

minesuite

Real-time activity based mine management

The understanding of mining costs is a major problem for management. Modern cost control systems are based on Activity Based Costing. Maptek has extended this framework with MineSuite to deliver the necessary detail into the cost matrix.

Real-Time Activity Based Mine Management (RTABMM) helps companies understand, re-engineer, measure and make decisions about mining activities, allowing operational and corporate personnel to collect and utilise production knowledge to improve quality and productivity.

The benefit for staff of adopting Real-Time Operations (RTO) is in removing delays in accessing information from critical business processes. Standard measures of performance such as KPIs, balanced scorecards, shift reports and other production statistics are often delivered too late to be really useful.

Reducing this lag between collecting data and presenting it to operational or managerial personnel, means that decision making can be transformed from being reactive to proactive. Increased global competition within the resources sector, challenges associated with maintaining quality personnel, and increased operational complexity dictate that operations must maintain their competitive advantage.

RTABMM analyses threshold performance indicators and also helps identify the critical success factors which determine an operation's advantage. By improving the knowledge base of the operation through the establishment of real-time data collection systems, operational staff can have confidence that their decisions can be made on the basis of facts rather than speculation.

Maptek assists companies to implement RTABMM. For example, optimising mine design in VULCAN, monitoring performance in real time with MineSuite, verifying actual mining volume changes with I-SITE, and using the services of Maptek IT for systems development and implementation, all serve to improve efficiency.

MineSuite Graphical Touch Screen mounted in shift supervisor vehicle



The key to RTO is the collection of production data in real time. MineSuite is being used at more than 20 sites to collect, process, report and store information required for this real-time knowledge base.

The objective of RTABMM is to identify and eliminate any non value-adding process or cost. MineSuite real-time fleet management presents operational staff and shift supervisors with a 'management dashboard', allowing easy access to the up-to-date real time production statistics and KPIs, even in the field via GTS (below). Predefined threshold alert alarms around any operational process or equipment prompt appropriate personnel for mid-shift decision making when the threshold measures for specified KPIs are exceeded.

One area where MineSuite minimises non value-adding activities is through the import of mine or blast block quality and quantity data - sourced from VULCAN. MineSuite calculates current 'actual' shift production by summing individual truck loads from the mine block. When this exceeds the planned production quantity (from VULCAN) by a designated percentage, staff can interactively determine if unnecessary dilution of product is occurring as a result of 'over mining'. Diluted product greatly reduces the profitability of an operation due to unnecessary production and processing costs.

Further benefits are achieved when the data is exported back to VULCAN to compare 'planned versus actual' production data for mining blocks. Planners can assess the impact of variability between the two values and build a 'predictability measure' to raise the level of confidence of the mine model and use this information for reserve calculations. Accurate reserves are fundamental to generating accurate financial models and improving operational efficiency.

Other advantages for mining operations implementing RTABMM include the determination of efficiency measures for all cost generating activities. Traditional financial performance measures can ignore the impact of other more direct methods dealing with quality and productivity. By the time problems show up as financial KPIs, the costs have already been incurred. Any decisions at this point are reactive rather than proactive.

Maptek works with mining companies to provide an integrated information source for decision making, continuous improvement, informed target costing, reliable bench marking and employee empowerment.

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