



Asset Management in a Digitalized Mine Workshop | 2022

During the Asset Management in a Digitalized Mine Workshop held on September 21, 2022, participants discussed priority topics and associated challenges. The priority topics discussed included:

- Data
- Connectivity
- Integrated roadmap: long-term vision
- Personnel training and user engagement

Priority Topic	Challenges Discussed
Data	<ul style="list-style-type: none"> • Mines to define the main business drivers for improvements of systems integration – what outcomes are needed/where is the value? • Transparency of asset health • How do we measure, store, define, and use data (i.e., get the right set of data and focus on key ones) • If data is not well defined it can be confusing because some looks the same but have different meanings. • How to create the definitions and agree on terminology when speaking of mobile assets and their related consumables. E.g., Should we be defining a drill pipe from its dimensions and weight? • How to combine the consumables from mobile machinery to the actual machine (i.e., There is maintenance as well as safety procedures for pipes and they connect to what we measure from the machine)? • How to keep track of geo-location of mobile machinery together with related consumables used in operating the machine? • Data security. • Data collection and explain what it means and appropriate details to support maintenance activities • Challenge – intra-operability between different systems to communication with correct info • What are the critical business decisions that lack data/latency of delivery? • OT reliability while getting access to data. • Raise level of data driven management to adopt systems • Data base is not only data: need to have process engineering diagram, SME involvement, and it is a team effort that needs to be defined and integrated
Connectivity	<ul style="list-style-type: none"> • Industries are becoming more connected, not less. • Various sources to actual program that can help • Digital twin to serve as a database • Result sharing required to support better decision-making • Aggregation of data at right level of management

Note that this document captures key discussions among a small cross-section of industry participants during a priorities workshop held on September 21, 2022. It is intended to be one of many inputs into the working group and is not intended as industry guidance or a formal report.



	<ul style="list-style-type: none"> • IT/OT accounting important
Integrated Roadmap: Long-term vision	<ul style="list-style-type: none"> • Looking at everything as an asset • Communicating to all the stakeholders in the language they understand • Interoperability: A roadmap to interconnect different systems • Asset management models • System selection/criteria • Event framing • Adoption of digital initiatives requires involvement from all involved along the value chain
Personnel Training and User Engagement	<ul style="list-style-type: none"> • Training for maintenance supervisors and planners on short-term KPI-driven management • Increase awareness and eliminate data confusion • Clarity on roles and responsibilities across all involved parties (e.g., onsite and support) • Customer decision in real time is important to be more productive and resource efficient • Quality of the maintenance, capability, education, ownership, and computer literacy • Shifting priorities/maintenance philosophy/culture (current state to end state) • Trust and confidence of the system • Focus on technology, people, and processes. • Because asset management is not an attractive profession, AI and cutting-edge technology makes the industry more attractive. • Coaching to support the system • Support cultural shift through training and learning to allow better understanding of why – people involvement • Standardized documents to support • Knowledge transfer: when personnel move jobs or retire the information that they have retained is lost. It is a challenge to get that expertise.

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