



IGF

INTERGOVERNMENTAL FORUM
on Mining, Minerals, Metals and
Sustainable Development

Technology Trends and implications in Mining

A community perspective

A brief overview

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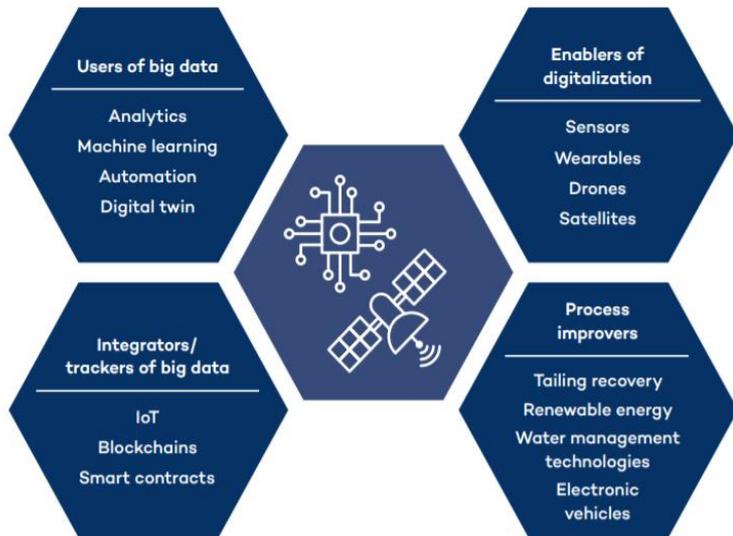




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What technologies are coming?

A Taxonomy of disruptive technologies

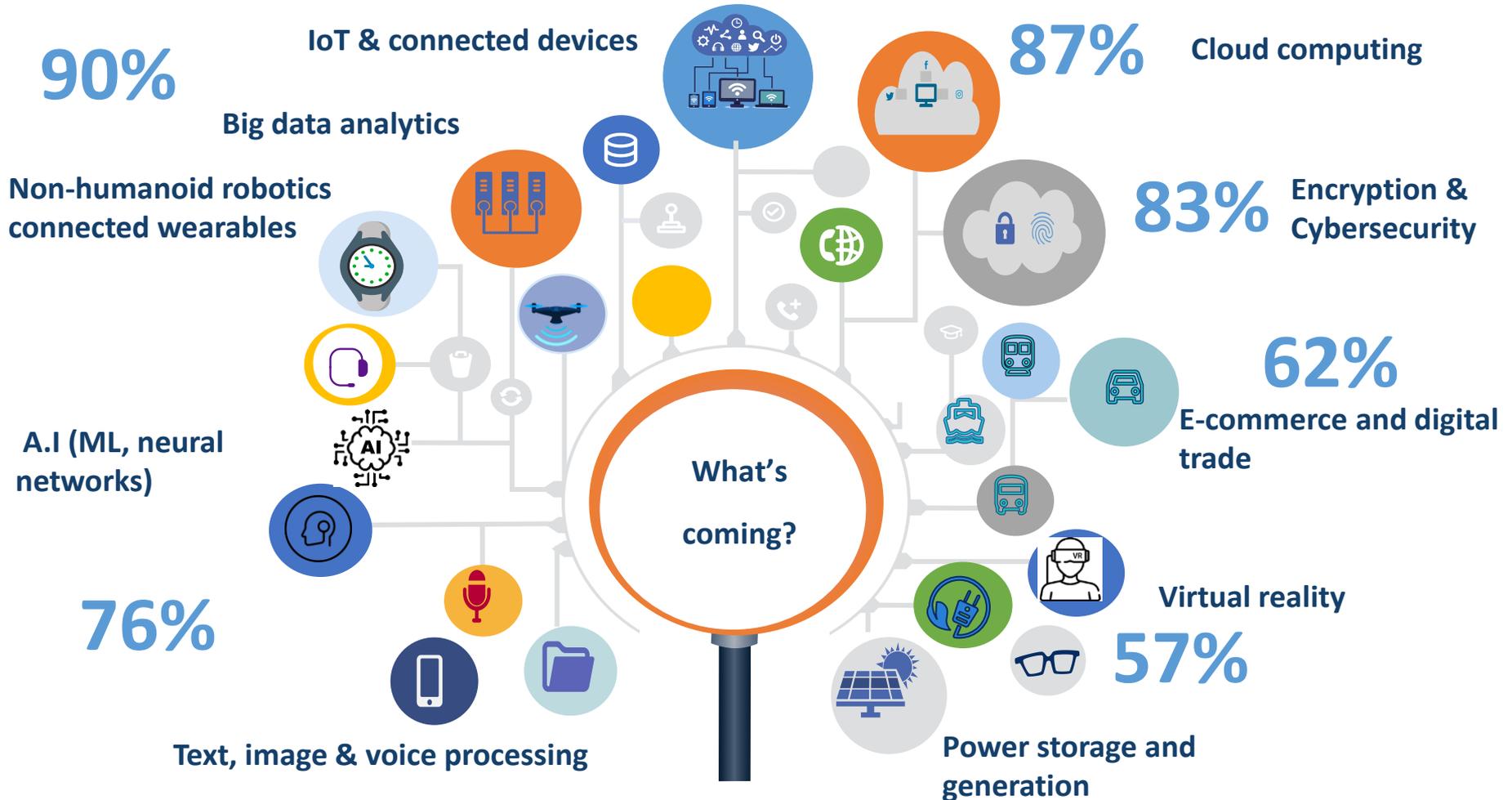


Source: IGF 2019



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Technologies likely to be adopted by 2025





