Call for CIT Technology Development Sites

Call for Proposals

The Critical Industrial Technology Initiative (CIT) is seeking proposals from interested and eligible parties to become a Technology Development Site under the initiative in four specific areas, as outlined in the TDS Focus section below, to support Ontario SMEs in the testing, validation and demonstration of new products and services to grow their companies through the integration of Critical Technologies.

Overview of the Critical Industrial Technologies initiative

The integration of critical technologies is the global future of industry. Through the Critical Industrial Technologies initiative Ontario industry will converge with innovative SMEs to amplify Ontario's rich critical technology capabilities and propel four key sectors of Ontario's economy to the forefront of this transformation.

Four key sectors:
- Mining
- Advanced Manufacturing (non-auto)
- Agri-Food
- Construction

Critical technology areas:
- 5G & advanced networks
- AI
- Blockchain
- Robotics
- Cybersecurity
- Quantum

The Critical Industrial Technologies initiative will support Ontario SMEs to develop new IP faster and at a greater scale for the benefit of the province and beyond. By also investing in talent development to advance the knowledge and training of critical technologies, Ontarians are poised as leaders in the global industrial economy to tackle the dynamic future.

The Critical Industrial Technologies initiative is a Government of Ontario initiative led by OCI.

Technology Development Sites (TDSs)

Technology Development Sites (TDS) under this initiative, leverage existing or industry-built regional strengths and capabilities across Ontario, with each site having a unique focus area relating to one of the four focus Strategic Sectors and/or Critical Technologies. The sites provide unique testing labs and capabilities to SMEs to develop, test and demonstrate/showcase their Critical Technology solution. These sites will allow SMEs to tap into sector specific assets, resources and capabilities and provide a sandbox for the integration of critical technologies into SME products and services.

TDS Requirements

Under the Critical Industrial Technologies initiative TDSs will be required to undertake the following:

1. Provide SMEs with no cost access to existing infrastructure/testing capabilities including specialized equipment, hardware and software for the testing, development, demonstration and/or integration of one or more of each Critical Technologies into new products and services. Access will be provided for SMEs approved under the following two Critical Industrial Technologies initiative programming streams:

   o Development and Commercialization Program (DC): this program provides SMEs with no cost access to the TDS and funding for SMEs to develop and validate their solutions
   o Technology Access Program (TAP): this program provides SMEs with no cost access to the TDS
     ▪ Note: TDSs work with SMEs from the DC or TAP stream in a standardized manner based on the engagement model proposed

2. Manage the onboarding and technical support of SMEs at the TDS

3. Conduct outreach and marketing activities to support the attraction and engagement of Ontario SMEs to the TDS and initiative

4. Implement a process to track SME utilization of the TDS and share on a regular basis the data with OCI. Note: A minimum of 2 hours of access will be provided to each SME. A minimum of 1 hour of technical support will be provided to each SME by the relevant TDS Delivery Partner(s)

5. Develop a data security plan that is reviewed and updated on an annual basis

Eligibility

The Lead applicant must be a not-for-profit or an academic institution with established testing labs and capabilities that SMEs will utilize to develop, test and demonstrate/showcase their Critical Technology solution. The site must allow SMEs to tap into sector specific assets, resources and capabilities and provide a sandbox for the integration of Critical Technologies into SME products and services.

Must:

- Be a not-for-profit organization or academic institution located in Ontario
- Have existing physical testing labs and capabilities located in Ontario that aligns with the specific Strategic Sector(s)/Critical Technology(ies) testbeds outlined below that SMEs can utilize to develop, test and demonstrate/showcase their Critical Technology solution.
- Have the capacity and demand to support a minimum of 10 SMEs with the development, integration, and/or validation of their Critical Technology solutions throughout the duration of the CIT program (ending September 30th, 2026)
- Can support SME projects immediately on March 5th, 2025, following the execution of the TDS agreement
- Be willing to allow SME to have unencumbered access to the site for testing/validation/ demonstration (e.g. no requirements to work with students and professors, reasonable black out access times, etc.).
- Meet the infrastructure and technical expertise requirements detailed below in the **Required Technology Development Site Focus**.

Not eligible:

- SME/MNE/Municipalities/NGOs/economic development corporations/industry associations are not eligible to apply as the lead applicant
- Organizations who do not have dedicated infrastructure/platforms/technology development facilities in Ontario
- Organizations who do not meet the infrastructure and technical expertise requirements detailed in the **Required Technology Development Site Focus**

Required Technology Development Site Focus

In this call we are looking for potential TDS' with the following focus/infrastructure and testing capabilities.

