WHAT IS IT?

Traditional mine operations lack a consolidated, end-to-end view across the site. On-premise solutions from dozens of vendors often create huge amounts of valuable but siloed data. This means there is limited opportunity for analytics and insights across the site.

Connected Mine is a multi-value solution that leverages mobile, tracking, analytics and cloud technology to more effectively manage industrial mining operations. Real-time device data (OT) is aggregated with context data (IT) and applied to industry-specific analytics models to determine actionable insights and deliver a real-time holistic view of mining operations, presented via mobile devices to the people who need it. With the increased visibility provided, issues can be anticipated and gains in production throughput, asset utilisation and operator performance can be achieved.

Our Connected Mine Proof of Concept (PoC) was rapidly delivered in just 12 weeks. The PoC aggregated data from eight systems across the mine, combined data to create new KPIs, ran analytics across the new combined dataset, delivered alerts via SMS & email, and displayed 150-200 key KPIs in a tablet application for operations supervisors – all in near real-time (~30s). This solution is now the basis of a five-year agreement to roll out to multiple sites globally.

1. Using IoT sensors coupled with near real-time analytics to enable predictive maintenance, thereby reducing downtime and operational costs due to unplanned maintenance.
2. Machine Learning models use various factors including worker performance, weather/time & historical incident data to measure, track and address worker fatigue, thus reducing accidents.
3. Improve asset utilisation through modelling entire mining site and using special optimisation algorithms to determine asset utilisation rate required to meet shift targets.

Feature Image: dashboard view of Connected Mine demo.

KEY FACTS

$13bn

Predicted worth of global smart mining market by 2020. [1]

30-50%

Maintenance costs typically comprise 30-50% of a mine’s total operating costs. [2]

31%

Nearly 31% of respondents plan to deploy smart mining solutions in the next year. [1]

BENEFITS

1. Using IoT sensors coupled with near real-time analytics to enable predictive maintenance, thereby reducing downtime and operational costs due to unplanned maintenance.
2. Machine Learning models use various factors including worker performance, weather/time & historical incident data to measure, track and address worker fatigue, thus reducing accidents.
3. Improve asset utilisation through modelling entire mining site and using special optimisation algorithms to determine asset utilisation rate required to meet shift targets.