

Mining series: digitalisation

Digitalising the mining sector can improve business performance while reducing risk.

Mining companies are embracing digital transformation as a key lever to extract value.

How digitalisation supports value release and risk mitigation

Prospecting & exploration

- Mineral prospecting and exploration using AI and predictive analytics
- Identification of target zones using AI
- AI for improving exploration targets
- Simulation driven planning using digital twin
- Autonomous drilling



Mining & beneficiation

- Autonomous operations and self driving trucks/trains
- Digitise remote operations and use of digital twins
- Smart sorting equipment
- Wearables and real time monitoring of behaviours
- Predictive maintenance and loss prevention
- Asset performance monitoring and predictive analytics
- 3D printing of spare parts

Supply chain & logistics

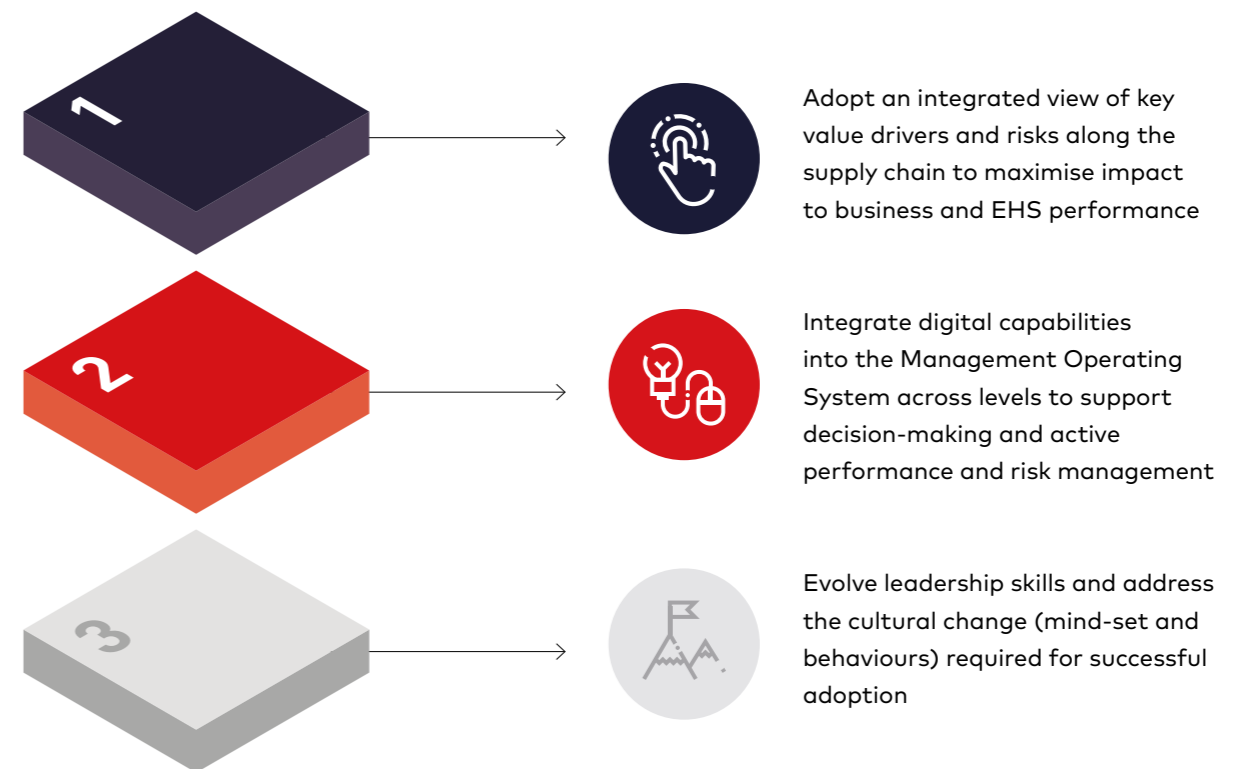
- Use of Big Data for smarter procurement
- Drones for inventory management, site surveying, traffic management, blast planning and collaboration
- Shipment tracking and route optimisation
- Pit to port integration

Sales & marketing

- Document digitisation and Robotic Process Automation
- Trading analytics
- Demand forecasting using predictive analytics
- Price movement forecasting

The three priorities for effective digitalisation

Addressing three priorities will ensure digitalisation actually translates into cost effectiveness, sustainable risk reduction and performance improvement.



Adopt an integrated view of key value drivers and risks along the supply chain to maximise impact to business and EHS performance

Integrate digital capabilities into the Management Operating System across levels to support decision-making and active performance and risk management

Evolve leadership skills and address the cultural change (mind-set and behaviours) required for successful adoption



Protect. Transform. Sustain.