Advanced Manufacturing

The Advanced Manufacturing focused TDS(s) will provide capabilities to support SMEs to integrate, develop, test, and showcase their critical technology solutions in a manufacturing environment. Proposed sites must:

- Have dedicated, physical testing environments equipped with automation such as conveyance systems, automated guided vehicles, palletizers, material handling systems, industrial and collaborative robots, PLCs and control systems
- May include dedicated manufacturing equipment such as laser cutters, waterjet cutters, CNCs, 3D printers, lathes, boring mills, etc.
- Provide one or more of the following sensing and data systems including computer vision cameras, barcode scanners, RFID tag readers, Data Acquisition systems, Manufacturing Execution Systems, SCADA, CMM, 3D Scanners, etc.
- Capability to integrate and test IIOT applications for predictive maintenance, manufacturing execution systems, and quality management systems.
- Provide services, software, hardware, and technical expertise to help SMEs develop, validate, program, and scale their innovative technology.

Construction

The Construction focused TDS(s), will provide a site where SMEs will be able to test, develop, validate and demonstrate their product on a live construction site/project. Proposed sites must:

- Provide SMEs with construction technologies access to live construction site/projects to implement, develop, and test their Critical Technology solutions in the design, build, operate, and/or maintenance phases of the construction lifecycle. Sites should allow for testing in diverse construction settings, from commercial to residential and infrastructure projects, and facilitate iterative development based on real-time feedback.
- Provide dedicated areas and infrastructure for testing emerging construction technologies, particularly in sectors such as modular building, sustainable construction, digital twin implementations, and automated inspection. These environments should offer high-quality testing environments that incorporate advanced construction management systems and relevant software solutions to integrate with SMEs' tools and data needs.
- Provide structured guidance, procedures, and protocols for SMEs to seamlessly collaborate with General Contractors or equivalent project management teams on-site.
- Enable SMEs to work with a General Contractor (or a similar project management organization) to implement, deploy, and/or validate their Critical Technology solutions based on the specific needs, project timelines, and outcomes of the construction project.

- Provide SMEs with clear construction timelines, schedules, and permitted construction technology projects for testing purposes.
- Ensure compliance with Ontario's construction and safety regulations, offering SMEs instruction and resources to meet safety standards and compliance requirements on live construction sites, including any relevant safety equipment and training to support SMEs during on-site testing and implementation.
- Establish an organized system for SMEs to coordinate testing schedules with project timelines, ensuring alignment with broader construction objectives.

Advanced Networks

The Advanced Networks focused TDS(s), will provide a site where SMEs will be able to access a high-performance computing infrastructure to leverage their computing resources. Proposed sites must:

- Provide a dedicated, tailored compute environment for multiple SMEs concurrently running their projects and meeting their hardware/software/network requirements to optimize performance for application workloads. The computing environment should have sufficient processing power, memory, and storage to handle complex AI workloads, including large-scale model training and inference.
- Have a virtualized testing environment to insulate concurrent projects from one another to minimize interference and ensure a smooth workload for each SME project.
- Be compliant with data security and privacy best practices and requirements to protect sensitive SME data and IP. This includes having data isolation, access controls, data encryption, incident response plans, and data deletion policies in place.
- Have sufficient capabilities to enhance various aspects of software development and testing, including scale, interoperability, load, analytics, simulations, and AI model training.
- Simulated and real-world environments to test AI solutions in various scenarios, including edge devices, cloud platforms, and IoT systems.

Artificial Intelligence Services

The Artificial Intelligence Testbed should provide the following capabilities to support startups in developing and testing their AI solutions. Applicants applying for the Advanced Networks TDS who have the capabilities below should list them in the same application:

- Access to a suite of state-of-the-art AI tools, libraries, and frameworks to accelerate development and experimentation.
- A curated dataset repository or access to real-world data sources to train and validate AI models.
- Robust data privacy and security measures to protect sensitive data and intellectual property.
- On-site or remote technical support from AI experts to assist with troubleshooting, optimization, architecture, deployment, implementation, and other best practices.

Agri-Food

The Agri-food focused TDS(s), will provide a site where SMEs will be able to test, develop, validate and demonstrate their product in a producer or processor environment.

Proposed sites must:

- Provide SMEs with Agri-Food technologies access to a physical producer and/or processing environment to implement, develop, and test their Critical Technology solutions for the Agri-Food sector. Sites should allow for testing in diverse growing settings including indoor and outdoor-based growing systems and/or a food processing.

