



Artificial Intelligence Prioritization Roundtable | 2022

During this virtual artificial intelligence virtual workshop held on August 22, 2022, participants discussed priority topics, along with the associated challenges/requirements, and next steps to address them. The priority topics discussed included data management and standardization, change management, and technical expertise.

	Data Management and Standardization	Change Management	Technical Expertise
Current State and Challenges/Requirements	<ul style="list-style-type: none"> • Data lakes with good documentation. • Building a centralized data platform. • Minimum measurement availability. • Integration between transaction data and time variant data. • Stability of the data model vs expandability. • Data quality. • Cybersecurity challenges. • Legal sharing problems. • Connecting transactional data with temporal. • It is hard to understand who owns this. • Share AI models across companies. • What is the data model optimized for? • Industry-wide standardization (e.g., OEMs). 	<ul style="list-style-type: none"> • Anomaly detection. • Good problem definition. • Data validation. • Can we leverage OEMs AI modules? • Stakeholder identification. • AI will get turned off by operations without proper change management. • Align expectations from AI with reality. • Define scope for ET (engineering. technology), OT (operations technology), and IT (information technology). 	<ul style="list-style-type: none"> • Universities developing programs like master's degrees but limited collaboration with the industry. • Business SMEs don't necessarily overlap with AI SMEs. • No clear and concise requirements written in an actionable format. • Identifying the level of expertise requirements. • Global shortage of AI specialists. • Perception challenges (i.e., AI talent is not attracted to this industry). • Rebrand mining: it will be the foundation for a sustainable future.
What are the Next Steps?	<ul style="list-style-type: none"> • Data modelling and data ownership • Legal understanding to allow multi-mining company solutions. • Make sure systems are designed communicate. • Leverage work from other industries (e.g., ARCWEB). • Definition of proper master data systems. • Create a centralized data management platform with AI capabilities. 	<ul style="list-style-type: none"> • Create training material to share. • Training in International Society of Automation (ISA) and other existing standards. • Use simulation and modelling tools with executives and SVP to support decisions. • Map company's processes and include top-down organization to understand resistances. • Develop robust inclusive protocols for how to implement AI; including how and why to construct multidisciplinary teams. • Practical, precise, and simple definitions of AI. • Documentation on where value can be added. • Use existing tools to demonstrate value. • Implement protocols to validate the model (shadowing). 	<ul style="list-style-type: none"> • Invite speakers from relevant market specialists. • Include a data science course in training plans. • Industry organized training/upskilling programs. • Development and maintenance of python libraries to interact with PI and other core systems. • Work-flow life cycling of AI project definition (i.e., the industry does not have a good appreciation of the complexity of building AI based tools, or the depth of different skill sets required). • Upskill new technical engineers to use Phyton or R with management support. • Demonstrate value to corporate. • Create multi-disciplines Working Groups in developing the Models.

Note that this document captures some key discussions among a small cross-section of industry participants during a priorities roundtable held on August 22, 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.