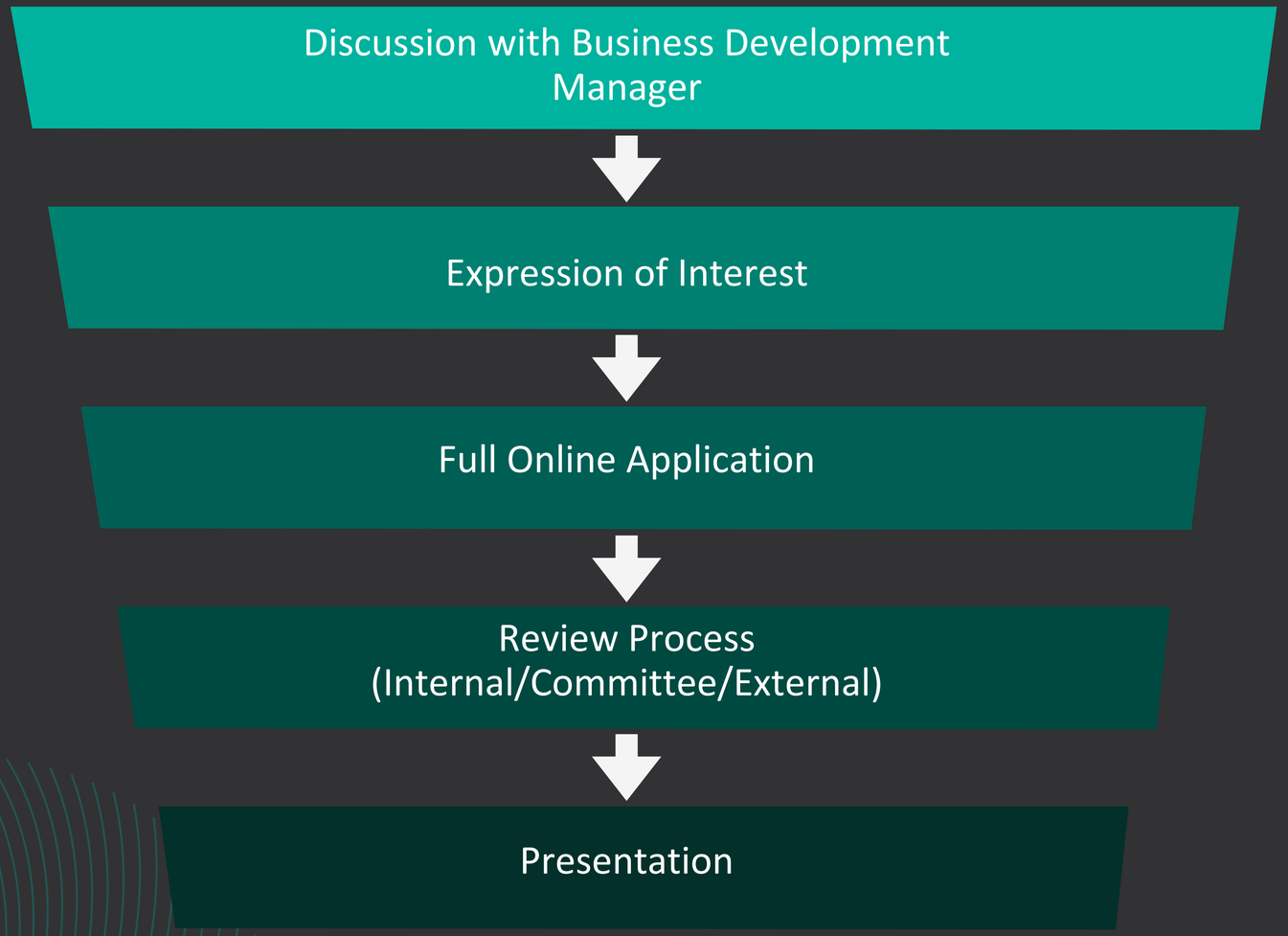
SME	Primary Partner (OEM)	OCI
Purchase of System Hardware	Equipment and Facility use	Purchase of System Hardware
Data Services for AI model training	Salaries	Salaries
Purchase of system hardware and tools		
Salaries		
$500,000	**$300,000**	**$400,000**