- Provide dedicated areas and infrastructure for testing emerging agri-food technologies, particularly in sectors such as robotics and AI.

- Capability to integrate and test IoT applications for smart farming and/or precision agriculture systems.

- Provide access to connectivity utilizing access technologies such as Wi-Fi, 5G, Lora etc.

- Provide services, software, hardware, and technical expertise to help SMEs develop, validate, program, and scale their innovative technology.

- Establish an organized system for SMEs to coordinate testing schedules with project timelines to ensure alignment with other activities at the facility

Use of Funds

The applicant is required to submit a needs-based budget that outlines the costs required to deliver the TDS requirements described above. The budget should outline the proposed costs to be requested from OCI against the matching contributions at a minimum ratio of 1:1.5 and cover the period of – TDS approval date up to September 30th, 2026.

Matching Requirements Example:

Total Eligible TDS Costs	CIT Contribution	Minimum Matching Contribution
$750,000	$300,000	$450,000

Funding will flow from OCI to the Applicant organization. All budget items must comply with the eligible project costs table given at the end of this document.

As part of the agreement, OCI reserves the right to revise the approved funding amounts based on the evaluation of the business plan, or failure to achieve the matching requirements.

Operating Period and Reporting Expectations

- The TDS will be operating from TDS approval date to September 30, 2026. All final reporting will be due by December 15, 2026.

- The TDS will report on progress semi-annually. Funding disbursements are made on approval of semiannual reports.
- Funding is provided on a reimbursement basis with a one-time initial advance upon activation.
- Refer to the eligible expenditures guide in the Business Plan Template for a list of allowable expenses.
- Note that funding is intended to support clients through the site's resources and facilities. It is not meant to be used to seed clients or directly fund client projects.

Evaluation Criteria

Applicants' proposals will be evaluated on the following categories:

- Applicant organizations' background, experience, and track record of success.
- Quality and strength of the organization's site, role, proposed governance structure of the TDS
- Description of proposed TDS area(s) of focus: value proposition and overall potential impact and expected outcomes, including the expected number of SMEs to be supported.
- Description of proposed TDS site: physical space(s), technology platforms, facilities and specialized equipment, other infrastructure, and compliance to standards.
- Strength of Data Security Plan and mechanisms to effectively safeguard SME's intellectual property
- Quality, effectiveness, and diversity of proposed activities, and how these activities will support Ontario SMEs to achieve incremental benefits to economic development, job creation, and trade for Ontario
- Description on SMEs onboarding process and providing them access the TDS capabilities services and offerings
- Proposed activities should be complimentary to the other established TDS activities and not duplicative
- Proposed budget and use of funds, ensuring realistic forecasts and demonstrating value for money
- Quality and strength of the outreach and marketing plan to effectively engage with organizations across the region.
- Secured funding from a variety of private and public sector sources (minimum 1:1.5 match)
  - Strength, diversity, and value of partnerships (including private sector partners and partnerships with other organizations) and their contributions, roles, leadership, and commitment to the site.
  - Intellectual Property policies enabling open innovation.
- Risk-mitigation strategy detailing how potential risks impacting milestones will be alleviated

Application Submission Process

1) Applicants should review the full Call for Proposal details, eligibility and requirements prior to applying.

2) If eligible, contact Jason Lee at jlee@oc-innovation.ca to initiate an application on the AccessOCI portal.
3) Complete the application and upload the Business Plan onto the AccessOCI portal.
- Your proposal must be submitted through the system by 13:00 on January 27th, 2025.
- An internal review will be conducted. Only complete applications meeting the requirements above will be approved and advanced to an External Review Panel.
- External review consists of a panel of experts who will score your proposal.
- A decision is expected in late February/March 2025
- Awarded proposals will undertake a contracting process with OCI outlining the terms and conditions of the TDS project.

Contacts:

Jason Lee,

Director of Strategic Programs,

jlee@oc-innovation.ca

Critical Industrial Technologies Initiative

Business Plan and Proposal for Technology Development Site

Organization Name: *Insert Name*

Lead Contact/Signing Officer			
Name:		Position/Title:	
Email:		Phone:	
Street Address:			

Financial Signing Officer			
Name:		Position/Title:	
Email:		Phone:	
Street Address:			

Operational Contact			
Name:		Position/Title:	
Email:		Phone:	
Street Address:			

1. EXECUTIVE SUMMARY (FOR PUBLIC RELEASE – 250 WORDS MAX)

Provide a brief overview of the Technology Development Site (TDS) (e.g., types of offerings, technology/sector focus, stage of companies supported, etc.). Summarize the key capabilities offered, services/activities proposed and the anticipated impact and benefits for SMEs and the Province on the adoption, integration, and commercialization of critical technologies in the four focus sectors (agrifood/advanced manufacturing/mining/construction).

