NAVIGATE YOUR
NEXT IN MINING

Infosys®

Navigate your next

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.

15+ Countries
Diversified projects executed

3 of the 5
Diversified Global Mining Majors

15+
Years of experience & a fastest growing practice

3000+
Dedicated professionals

50+
Strategic relationships - mining majors, consulting leaders, academia, EPC, and OEM suppliers

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

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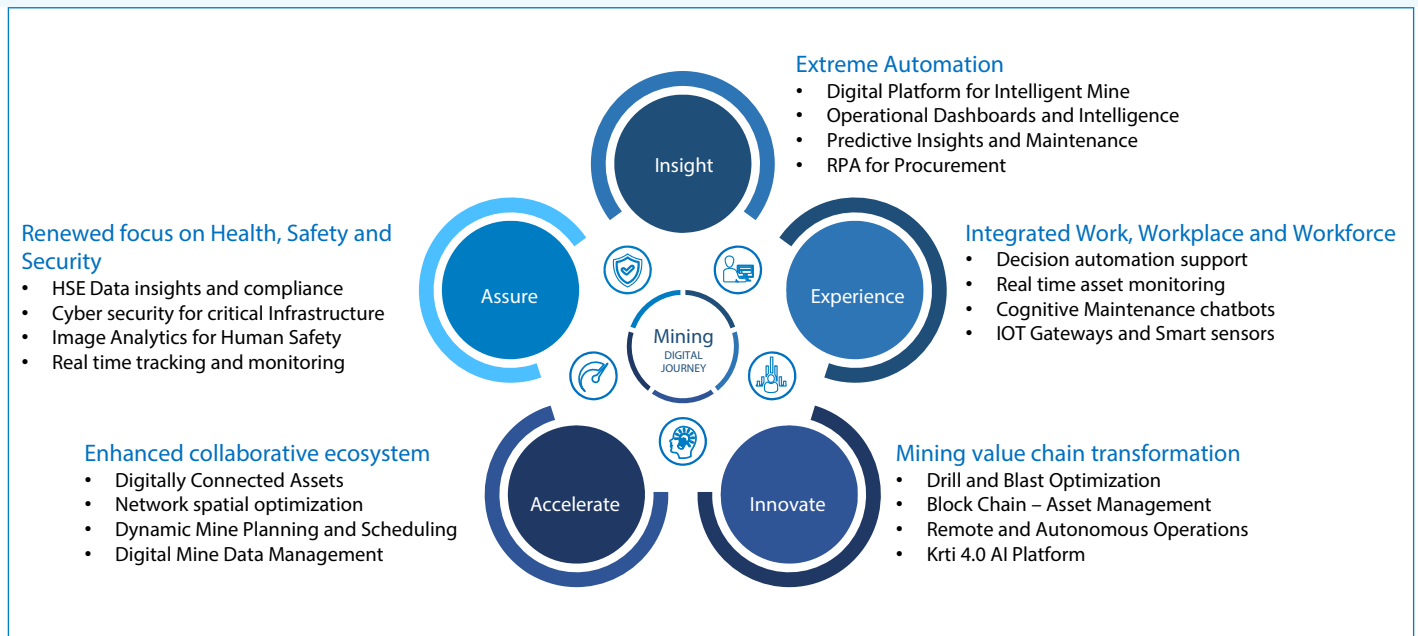
Insights: Leverage data management solutions and intuitive operational dashboards to monetize business opportunities.