2 | 1

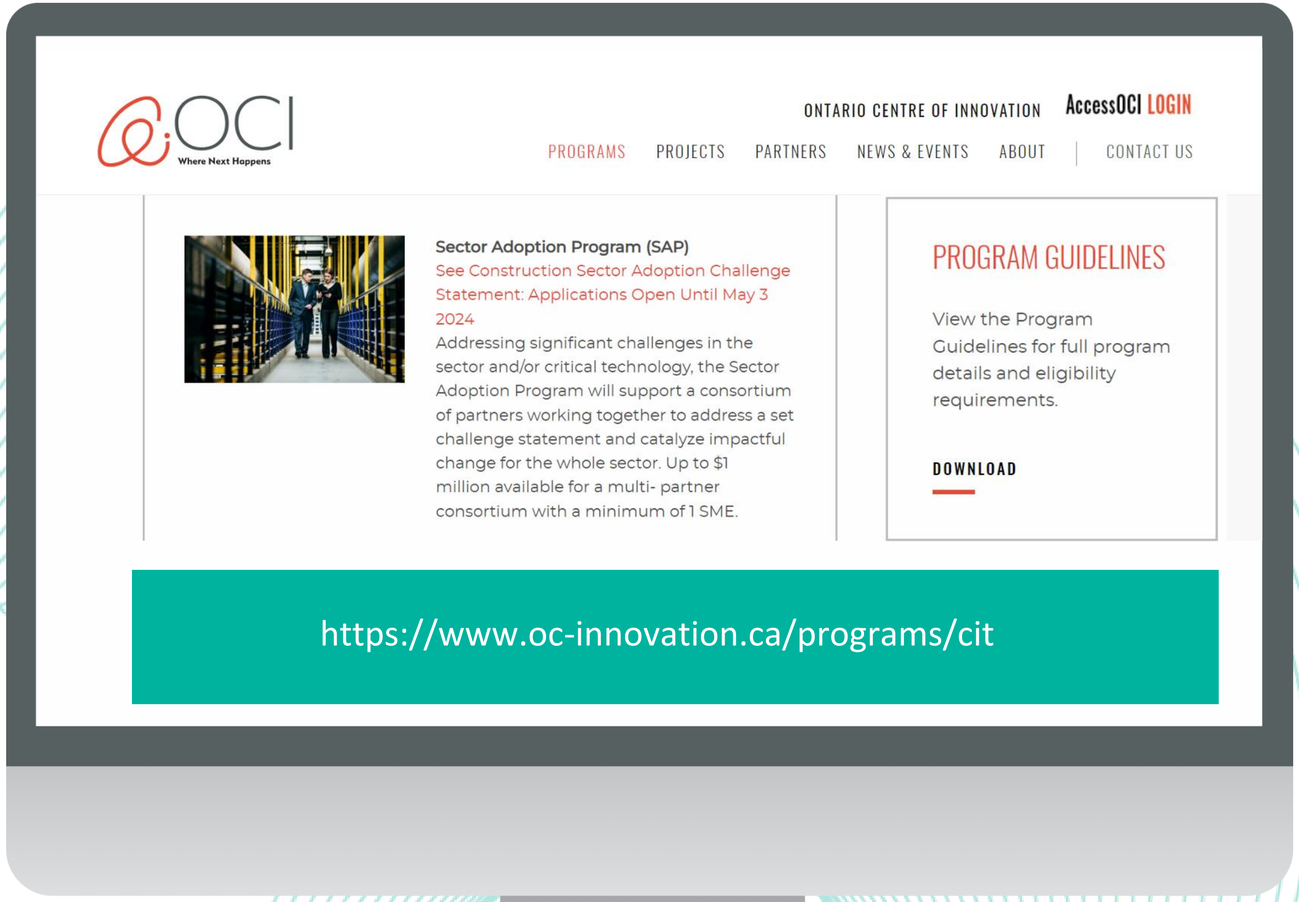
Total = $1,200,000

Application Process – Sector Adoption

Business Development Managers provide hands-on support to the overall application process.



Challenge Location



Successful Applications

Tell the Story

Company – years in business, number of employees, revenue, key sectors served, clients

Technology – critical technology employed, stage ie. TRL, what does it do, how does it address an issue, use cases, competitive advantages

Project – what do you hope to achieve, what needs to be done, why do you need this support, how does it address a challenge statement

Partners – similar description as company, why are they important to project, what is their significance in the sector

Budget – review eligible expenses, provide justification of expenses, be reasonable

CiT | CRITICAL INDUSTRIAL TECHNOLOGIES

Questions?

eOCI Where Next Happens

Ontario

Updates and Information

Follow OCI on LinkedIn and X for news:

@OCInnovation

@ontario-centre-of-innovation

On our Website:

Find detailed program information

View active and archived Challenge Statements

Register for upcoming CIT Webinars and view event recordings

Visit the CIT Website:

https://www.oc-innovation.ca/programs/cit/

CRITICAL INDUSTRIAL TECHNOLOGIES

Contact Information

Large Companies (>500 staff), Academia, Associations, and Groups

Contact Laura for ecosystem engagement (custom events, promotion, partnerships)

Outreach & Engagement Manager
Laura Clark
lclark@oc-innovation.ca

Construction
James Borst
Jborst@oc-innovation.ca

Advanced Manufacturing
Cameron Gray
cgray@oc-innovation.ca

SMEs (<500 staff)

Contact a Sector Manager with project inquiries

Mining
Sierra Mercer
smercer@oc-innovation.ca

Agri-Food
Robert McMillan
rmcmillan@oc-innovation.ca

Thank You

CRITICAL INDUSTRIAL TECHNOLOGIES

OCI Where Next Happens

Ontario