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2. LEAD ORGANIZATION & PARTNERS'S ROLES, COMMITMENTS AND GOVERNANCE STRUCTURE

1. Describe the Lead Organization, its role, and its plan to commit and contribute to the overall success of the TDS and Critical Industrial Technologies initiative.
2. If applicable, describe all partners and their roles. Provide supporting documentation in the form of letters of support detailing contributions.
3. Describe the proposed governance structure of the TDS, including accountabilities, roles, and responsibilities.

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3. (Type Here)

3. DESCRIPTION OF THE TECHNOLOGY DEVELOPMENT SITE AND SME OFFERINGS

1. Describe the physical space, technology platforms, data and information, facilities, specialized equipment, hardware and software, other infrastructure and capabilities, services and activities that will be available and offered to Ontario SMEs by the TDS, for testing, validation, integration and demonstration/showcasing of critical technology products and services. Complete Appendix A for the main offerings.

2. Outline how these offerings and support provide a unique value proposition not otherwise available to SMEs. Articulate how, if other Government funding is currently supporting the TDS, the offerings and services are complimentary and not overlapping.

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4. SME ACCESS TO INFRASTRUCTURE, SERVICES AND ACTIVITES

1. Provide a description of how SMEs will access the TDS's capabilities services and offerings. Include:
   - An outline of the SME onboarding process noting any specific requirements that the SME will need to provide/complete before access is given.
   - An outline of the key parameters around SME usage and TDS access e.g SME capacity limits, project timing (seasonal, operational start date, open hours, down times etc.)

2. Tracking of SME utilization of the TDS capabilities and offerings will be required.
   - Indicate the expected range or average SME utilization rates of the TDS (# of hours per visit, # of visits, # of hours of technical support, based on historical data)
   - Outline the process the TDS will implement to track SME utilization of the TDS and how this data will be regularly shared with OCI.

NOTE: Under the Critical Industrial Technologies initiative, each SME will be required to use the testbed for a minimum of 2 hours and receive a minimum of 1 hour of technical support (includes onboarding / troubleshooting / technical advice etc.)

3. Outline the TDS data security plan and how SME IP and data will be managed and protected whilst utilizing the TDS. A Data Plan will be required to be maintained by the TDS that is reviewed and updated annually.

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5. EXPECTED OUTCOMES

1. Outline the number of SMEs that would be supported in developing/testing/validating/demonstrating technologies at the TDS through both the Open Access and Development and Commercialization Programs.

Note: For this initiative, an SME is defined as a for-profit privately owned business that is incorporated federally or provincially with a valid Business Number, has between 1 – 499 full-time equivalent employees and a permanent establishment in Ontario

2. Provide a description of the expected outcomes that will be generated by the TDS for the Critical Industrial Technologies initiative and Ontario. Consider:

   - incremental benefits to the Ontario economy;
   - creation and capacity of high-value quality jobs and wages;
   - sales and tax revenues;
   - social and/or environmental benefits;

- contribution to knowledge and experience for the four key sectors/critical technology areas
- benefit to Ontario SMEs
- broader, measurable benefits to for the four key sectors/critical technology areas.

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6. OUTREACH AND MARKETING

Outline the TDS outreach and marketing strategy for the initiative and how it will integrate with OCI's and potentially other TDS's strategies. Specifically explain how the TDS plans to support the attraction and engagement of Ontario SMEs to the TDS and the initiative's SME programming.

(Type Here)

7. RISK MITIGATION

Identify and describe potential risks that may affect activities, milestones and objectives, listed in Appendix A, ultimately impacting the success of the TDS, and provide clear strategies to mitigate these risks. Consider technical, market, regulatory, environmental, human capital, financial/funding, strategic and other operational risks.

Risk	Likelihood (Low, Medium, High)	Impact (Low, Medium, High)	Mitigation Strategy

8. PROPOSED BUDGET

Complete the budget table in Appendix B, with a high-level breakdown of the proposed TDS costs. Include matching contributions that demonstrate a minimum of 1:1.5 required industry matching. Provide any additional notes or clarifications on the budget in the box below.

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APPENDIX A – TDS Offerings for SMEs
Timeframe: October 1, 2024 – September 30, 2026.

