

Case Study: Aluminum Planning and Scheduling

A Global Aluminum Manufacturer Achieves 32% Increase in Throughput and 5% Reduction in Waste with V8-APS for Aluminum

COMPANY

A leader in aluminum rolled products and extrusions operating on three continents and serving the aerospace, automotive, defense and construction industries.

CHALLENGE

The company was facing planning and scheduling challenges in two very distinct plants, Plant A, an aluminum finishing facility and Plant B, a rolling mill. Plant A was undergoing a process improvement initiative and experiencing operational issues as a result of combining multiple plants and production lines into one facility. As the company's first plant to implement Oracle, they also found they needed to create workarounds for planning and scheduling, relying on an in-house, time-intensive Excel model. It took hours to produce a schedule that ultimately contained calculation errors. In the end, they had suboptimal planning and scheduling which required intensive manual overrides and did not account for all demand constraints.

Plant B was facing its own challenges. It had decades-old, homegrown planning and scheduling software which relied on just one veteran scheduler who performed manual interventions. The plant was very difficult to schedule manually due to complex marriages, or combo cuts, and coating lines which required optimal sequencing. Although there was basic MRP in their current software, it was not very flexible, and its inflexible BOM (bill of materials) structure led to suboptimal marriages and coil ordering. Since the plant was looking to save on metal through marriages and increase production through their coating line by 25% over 3 years, they needed a tool to maximize throughput and reduce waste. They also needed a system that would capture the scheduler's decades of knowledge in a tool that the next generation could run.

SOLUTION

The company selected Visual8's Advanced Planning & Scheduling solution, V8-APS for Aluminum, to help increase productivity, improve efficiency and reduce waste in their two facilities. Their Supply Chain Director comments, *"We investigated several different options. V8-APS offered an end-to-end suite of modules to better manage our processes. They exceeded all other options, offering low cost, easy maintenance software."*

Visual8 worked very closely with each facility to custom program the mathematical models and algorithms needed to manage their processes. The Supply Chain Director notes, *"It was extremely valuable to us that V8 had experience in the aluminum market, and that they made themselves very familiar with our products and processes. Visual8's team is very customer focused and was either physically at one of our plants or a phone call away. They provided us with the best custom tailored solution for each plant."*

V8-APS integrated seamlessly with Plant A's Oracle solution and Plant B's legacy ERP to generate optimized production sequences. The plants were now able to maximize throughput on a given work center on command. Scheduling was done overnight in a matter of minutes rather than hours and required no special handlers or manual intervention. Improvements were achieved in equipment, resource and inventory utilization, and the company had increased visibility of ongoing and upcoming production. The scheduler of Plant B comments, *"Visual8 will tell us within a factor of 2 days when an order will be ready. That's remarkable. That's based on supplies coming in, processing, shipping – everything."*

While the company's original Excel module and homegrown ERP could only be repaired by their creators, if something goes wrong with V8-APS, the V8 team is able to fix it in a matter of minutes in the cloud – no lengthy disruption or site visit required.

RESULTS

"V8-APS has definitely paid for itself," says the company's Supply Chain Director. Plant B reports **increased throughput by 32%** (360,000 pounds) through their coating line, by running wider coils and making use of optimized order marriages at the slitters. They have exceeded production forecast expectations. The scheduler of the plant comments, *"We have done more coating in this plant this year than in the past 46 years. In my decades as a scheduler, V8-APS is the best system I've ever seen. We have upped our production plan for this year by 9% and we are confident that we can meet this challenge."*

Plant A is also reporting increased throughput with optimized planning and scheduling. They have also realized a significant reduction in scheduling time and effort. The company's Supply Chain Director notes, *"Before the Visual8 implementation, we had 3 schedulers, plus a 4th who was part-time. Post implementation, we only need 2 schedulers to do the same work."*

PLANT A	PLANT B
✓ Seamless integration with Oracle	✓ 32% increased throughput on the coating line
✓ 2 schedulers instead of 3 + 1	✓ 5% reduction in wasted metal through better coil usage
✓ Increased throughput	✓ Forecasting a 9% increase in their production plan this year
✓ Much faster scheduling	✓ Increased visibility of upcoming production issues
✓ Optimal production plan and schedule	✓ Optimal production plan and schedule

ABOUT VISUAL8

Visual8 delivers advanced planning, scheduling and optimization solutions that help solve complex operational, tactical and strategic problems across industry sectors. For over 22 years, our comprehensive suite of customized solutions and products have empowered businesses to better plan capital investments, improve operational efficiency, reduce waste and increase profitability.