Case Study

DESWIK
ORB

Value chain optimization software to increase profit, reduce costs and maximize efficiency.

SCHEDULE A DEMO

20%
Improvement to mine Productivity

17%
Improvement to draw Compliance

Digital Twin
Digital representation of active cave state

World's first highly automated Short Interval Control system for hard-rock underground mines

THE CUSTOMER

Our client is one of the world's largest gold mining companies that owns and operates mines in Australia and internationally, with gold reserves representing more than 25 years of production.

THE CHALLENGE

Shift planners were looking for a way to dispatch LHDs according to an optimized draw strategy that would enable them to respond to changes in real time. Planners needed to meet long-term objectives and compliance goals, while factoring in complex operational and geotechnical constraints to maximize productivity of block cave assets.

- Making the best plan from over one billion potential draw strategies
- Delivering a draw strategy that adheres to numerous caving and operational constraints
- Aggregating real-time data from multiple sources

THE SOLUTION

Deswik designed and developed ORB, the world's first highly automated Short Interval Control (SIC) system for hard-rock underground mines, resulting in:

- Maximum productivity with guaranteed optimality using Industrial Mathematics
- Successful transition to a continuous draw strategy
- Centralized dashboard display providing accurate visual representation of live cave state
- Increased accuracy, completeness and value of historical operational data
- Autonomous real-time LHD dispatch decisions sent direct to operators via on-board tablets with 2-way communication capability