

# Ground Breaking News

## MINING AND THE GREEN ECONOMY

Most Canadians recognize the global impact of climate change and acknowledge that in other parts of the world, the effects are CRITICAL. Currently, one of the best ways to stall or even reverse this trend and sustain the global economy is to replace fossil fuels with low carbon electricity. A low-carbon economy will depend on a reliable, low-cost supply of all the metals, especially copper, that facilitate the generation, transmission, storage and manipulation of electricity.

But given the decline in the rate of discovery of sizeable near-surface metal deposits, more metals have to come from high-cost underground mines. If increasing demand for metals drives a rise in prices, it will be harder to drive low-cost carbon out of the economy. What is required is for the global mining sector to find and produce more metals at a lower cost and risk to the environment. This change needs disruptive, transformative innovation in the metal mining sector. If we are going to win the war against carbon, improving the performance of the metal mining sector is the key to winning it.

The metal mining sector is only about 4% of the Canadian economy, but it continues to have a positive and disproportionate influence on the global mining sector. It is an area where Canada has a competitive advantage. A radical improvement in the performance of the metal mining industry is essential if we are to impact climate change significantly within the next two decades. The metal mining sector offers Canada, with 2% of global GDP, a credible and attainable leadership role in combating the Global Climate Crisis.

## PERU DELEGATION VISIT TO SUDBURY

A delegation of Peruvian government officials, Mining Companies and University researchers are visiting Sudbury (August 10—16) to investigate the research and application of novel environmental techniques in Sudbury. The visit was organized by the CORE Foundation of Peru, in collaboration with CEMI and the Goodman School of Mines. The visitors will hear presentations from Laurentian University faculty, Vale Living with Lakes Centre and CEMI as well as field trips to various sites of interest. The Peruvian delegation is interested in learning how Sudbury was able to transform its landscape from previous mining impacts.



## NATIONAL MINING ECOSYSTEM DEVELOPMENT OPPORTUNITY



CEMI is pleased to be leading an application for federal funding of a National Mining Innovation Ecosystem from the Strategic Innovation Fund Stream 5 (SIF5). So far, the Mining Innovation Commercialization Accelerator (MICA) has attracted over \$80M of potential private sector investments and has engaged over 20 key Canadian national mining innovation support organizations and over 30 private sector organizations which include SMEs and mining companies. CEMI's outreach to the national mining ecosystem includes AMQ, BDC, CanmetMining, CEIMD, CIM, CMIC, COREM, EDC, GMG, iMii, MAC, MSABC, MiHR, Mining3, MITACS, Mining NL, MISA, MSTa, NBIF, NORCAT, NRC, PDAC and all of Canada's Provincial and Territorial governments.

MICA's Objectives are: to increase regional and national mining growth, expand the service-supply segment with cross-sector innovators, and target globally relevant issues to realize export sales potential.

MICA will be of national scale, include high-impact solutions and late-stage developments in **4 themes:**

- High-capacity Production Systems
- Low-energy Consumption Technologies
- Smart Autonomous Systems
- Zero-impact Tailings Management

These themes address the two primary challenges facing the metal mining industry today; the need to increase productive capacity at lower cost and to eliminate environmental and human health risks associated with mine waste and waste-water management.

To express your interest in MICA please visit: [www.cemi.ca/mica](http://www.cemi.ca/mica) or email [dlepage@ceci.ca](mailto:dlepage@ceci.ca).

## UPCOMING EVENTS

The Centre for Excellence in Mining Innovation, in partnership with iKconnect, is hosting the **Future of Deep Mining Conference**. The Conference will bring together members of the deep mining community to learn more about the opportunities within this emerging marketplace.



### FUTURE OF DEEP MINING 2019

ONE KING WEST HOTEL & RESIDENCES TORONTO  
SEPTEMBER 19 - 20, 2019

[www.cemi.ca/futureofdeepminingconference](http://www.cemi.ca/futureofdeepminingconference)



### Smart Mining 2.0

ONE KING WEST HOTEL & RESIDENCES TORONTO  
SEPTEMBER 19 - 20, 2019  
<http://ikconnect.world/SmartMining2/>

Exciting opportunities for mining executives to engage in insightful conversation and get encountered with modern technologies that can guarantee lower costs, greater production efficiencies, reduced environmental impact and workforce safety.

