

Automated Planning Systems Maximize Production and Profits for Automaker's North American Plants

The Client

The manufacturing division of one of the world's largest automakers

Background

The company first approached LÛCRUM and asked for help integrating its internally developed vehicle planning application with financial information which would allow for "what if" scenarios to measure profitability. The lack of integration was resulting in an inability to measure the effect on profitability of a given production mix across all of the North American plants. Working with the company's planners and leadership team, LÛCRUM delivered a "profit analysis" application that gave the client much greater visibility into the expected profitability of any planned manufacturing mix. Subsequently, the client's Production Planning team approached LÛCRUM to deliver a solution which would fully automate the process of creating an optimized production plan.

What the Client Wanted

The first step in their quest for continuous improvement was to create a "profit analysis" application. Their next goal was to develop a system for production planners that would improve and automate the full process of planning monthly schedules to optimize production and maximize profits; eliminate manual data entry so that production planners could focus on higher value activities.

Challenges

The client needed to define the integration of financial data with the vehicle production plans in such a way that expected profits could be measured. They wanted the ability to create "what if" production scenarios and related effect on profits. Production plans needed to take into consideration multiple manufacturing constraints that vary by plant — such as plant set-up, capacity, staff and robots — as well as fluctuating consumer demand for each of the various products. Achievement of these goals would require replacing a time consuming and tedious production planning process based on disconnected, desktop applications used by production planners.

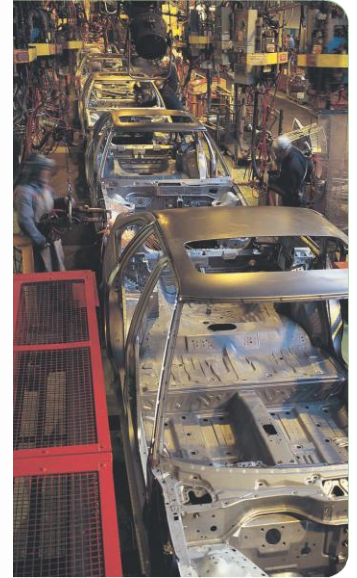
The Solution

LÛCRUM developed a profit analysis application that integrated financial information from multiple sources with the existing production planning desktop applications. They assisted in the evaluation and selection of an industry leading "optimization" engine to be used in a new application which would generate an optimized production plan.

LÛCRUM developed a working prototype of a relational database, and a web-based application, integrated with a leading optimization engine, providing planners the ability to generate the optimized monthly production plan.

Benefits

- Better decision making and improved profits; profit analysis provides greater insight into the expected profitability of a given production plan
- Positioned the client to replace its current set of standalone production planning applications; once in production, the new planning application is expected to generate several million in incremental profits
- The new application is expected to cut the planning group's production plan modeling cycle time by 75 percent and enable rapid "what if" analysis capabilities
- The company plans to look at how the new solutions can be leveraged in other global markets



"We were able to help them develop a process that enables planners to do their jobs dramatically faster and more efficiently. Now they can more easily determine how many to build of each model at each plant and what combination of production will yield the most profits."

Managing Director of
Business Development,
LÛCRUM

LÛCRUM
7755 Montgomery Road
Suite 160
Cincinnati, OH 45236

513-241-5949
www.lucruminc.com