

# Remote Controlled: Technology and the Canadian Mining Sector - Part III: Preliminary Ontario Case Study Findings

**Presenter:** Heather Hall, PhD  
Associate Professor  
[h.hall@uwaterloo.ca](mailto:h.hall@uwaterloo.ca)

**Research Team:** Mackenzie Crabbe, Joelena Leader

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**UNIVERSITY OF WATERLOO**  
FACULTY OF ENVIRONMENT

# **ONTARIO MINING CONTEXT**

# Ontario Mining Sector – Facts and Figures

- 29 metal mines in Ontario (gold, base metals, iron, platinum group)
- The mining sector produced \$11.1 billion worth of minerals, which accounted for 20% of Canada's total production value.
- Mining in Ontario directly contributed an estimated annual total of \$8.0 billion to gross domestic product (GDP), \$2.9 billion in wages and salaries, and approximately 75,000 jobs in the province via direct, indirect and induced channels.
- There are over 1,400 mining supply and service companies in Ontario; the sector employs more than 40,000 people and Ontario produces more than \$10 billion worth of mining supplies and services every year.

**Source:** Ontario Mining Association, 2021, [Facts and Figures](#)

# **ONTARIO CASE STUDY/ NATIONAL CONTEXT**

# Progress To Date



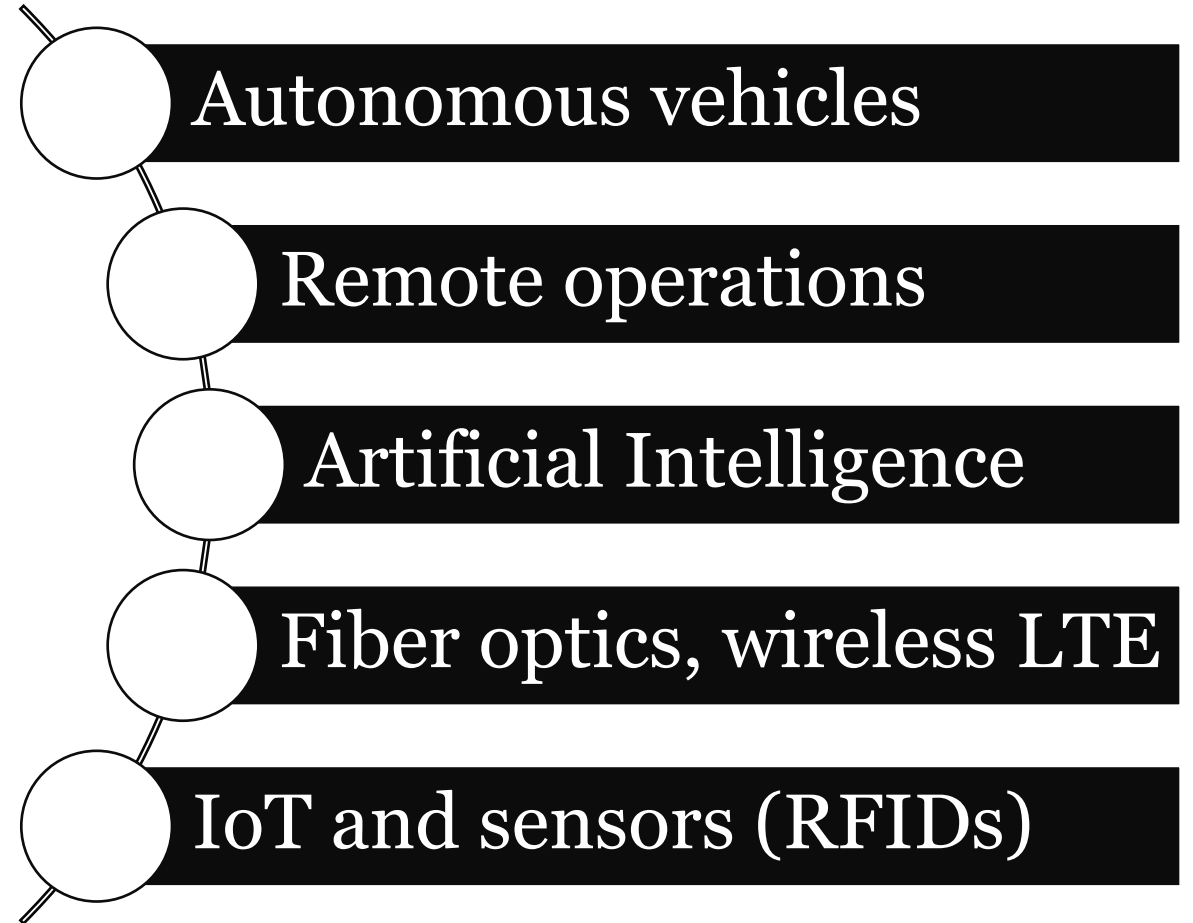
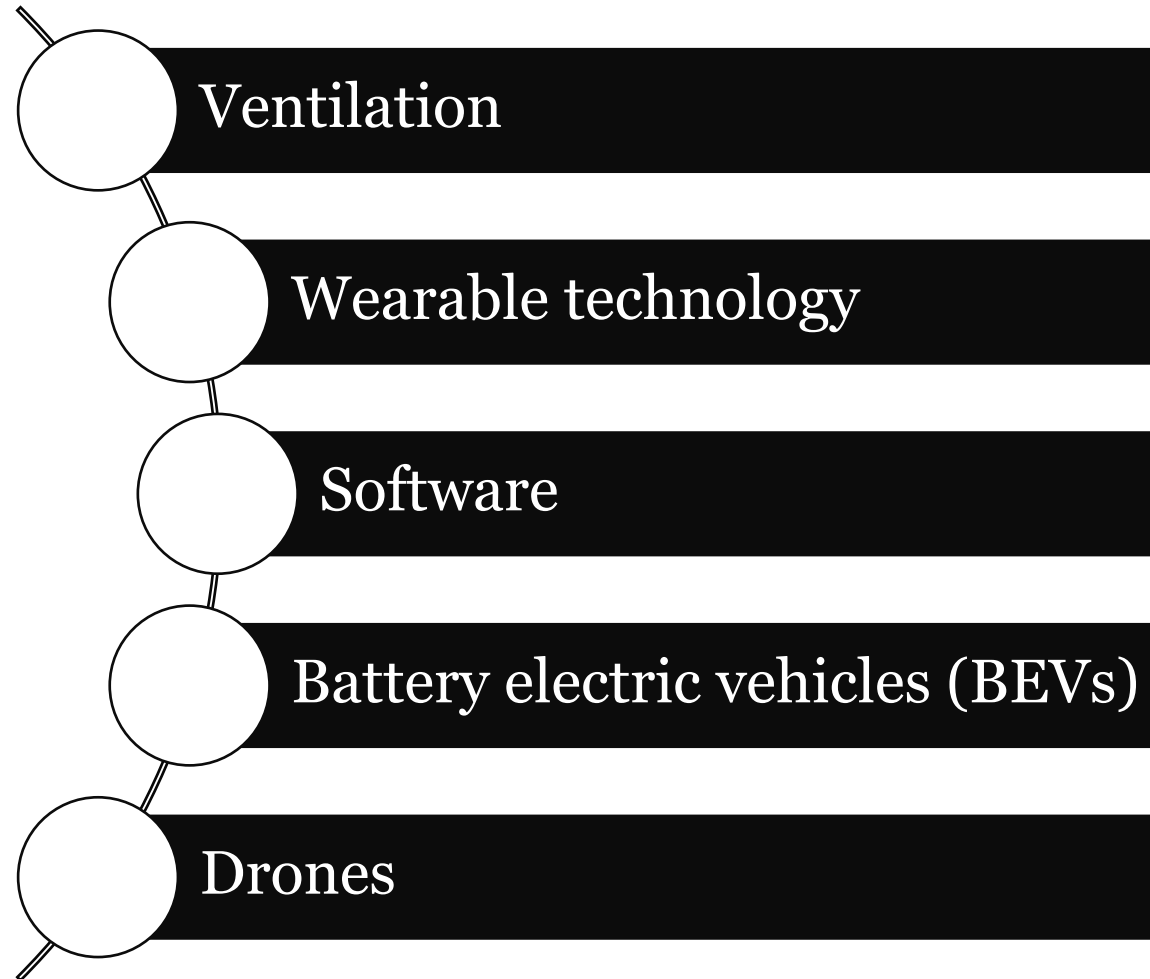
Completed 11 Phase 1 interviews with national and provincial industry experts