### International Week of Research, Innovation and Entrepreneurship

UNSAAC-2019 International Scientific Symposium  
Peru, Cusco

September 30 - October 4

CEMI Presentation: Mining Innovation Ecosystem

### Trade Mission to Europe



### A SMART MINING CONFERENCE IN GERMANY

and a SMART MINE VISIT IN SWEDEN

November 18—22, 2019

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A 1 DAY, 2 NIGHT SYMPOSIUM WITH  
A FOCUS ON SOFT-SKILL DEVELOPMENT

### MECA SYMPOSIUM

HOSTED IN PARTNERSHIP WITH **CIM ICM**  
Sudbury, Ontario, October 9-11, 2019  
<https://mecasyposium.com/>

## MIRARCO CEO RETIRES



After seven years as President & CEO of MIRARCO Mining Innovation in Sudbury, Vic Pakalnis is set to retire on July 31<sup>st</sup>, 2019.

CEMI wishes Vic *Continued Success* and a *Happy Retirement*.

# CENTRE FOR EXCELLENCE IN MINING INNOVATION

## WHY ENGAGE CEMI?

CEMI helps solve mining industry challenges. We accelerate the delivery of commercially viable innovations to improve operational performance. Simply said, our services are designed to bridge the gap between a challenge and a solution.

## OUR SERVICES

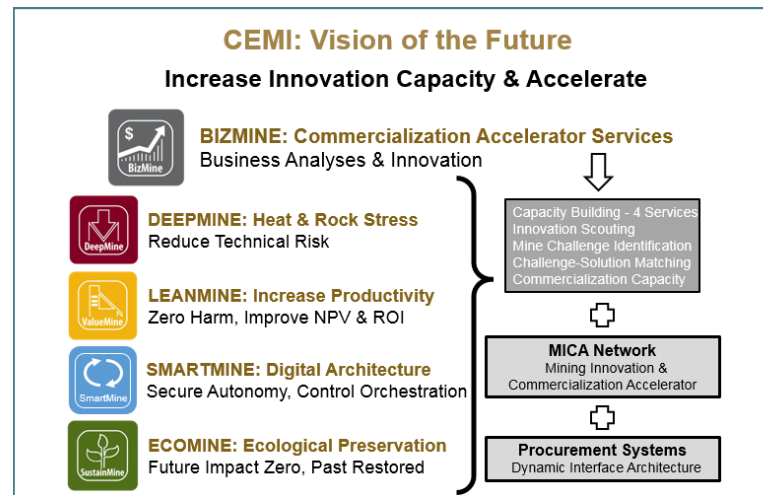
- Innovation Scouting**  
 Global search for current and emerging pre-commercial solutions
- Challenge Identification**  
 Review of existing challenges from technology road maps and uncovers hidden challenges using a systems analysis process
- Challenge Solution Matching**  
 Matches current and emerging pre-commercial solutions with validated industry challenges
- Commercialization Services**  
 CEMI conducts innovation and commercialization gap analysis assessments and offers services to bridge identified gaps

CEMI CONNECTS  
BUILDERS AND BUYERS  
OF INNOVATION

CEMI's objective is to help the mining sector achieve step-change improvement in performance by accelerating the adoption of innovations in mines and by increasing the innovation capacity of the mining service companies that deliver techniques and technologies to the industry. There is no shortage of good ideas, or partially developed solutions to the very real problems that confront mining operations, but the process of converting these into commercially viable products and services that mining companies can adopt, is slow and difficult. The need for mines to achieve step-change improvement in operational performance is urgent and we are finding ways to make this happen more quickly and efficiently.

We focus on:

- Accelerating the commercialization of technical solutions to be market ready — **Viable Products & Services**
- Managing networks of technical solution providers and innovative SMEs — **Sector Collaboration**
- Systematically target issues relevant to the global mining industry as well as regional and national ones — **SME Export Market**
- Searching globally for solutions to locally critical operational bottleneck — **Industry-Identified Priorities**



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IF YOU ARE INTERESTED IN DOING BUSINESS WITH CEMI, PLEASE CONTACT US AT [INFO@CEMI.CA](mailto:INFO@CEMI.CA) TO BE ENROLLED IN THE CLIENT INTAKE PROCESS.

[www.cemi.ca](http://www.cemi.ca)