Innovate: Utilize self-operating machinery and autonomous fleet management systems to improve efficiency and rationalize costs across exploration, drilling, and haulage.
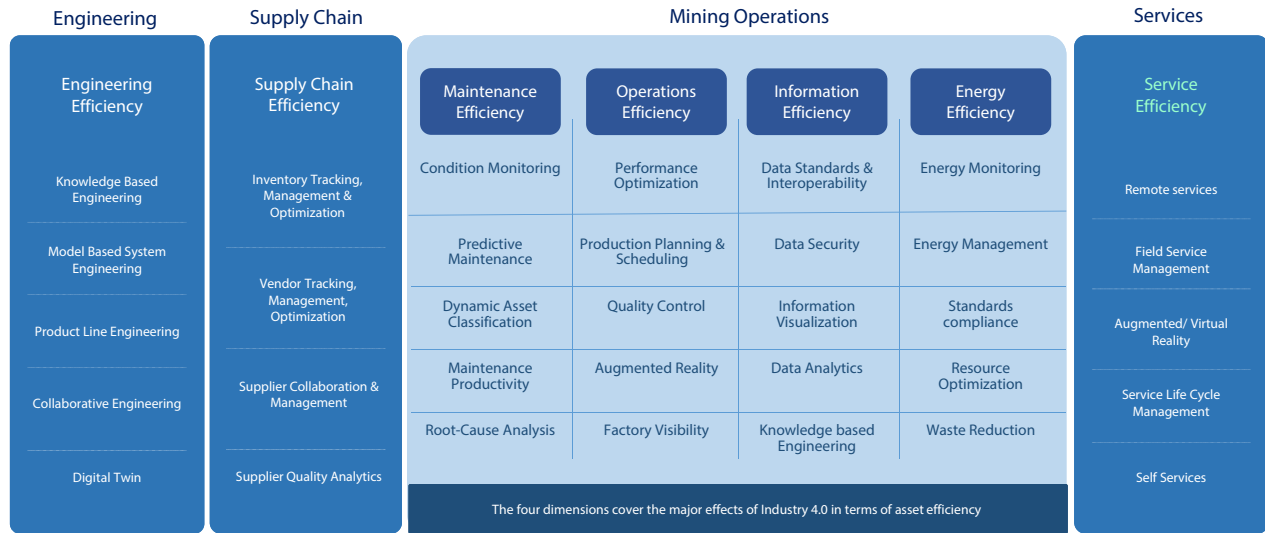
Accelerate: Train employees in augmented and virtual reality products to boost productivity as well as enterprise performance.

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

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

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

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

Insight

Assure

Experience

Mining
DIGITAL JOURNEY

Accelerate

Innovate

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

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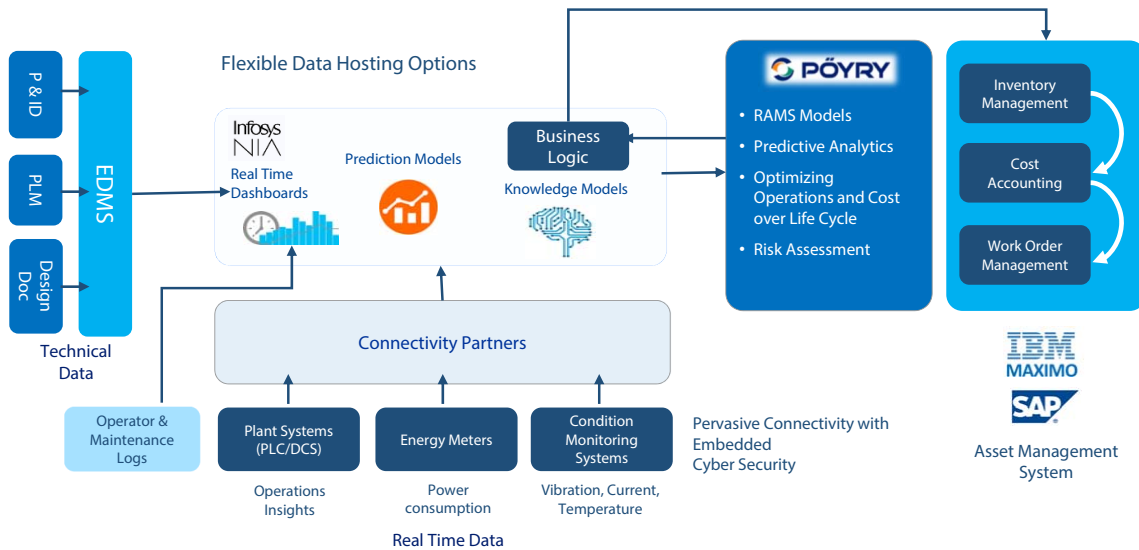- Remote and Autonomous Operations
- Krti 4.0 AI Platform

