



Mining companies needs to evolve to stay relevant in a lower-carbon economy led by a change in business models that helps them adapt to stay relevant, competitive and sustainable.

STRATEGY & DESIGN

Define digital

business model,

roadmap -

process.

technology



DIGITAL

CUSTOMER

Transform customer facing functions

INTELLIGENT OPERATIONS



Digitalize internal **business** operations

FUTURE ENTERPRISE



Leverage emerging technologies to, incubate disruptive business models

DIGITAL **INSIGHTS**



Foster data-driven decision making **FOUNDATION**

DIGITAL



secure, and future-proof foundation

- Digital Mine
- Operational **Dashboard**
- Track and Trace
- Fuel
- Management
- IoT Sensor based predictive maintenance
- Al Platform
 - RPA for **Procurement**
- Autonomous Vehicles
- Remote **Operations**
- Mine Analytics
- Drilling and **Blasting Analytics**
- Drone Analytics
- Mineral **Traceability**
- Network of the Future
- Connected **Workforce**

Tech Mahindra Digital Themes are helping our customers connect their digitalization efforts to their business outcomes helping them develop integrated solutions beyond immediate technology needs

WE ARE HELPING GLOBAL MINING AND COMMODITY COMPANIES TAKE THE DIGITAL LEAP

Mining and smelting decision support for a South African mine

Eliminating manual interventions in management reports through integrating and automating the transmission of the production and quality data with the ERP systems.

SD WAN Network for a South African mining company

Enabled strong and secure network which acts as a backbone for Mine Digitalization. 1st deployment of SD WAN network in Africa.

Strategic partner for a mining company with global operations

Standardize business processes globally, embed them into a single source of truth, collaborating operations for enabling business information flow across the enterprise, lower controllable cash costs.

Predictive asset maintenance for an

ures at their beneficiation plants by leveraging analytics of operations and maintenance / ma-



From Pit to port to CX transformation for a steel giant

Consulting led value chain integration, new age CX, refractory spend analysis, sales and operational planning and EHS systems streamlining, niche financial systems implementation.

Australian gold mine

Prediction of gearbox & pinion bearing failchine data collected by various OT systems.

Operational Intelligence for a gold mining company

Business process standardization and harmonization through ERP integration, visualization dashboards for core mining, finance and distribution functions.

Asset tracking for a ready made concrete company in India

Standardize business processes globally and embed them into a single source of truth, help lower controllable cash costs.

Industry 4.0 – real time visibility for an US building material company

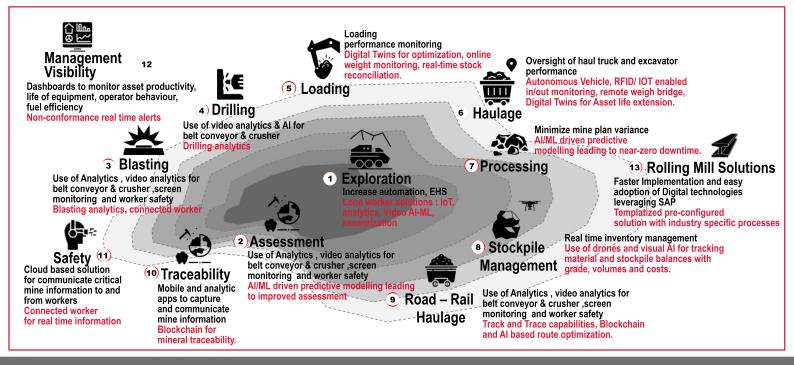
Developed data platform for operational analytics, and feedback to plant floor for improved process control and manufacturing, predict the changes in the critical parameters for actionable insights.



The metals and mining industry is looking at a digital technology led transformation making the processes efficient, safer and more productive. From new age technologies to locate deposits to analytics for better customer experience, the path success would be identifying the right technology and using data to enable management and workplace decisions

Priorities in the Mining Industry Of today

Is to address rising cost challenges and process complexities of the industry



PRIORITIES OF THE MINING AND METAL INDUSTRY



THE CONNECTED MINE

Tech Mahindra Connected Mine Solutions enable mining companies manage their in-pit operations remotely with actionable insights at a cost effective. By consolidation of data from mine to the port and under ground sensors to the CXO dashboard, the solution brings in visibility to manage the complete mining portfolio - from auto-haul, to vehicle mainteance and fuel usage to planned target versus actual variation.



MINE PLANNING

Tech Mahindra and partner solutions are helping mining clients adopt collaborative solutions for the entire mining value chain - mining activity and resource scheduling (personnel, assets and inventory), drilling and blasting analytics, optimize material quality and flow, equipment routing and deviation monitoring, stockpile management include drone based analytics and heavy asset management - all integrated with SAP HANA and ECC.



VEHICLE HEALTH MONITORING

A centralised vehicle health Management system supporting multiple mining hardware OEM's is critical for asset uptime, Lowering cost of maintenance and spares and improved monitoring. TechM offers a real time maintenance dashboard will help monitor the remaining lifespan, maintenance compliance and availability of the entire fleet across multiple mines.



FLEET AND OPERATOR MANAGEMENT

Fuel efficiency demands are driving progressive tracking of each haul and its status, tracking and logging of fuel transactions and consumption data from the fuel sensors to monitor costs of each trip. TechM's fuel management and operator behaviour platform offers rich analytics highlighting actionable insights for cost alerts and operators driving history deviations.



DRILLING AND BLASTING

TechM offers an unique platform for drill, blast, mine safety and drone Data analytics. By empowering the average miner and their supervisor through SaaS and mobile based intelligence, there is a complete elimination of potential risks/problems in drilling and blasting.



DRONE ANALYTICS

TechM provides a drone platform which includes Digital Elevation Modelling(DEM) for height and depth of the entire site and calculation of accurate stock volumes in much lesser time compared to other traditional methods.



CONNECTED WORKER

TechM offers an unique platform for for drill, blast, mine safety and drone Data analytics. By empowering the average miner and their supervisor through SaaS and mobile based intelligence, there is a complete elimination of potential risks/problems in drilling and blasting.



NETWORKED MINES

With an increased need for pit to port connectivity, TechM is working with mining clients to enable wireless technologies that are used to create a software defined WAN that links all locations to ensure that connectivity is available at the remote site.



CONFLICT TRACEABILITY

Leveraging Blockchain, Al-ML, IoT and NFC, TechM is enabling mineral users to be responsible citizens and lower regulatory compliance efforts by identifying the mine source across the processing and final usage of the metal.



AUTONOMOUS VEHICLES

The performance of the Autonomous Vehicles using AI and IoT with no driver assistance or shift breaks is enhanced by TechMahindra services around software, hardware and infrastructure.



PRE CONFIGURED SAP SOLUTIONS

Faster Implementation and easy adoption of Digital technologies leveraging SAP Templatized pre-configured solution with industry specific processes

Preconfigured Solution providing faster implementation and easier adoption in areas of Procure to Pay Plan to Produce Quote to Cash Logistics and Transportation.



MANAGEMENT VISIBILITY

Dashboards to monitor asset productivity, life of equipment, operator behaviour, fuel efficiency Non-conformance real time alerts.

