



CRITICAL
INDUSTRIAL
TECHNOLOGIES

Critical Industrial Technologies Sector Adoption Program

Addressing Mining Safety Through Critical Technologies

Challenge Launch Date	May 29, 2024
Expression of Interest (EOI) Deadline	June 28, 2024
Application Deadline	July 12, 2024
Challenge Statement	<p>With the abundant presence of resources, the Ontario mining sector is well poised to grow with the increasing global demand for minerals. Given the hazards inherent in mining due to both environmental and operational conditions, safety is of paramount concern to mining companies in the development of these resources. Technology-driven solutions are proving to be effective in addressing a variety of safety challenges in the mining industry.</p> <p>To spur further advancements, the Critical Industrial Technologies program is calling for innovative solutions that help ensure safe operating conditions in the mining sector. These solutions should incorporate critical technologies to address potential hazardous situations in mine development, extraction, and processing. Examples of potential solutions may include technologies such as 5G-enabled tele-operations, IoT devices and AI for air quality monitoring and robotics or drones for use in unsafe areas.</p> <p>Ontario-based companies are encouraged to submit their innovative solutions that can demonstrate a transformative approach to the safety concerns in the mining sector. Companies should be prepared to demonstrate their solutions to show adoption within the mining industry.</p>
Timeline	Maximum Project duration is up to 1 year
Available Funding	<ul style="list-style-type: none">• Up to \$1,000,000• Funding must be matched 2:1 by the Applicant Companies by cash or cash equivalent. Matching contributions can also be provided by Industry Partners.• Cash equivalent can include, but is not limited to, salaries and other operating expenses that will be allocated to the projects.
Project Details	<ul style="list-style-type: none">• Projects must involve the integration, development, adoption and/or acceleration of at least one of the following critical technologies - 5G, AI, Blockchain, Cybersecurity, Robotics, Quantum.• Proposed projects can be enhancements to existing products/services or new products/services.

	<ul style="list-style-type: none"> • Solutions developed through the challenge must have a significant impact on safety in the mining sector and be capable of being adopted by multiple stakeholders throughout the province. • The lead applicant <u>must be</u> an Ontario-based SME and must meet the requirements identified in the Sector Adoption Program Guidelines. • Applicants are encouraged to form a consortia of partners who will work collaboratively to develop and demonstrate a solution that will have widespread adoption and impact on the Ontario mining sector. • Applicant Companies must identify at least one Primary Partner who will commit to participating in the project as a strategic partner, customer, etc. Primary Partners do not have to be based in Ontario. • At least one Primary Partner should exhibit market 'pull' to help validate the readiness of the sector to adopt the demonstrated solution.
<p>Project Outcome and Participation Benefits</p>	<ul style="list-style-type: none"> • Successfully integrate one or more Critical Technologies, including 5G, AI, Blockchain, Cybersecurity, Robotics and Quantum into solutions supporting enhanced safety in the mining supply chain. • Create scalable solutions that can be easily replicated and deployed across multiple stakeholders -thus fostering widespread adoption and impact. • Demonstrate these solutions with a partner to show industry acceptance and suitability for widespread adoption. • Through the formation of a consortia, foster collaborative partnerships between Ontario-based SMEs and industry partners, leveraging diverse expertise and resources to drive innovation and achieve shared goals. • Generate significant job creation and economic growth for the applicant companies and related industries, supporting Ontario's broader economic development objectives. • Create opportunities for market expansion and business growth by introducing innovative solutions that meet evolving market demands and customer needs, both within Ontario and beyond.