Platform, Capability, service, Activity	Overview	Timeline (start & end date)	Milestones & Outcomes	Key Performance Indicators (Input/Output)

APPENDIX B – Detailed TDS Budget Table

Budget Item	Source (organization name)	OCI Cash (K$)			Matching Contribution (K$)		
		FY24/25	FY25/26	FY26/27*	FY24/25	FY25/26	FY26/27*
TOTAL							

Instructions:
- Identify the source (organization name) and type of funding (cash/other) for each item. Use one line per type for a given item.
- All TDS contributions must achieve a minimum 1:1.5 required industry match.
- All tangible contributions to the TDS must be listed.

The TDS will work with two streams of SMEs; those from Development and Commercialization (DC) and those from the Technology Access Program (TAP). The expected breakdown is as follows:

Program stream	FY 24/25 April – March Target Number of SME Projects	FY 25/26 April – March Target Number of SME Projects	FY 26/26 (April – September) Target Number of SME Projects
TAP	##	##	##
DC	##	##	##
Total	##	##	##

*Distribution of TAP and DC projects may change throughout the course of the agreement based on real-time demand from CIT.

TDS Eligible Expense Guideline

ELIGIBLE AND INELIGIBLE EXPENSES

Eligible Expenses are costs directly attributable to, and necessary for carrying out the Project. To be eligible, the cost must be incurred and paid on or after the effective date of the Agreement and up to and including the Project Expiry Date.

Eligible Expenses are actual cash outlays that must be documented through invoices, receipts, or records acceptable to the Province and are subject to verification by an independent auditor. Evidence of payment must be maintained for audit purposes. Acting reasonably, the Province's decisions as to the expenditure eligibility and valuation are final and determinative.

ELIGIBLE EXPENSES	INELIGIBLE EXPENSES
1. Costs related to establishing and delivering the core functions of the Project – Description and Timelines, and in keeping with Province budget allocation. 2. Costs payable by the Recipient incurred by participants for delivery of the Project, including infrastructure. 3. Costs related to Recipient management and delivery of the Project including: *a. Salaries, Wages and Benefits* • Salaries • Benefits • Consultant Fees • Contractors Fees • Recruiting Expenses • Expenses related to employee termination b. Office Expenses & Equipment for purposes of the Project • Administrative Supplies • Meetings • Rent • Leasehold improvements	In general, Ineligible Expenses include (but are not limited to): 1. Entertainment expenses and alcoholic beverages 2. Expenses associated with lobbying or government relations activities 3. Costs associated with travel, activities or operations performed outside of Ontario, unless the proposed expenditures are directly related to the operation of the Recipient in carrying out the Project and provided that the Recipient obtains prior written approval of the Province. 4. Legal, accounting and consulting costs and fees not related to the Project, which includes those costs and fees in connection with financial reorganization, security issues, capital stock issues, obtaining of patents and licenses and prosecution of any claims against the Province 5. Federal and provincial income taxes, excess profit taxes or surtaxes and any special expenses incurred in relation to taxes

- Telephone, Fax
- Computer & related equipment
- Legal
- Insurance

c. Marketing for purposes of the Project
- Promotional Material
- Events

d. Travel expenses
- Travel within the Province of Ontario directly related to the operation of the Project.
- Travel expenses must be modest and appropriate, and strike a balance among economy, health & safety, and efficiency of operations and where applicable incurred in accordance with the Broader Public Sector Expenses Directive.
- In no event will the Province pay for travel expenses that exceed the rates set out in Ontario's Travel, Meal and Hospitality Expenses Directive.

e. Audit Expenses

4. Other costs that, in the opinion of the Province, are considered necessary for the successful implementation of the Project and have been approved in writing prior to being incurred.

6. Costs, including taxes, for which the Recipient has received, will receive, or is eligible to receive, a rebate, credit or refund
7. Fines and penalties
8. Donations in the form of goodwill and other intangibles (such as intellectual property, including licenses and patents)
9. Opportunity costs
10. Standard discounts
11. Interest charges
12. Allowance for interest on invested capital, bonds, debentures, bank or other loan together with related bond discounts and finance chargers
13. Losses on investments, bad debts and related collection expenses
14. Losses on other projects or contracts
15. Amortization of unrealized appreciation of assets
16. Depreciation of assets paid for by Ontario
17. Expenses and depreciation of excess facilities
18. All costs that are not Eligible Expenses
19. Any costs as determined by the Province from time to time in its' sole discretion.