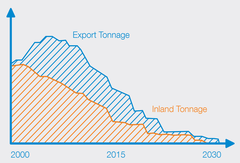
Power and productivity
for a better world™

Next level mining
Securing the future through integrated operations and information technologies

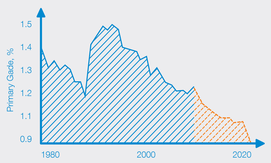
Challenges facing the mining industry

Depleting Reserves

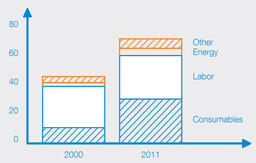


Source: Xstrata Copper

Declining Grades



Increasing Costs

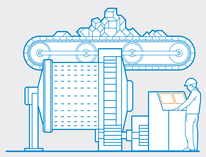


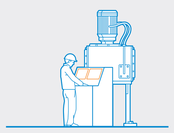
The main objective is to increase productivity despite challenges.

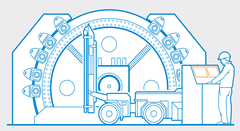
- Deeper seams = higher production effort
- Depleting reserves
- Complex assets and ore bodies
- Declining ore grade quality
- Low commodity prices
- High labor cost
- High energy cost
- Globally connected economies and businesses

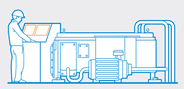
The old way
Islands of automation

Many companies have little or no data integration across the value chain and operate in silos, with data not being shared with other departments







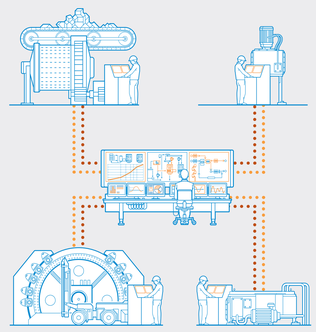


Our vision for mining
Optimizing the entire value chain through integration

The future of mining lies in bringing equipment, systems and people together

The solution lies in the automation and integration of information – and the use of that knowledge for real-time optimization of the mining processes.
We are able to provide our customers with the most optimized and seamless integration of power and automation throughout the entire plant to meet the key mining industry requirements:

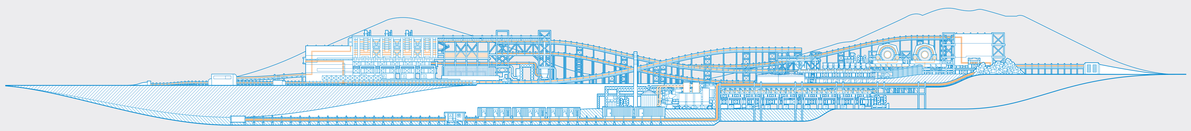
- Higher productivity
- Improved plant reliability and availability
- Enhanced collaboration to minimize CAPEX and OPEX
- Increased energy efficiency and environmental sustainability
- Improved safety



Areas of automation
From mine to market

ABB's position in mining is to supply the complete data integration solution and many of the elements crucial for mining, such as gearless mill drives, hoists, complete plant electrification, ultra-long-distance conveying, super-sized processing plant technologies, integrated process control and optimization solutions, motors and drives systems as well as instrumentation and analyzer systems.

- Process and power control system core
- Mine electrification and integration
- Collaborative production management: integrated mine-to-market value chain operations



Enabling technologies

Project management
- One point of contact
- Experience and competence

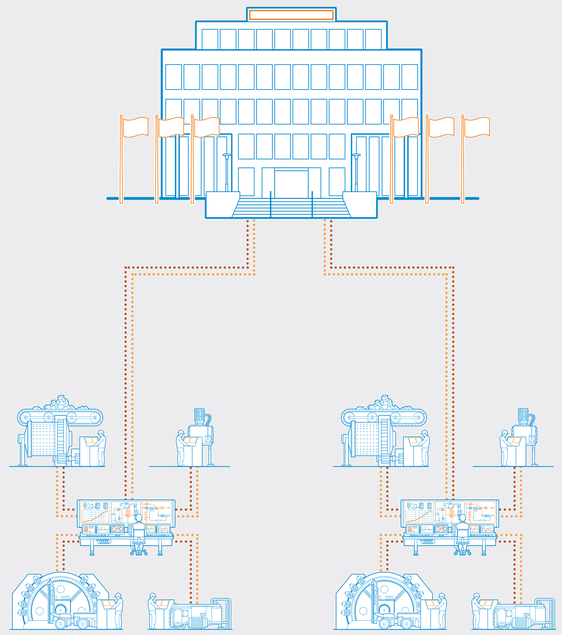
Engineering services
- Electrical system design and optimization
- Automation system design and optimization

Operation management products
- Integrated Mine Operations: Dispatch and schedule
- Knowledge Manager: information management
- Asset Vista: consistent asset monitoring

Process management products
- Minerals Library: efficient engineering and operators
- MIDAS: electrical integration - IEC 61850
- APC: productivity and energy efficiency

Automation products
- Cabling, networks
- PLCs, sensors
- 800xA DCS
- Extended Operator Workplace

Core hardware products
- Electrification
- Microgrids
- Drives and motors
- GMDs, hoists, conveyors

The future
Optimized mine management - from rock face to end customer – across multiple sites

Mining companies have become multinational giants with mines around the world. ABB ensures all information from local mines can also be consolidated into corporate headquarters to facilitate collaboration accross mines. Production planning, resource planning, specialist support, inventories, spare parts etc. can be optimized to reduce CAPEX and OPEX.