The mining industry today is navigating several challenges: depleting volume and quality of ore deposits, rising costs of operations, social license to operate, and unpredictable demand. Companies also required to safeguard workers from the occupational hazards of hostile mining conditions.

Infosys partners with mining companies to streamline operations – from planning to development, drilling to blasting, ore extraction to quality control, and pit to port haulage. We capitalize on advances in technologies and modeling techniques to mitigate risks and drive sustainable growth.

We craft the way you and your customers experience digital solutions, help your business gain insights from data, innovate with you in the world of vertical platforms and digital-first engineering, accelerate our core digitalization and assure ways for you to establish digital trust.

Experience: Apply image and video processing algorithms and cognitive analytics to modernize asset management.

Insights: Leverage data management solutions and intuitive operational dashboards to monetize business opportunities.

Innovate: Utilize self-operating machinery and autonomous fleet management systems to improve efficiency and rationalize costs across exploration, drilling, and haulage.

Accelerate: Train employees in augmented and virtual reality products to boost productivity as well as enterprise performance.

Assure: Adopt digital mine planning and scheduling systems to optimize operations across mining sites.

Infosys Digital Framework is redefining the mine-to-market value chain

**Mining value chain transformation**
- Drill and Blast Optimization
- Block Chain – Asset Management
- Remote and Autonomous Operations
- Krti 4.0 AI Platform

**Extreme Automation**
- Digital Platform for Intelligent Mine
- Operational Dashboards and Intelligence
- Predictive Insights and Maintenance
- RPA for Procurement

**Enhanced collaborative ecosystem**
- Digitally Connected Assets
- Network spatial optimization
- Dynamic Mine Planning and Scheduling
- Digital Mine Data Management

**Integrated Work, Workplace and Workforce**
- Decision automation support
- Real time asset monitoring
- Cognitive Maintenance chatbots
- IOT Gateways and Smart sensors

**Renewed focus on Health, Safety and Security**
- HSE Data insights and compliance
- Cyber security for critical Infrastructure
- Image Analytics for Human Safety
- Real time tracking and monitoring
Driving efficiencies by leveraging Industry 4.0

As part of your digital journey, we apply the concepts of Industry 4.0 to improve engineering, supply chain, and operational and service efficiency across multiple dimensions. Our framework below has been developed jointly with RWTH Aachen University of Germany. This has enabled us to develop testbeds and reference architectures which have been approved by the Industrial Internet Consortium.

Krti 4.0 … Infosys’ next generation AI platform to address the key challenges in mining operations

How Infosys is helping clients …
We have done this for them, we can do this for you…

Strategic Partner for a Mining Company with 34 Sites
For an iron ore, copper, and coal mining company, we offer global operation support for production, productivity improvement, engineering and procurement, and more. With us, the client automated their value chain, and adopted an integrated HSE platform.

Asset-specific Analytics to Rationalize Costs
Crafted a solution that offers asset-specific analytics and near real-time visibility into performance indicators. This helped the client improve fleet safety, reduce fuel consumption, and rationalize maintenance costs. Automated the calculation of materials handled for faster inventory reconciliation.

Smelter Decision Support
Developed a decision support system for the smelter complex operator to communicate the right time to move hot matte from furnace to converters based on the predicted assay value as well as the actual data integrated from LIMS.

Operational Intelligence
For a Brazilian Mining major, helped define a KPI hierarchy and rollup strategy. Developed a single source of truth operations reporting portal leveraging a corporate data historian, ERP integration and visualization over mobile dashboards for KPIs and real-time process workflows.

Mobile Fleet Efficiency
Applied big data analytics on vehicle fleet telemetry data to derive insights related to operational events, driver behavior and its correlation to fuel consumption and maintenance events, Material movements, Safety incidents.

Ramp Safety
Developed a solution to enhance the safety of people and trucks on a constrained ramp by integrating real-time location information from two different COTS systems and overlaying the same on a 3D visualization platform.

Environmental Monitoring
Created real-time dashboards for monitoring environmental emissions as per regulatory requirements and ensuring production is carried out at optimum levels.

Surface Material Movement
Developed an application to track movement of material based on vehicle tracking information and integration with grade information in the grade control system.

Energy Management
Developed a dashboard to increase visibility of energy spent on plant operations. Covered electricity usage, hydrocarbon usage and water usage in the plant.

For more information, contact askus@infosys.com

For more about the Infosys mining practice, visit https://www.infosys.com/industries/mining/