Deswik®

Case Study

DESWIK
BOLT

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

Innovative solutions for global bauxite operations.

THE CUSTOMER

The client is a global leader in aluminum, one of the world's most widely used metals. Active in the sector for more than 110 years, the client operates large-scale, high-quality bauxite mines and alumina refineries globally.

THE PROBLEM

Strategic decision-making for the global bauxite operations was a complicated and time-consuming task. Planners were using sophisticated tools to make decisions, but the underlying optimization technology had become dated and cumbersome; the data had to be aggregated, resulting in a loss of detail and leading to lower-quality solutions. The existing tool would unpredictably produce higher-quality solutions when more constraints were added. This meant planners had to explore hundreds of scenarios to determine which one might yield the best solution, with no guarantee of optimality.

With each scenario often taking more than a day, the planning team was looking for a better tool that used the latest in optimization technology.

THE SOLUTION

Deswik, in close consultation with the client's subject matter experts, built and designed a numerical optimization-based decision support tool. Using the latest technology, the tool can model more complex mining value chains than the incumbent tool, with much higher fidelity. It is able to produce the optimal solution—eliminating the need to explore multiple scenarios—in much shorter time frames.

As the tool utilizes the latest optimization technology in a range of innovative ways, it can scale to solve truly enormous problems, much larger than those previously solvable. Scenarios can now be generated to include value chains spanning multiple mines, plants, ports, and customers—something that no other tool on the market is able to do with as much detail.

THE BENEFITS

In a carefully controlled benchmarking test, the tool significantly increased NPV compared to solutions produced by the incumbent tool. With such impressive results, the tool is now being used to support the planning operations of all bauxite assets in the client's global portfolio.

DESIGN TO DELIVERY: 20 WEEKS

Scoping	Development	Configuration	Implementation	Training
2 weeks	13 weeks	2 weeks	2 weeks	1 week

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Learn how to maximize supply chain efficiencies with the power of industrial mathematics.

SCHEDULE A DEMO