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What impacts are we likely to see?



For mining industry:

- ✓ Improved efficiency (labour; assets; operation)
- ✓ Higher productivity
- ✓ Improved work & workers safety

For Governments:

- ✓ Balance of socio-economic benefits
- ✓ Revenues
- ✓ Possible implications for ASM

For communities:

- ✓ Changes in occupations and jobs
- ✓ Ripple effects on local economies
- ✓ Gendered implications



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Impacts at the local level: Employment

2nd highest risk for mining industry

19.9%

**Risk of Job
displacement by 2025**



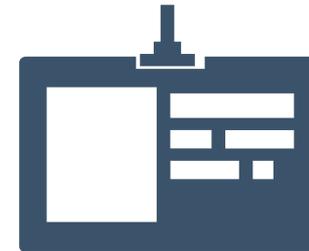
49%

**Expected fall overall by
2040 (Canada)**



What is needed?

Skills and education



**Alternative
livelihoods:
diversification**

**Recalibrating
local content
policies**





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Impacts at the local level: Tech as an opportunity

Shared infrastructure

1. Renewable energy: greening the mine can be an opportunity to light up communities
2. Access to water: Water saving technologies can free resources for communities. Water management technologies can be shared with communities.
3. Shared connectivity: A game changer overall, for economic activities; in support of education; health etc.

Local innovation

Opportunities for local firms to design tailor-made solutions for high-tech mines.

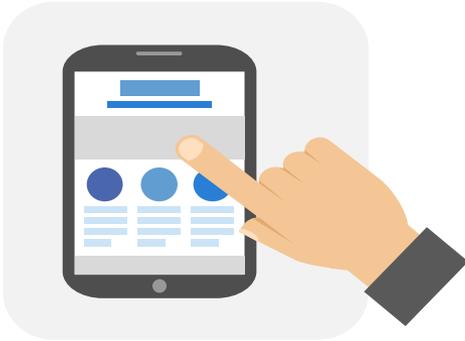




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Data collected by mines for wider benefits

Data to support mining governance



Real-time data analyzed through AI:

- Better understanding of ore grades
- Real time info on flow and quantity of ore extracted
- Improved audits and revenue collection/ avoid IFFs
- Responsible sourcing

Two examples



Data to support non-mining sectors



Real-time data on weather, water, climate

- Water management policies
- Better agriculture policies
- Development of new farming techniques;
- Environmental management and biodiversity
- Management of climate risks

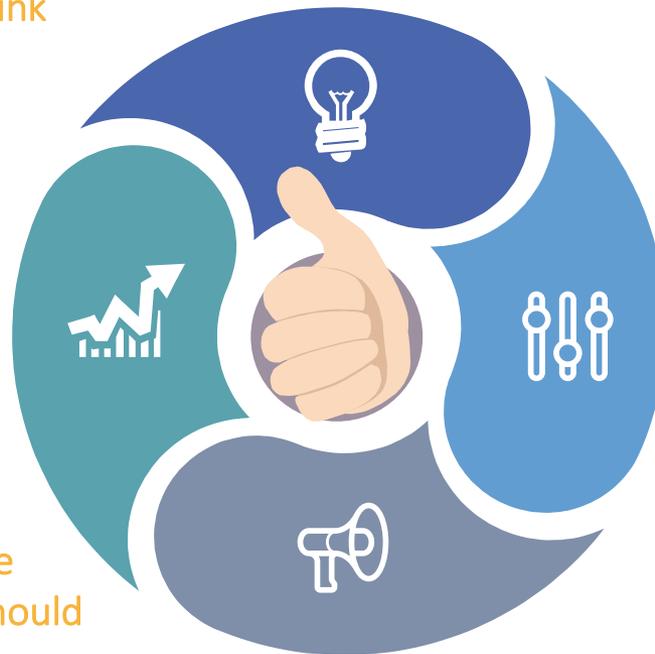


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Questions for discussion

Do new technologies offer an opportunity to reset and rethink community relations?
What are the risks?

How are governments engaging with companies? Are rethinking ways to strengthen community resilience?



Is CSR still sufficient to keep the social licence to operate? Or should we brace for new and innovative social investment mechanisms?

THANK YOU

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