Extractive Industries

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Research Findings: Canada's Digital Opportunity

- Extractive Industries
  - Conservative Industry Cultures. Innovation is incremental. Most is aimed at continuous process improvement and cost saving.
  - Tier 1 Suppliers not Operating companies dominate pace of Innovation.
  - ICT SMEs access at margin. Difficult to Scale.
- Digitization of Extractive Industries
  - OG: General, economic imperative. Exploitation.
  - MN: Existential Imperative. Exploration

Policy Implications of Research Findings

- Extractive Industries are becoming ‘normalized’ around the new Advanced Manufacturing Model where value creation and production takes place largely in the Supply Chain. Auto 80%; OG 51%.
- International Tier 1 Suppliers primarily rely on in-house Global R&D Centres.
- ICT SMEs gain entry with policy support. But limits to Scale:
  - OG: Atlantic Accord. Special Environments e.g. Ice.
  - MN: Flow Through Shares. Exploration.

Policy Perspective

- Operating Companies: Cultures
  - Open vs. Indigenous Innovation Cultures.
  - Different levels of Embeddedness in Local Communities.
  - Emergence of Indigenous Local Management.
- SMEs: Entry vs Scaling
  - Specific local conditions and environments combined with special procurement and financial assistance can work. Scaling to global supply chains are limited.
- Talent and Technology for SME’s
  - Colleges vs Universities. Skills and Technology vs Relationships.