Implementation of AI Outcomes
May 5 2020 Workshop – Context-setting activity

Why would this guideline be useful?

- Help companies prioritize projects and efforts
- Enhance understanding of value from Al projects and build trust and confidence in AI
- Improve adoption and, as a result, boost efficiency in the mining value chain and improve industry performance and sustainability.
- Reduce barriers of entry and foster innovation in the mining industry
- Identifying skills and technology gaps
- Identify successful and valuable use cases
- Create a common language around AI in mining and sharing best practices so that there is a common approach, which can, in turn, help with interoperability and enable faster development
- Help readers anticipate and mitigate bias
- Provide guidance for data generators
- Enable knowledge-driven decision making with data-driven insight
- Guidance for successful deployment

What are the key challenges?

Business*

- Skills shortage and workforce gaps
- Top down leadership to implement at all levels to gain ownership
- Understanding the gap between process experts and technology experts
- Education and awareness for non-technical teams
- Differentiate hype from solid theory and practice
- Collaboration between mining companies and software developers
- Understanding the value of data
- Choosing the right technology to deliver business vale
- Human factors
- Change in mindset from fixed to growth
- Trusting AI throughout the model lifecycle (development, deployment, ongoing support)
- Buy-in from the workforce and community
- Proof of concept

Technical

- Ethical data sourcing and implementation
- Data model governance and data accessibility, structure, and quality
- Visibility of data assumptions and model constraints
- Human machine interface
- Cybersecurity
- Data structure and categorization
- Bias in legacy systems and data sets
- Safety of AI systems
- Reliability and testing

*note: as the group discussed in the guideline draft itself, there is not a hard line between business and technical considerations, so some of these points may apply to both

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Who are the key individuals or groups who would benefit from this document?

- Mining companies
    - IT/OT
    - Data scientists
    - Executive leadership
    - Business development / product management
    - Corporate transformational offices
    - Human resources (skill development and hiring)
    - Small- to medium-sized companies (may benefit especially because they don't always have the resources to do their own studies)
- Original Equipment Manufacturers (OEMs)
- Technology providers
    - Software companies
    - Technology startups
- Technical investors
- AI researchers and designers
- Government and regulators
- Educational and research institutions

Who do we need to contribute?

- Mining companies (all levels)
    - IT departments
    - Legal departments
    - Data scientists
    - People who are hesitant (to troubleshoot key areas)
- Subject matter experts
    - Modelling experts
    - Ethics experts
    - Practitioners
- Regulatory agencies and government
- Industry technology and innovation groups
- Data generators and aggregators
- Technology enterprise architects
- Technology startups
- Educational and research institutions