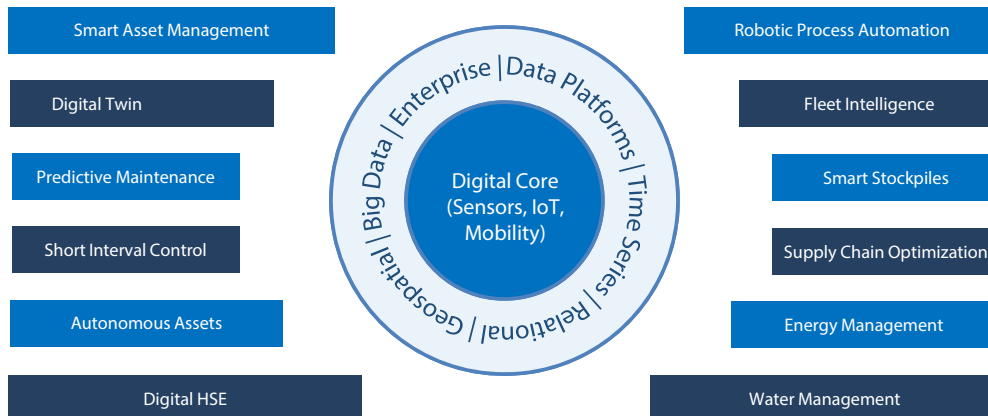# Driving efficiencies by leveraging Industry 4.0

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.

Engineering	Supply Chain	Mining Operations				Services
Engineering Efficiency	**Supply Chain Efficiency**	**Maintenance Efficiency**	**Operations Efficiency**	**Information Efficiency**	**Energy Efficiency**	**Service Efficiency**
Knowledge Based Engineering	Inventory Tracking, Management & Optimization	Condition Monitoring	Performance Optimization	Data Standards & Interoperability	Energy Monitoring	Remote services
Model Based System Engineering	Vendor Tracking, Management, Optimization	Predictive Maintenance	Production Planning & Scheduling	Data Security	Energy Management	Field Service Management
Product Line Engineering		Dynamic Asset Classification	Quality Control	Information Visualization	Standards compliance	Augmented/ Virtual Reality
Collaborative Engineering	Supplier Collaboration & Management	Maintenance Productivity	Augmented Reality	Data Analytics	Resource Optimization	Service Life Cycle Management
Digital Twin	Supplier Quality Analytics	Root-Cause Analysis	Factory Visibility	Knowledge based Engineering	Waste Reduction	Self Services

The four dimensions cover the major effects of Industry 4.0 in terms of asset efficiency

Krti 4.0 ... Infosys' next generation AI platform to address the key challenges in mining operations

Flexible Data Hosting Options

P &ID · PLM · Design Doc → EDMS

Technical Data

Infosys NIA — Real Time Dashboards · Prediction Models · Knowledge Models

Business Logic

PÖYRY
- RAMS Models
- Predictive Analytics
- Optimizing Operations and Cost over Life Cycle
- Risk Assessment

Inventory Management · Cost Accounting · Work Order Management

IBM MAXIMO
SAP
Asset Management System

Connectivity Partners

Operator & Maintenance Logs · Plant Systems (PLC/DCS) · Energy Meters · Condition Monitoring Systems

Operations Insights · Power consumption · Vibration, Current, Temperature

Real Time Data

Pervasive Connectivity with Embedded Cyber Security

How Infosys is helping clients …

Smart Asset Management

Digital Twin

Predictive Maintenance

Short Interval Control

Autonomous Assets

Digital HSE

Digital Core (Sensors, IoT, Mobility)
Enterprise | Data Platforms | Time Series | Relational | Geospatial | Big Data

Robotic Process Automation

Fleet Intelligence

Smart Stockpiles

Supply Chain Optimization

Energy Management

Water Management

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

Infosys®
Navigate your next

For more information, contact askus@infosys.com

Infosys.com | NYSE: INFY

Stay Connected   SlideShare