Currently conducting Phase 2 and 3 interviews with mining companies and mining-related technology companies

# **PRELIMINARY FINDINGS**

# Technologies



# Drivers

Labour shortages

Safety

Need for better  
coordination of  
data for risk  
detection

Improving  
efficiency and  
productivity

Improved data

Enabling the use  
of other  
technologies

Less maintenance  
required

Cost efficiency

Clean technology  
production and  
environmentally  
friendly solutions

Accuracy and  
reliability



# Barriers

Technology limitations and infrastructure challenges

Hostile underground environments

Culture in the mining industry

Requirements for implementing technology

Lack of skilled/trained workers

Curriculum and training program challenges

Cost of implementing new technologies

Investment and strong business cases needed

Regulations & legislation on technologies

Social license to operate

# Impacts

- **Employment impacts** (e.g., reduce labour costs in mining and transfer to service sector to develop tech, declining number of employees in mining and shift to high skilled workers, new employment opportunities as mines become economical with tech adoption)
- **New skills, education or training opportunities needed** (e.g., technical skills needed in IT, computer coding/programming, AI, mechanical, electrical and computer engineering, critical problem-solving skills, teamwork, communication, and blended skills)
- **Impacts on business development** (e.g., cross sector opportunities, adopt technologies to stay competitive)
- **Industry, government, unions, postsecondary responses to impacts** (e.g., committees reviewing regulation changes, new training programs)

# Thank You! Questions?

**For more information:**

**Heather Hall:** [h.hall@uwaterloo.ca](mailto:h.hall@uwaterloo.ca)

**Project Website:** <https://uwaterloo.ca/disruptive-technologies-economic-development/>



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