

Remote Controlled: Technology and the Canadian Mining Sector - Part 1: National Perspective

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UNIVERSITY OF WATERLOO
FACULTY OF ENVIRONMENT

Agenda



Project Overview

Introduction to the Research Team

Session Overview

Funders



Social Sciences and Humanities
Research Council of Canada

Conseil de recherches en
sciences humaines du Canada

Canada

Ontario



Early Research Award Program

PROJECT OVERVIEW

Context



“Age of Disruption” (Deloitte 2015)

In 2021, the minerals and metals sector directly employs over 402,000 people and indirectly employed an additional 262,000 (NRCAN 2022).

Advances in technology have the potential to fundamentally reshape the future of work and the development of mining communities and regions across the country.

Little is known, however, about the adoption of emerging technologies in the Canadian mining sector and their impacts on mining communities.

Case Study Regions



Kootenays, British Columbia

Image source: [Elk Valley Coal News](#)

Yukon



Image source: [North of 60 Mining News](#)



Northern Ontario

Image source: Marie Fjordell, [Canadian Mining Journal](#)

Newfoundland and Labrador



Image source: Signal Gold Facebook, [Saltwire](#)

Research Questions

- 1) What is the nature and extent of emerging technologies in the Canadian mining sector?
- 2) How are these technologies reshaping the sector?
- 3) What is driving the adoption of emerging technologies in the Canadian mining sector? and
- 4) What are the socio-economic and spatial impacts on mining regions and the responses by companies, various levels of government, including Indigenous governments, as well as leaders and organizations involved in economic development and skills training, postsecondary and research institutions, industry associations, and other stakeholder organizations?

Methodology – Technology Assessment (Franks and Cohen, 2012; McNab and Garcia-Vasquez, 2011)

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- What is the technology?
 - Where will it be implemented?
 - How will it affect employment?
 - How will it affect skills, education, and training?
 - How will it affect business development?
 - How will it affect presence effects
 - How will it affect community investment?

Methodology – Qualitative Interviews

Phase 1

- Industry Experts

Phase 2

- Mining Companies

Phase 3

- Mining-Related Technology Companies

Phase 4

- Local and Regional Support Organizations

RESEARCH TEAM

National/Ontario

- Heather Hall, Mackenzie Crabbe, Joelena Leader

Yukon

- Joelena Leader, Ken Coates, Brady Reid

British Columbia

- Sarah Breen, Laura Stern

Newfoundland and Labrador

- Kelly Vodden, Leanna Butters, Janelle Skeard

SESSION OVERVIEW

Agenda for the Session

Part 1: National Perspective

- Presenter: Heather Hall

Part 2: Systematic Review Findings

- Presenters: Mackenzie Crabbe & Heather Hall

Part 3: Preliminary Case Study Findings

- Presenters: Sarah Breen, Laura Stern, Brady Reid, Heather Hall, Leanna Butters

Part 4: Exploring Technology Adoption in the Mineral Mining Industry in Canada

- Presenter: Mackenzie Crabbe

Thank You! Questions?

For more information:

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



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