Case Study

Capacity Planning

Summary

A large US winery was seeking a decision support tool to make strategic decisions quickly and efficiently. The company was interested in a model that allowed them to make capacity expansion planning decisions in an optimal and timely manner. The OSI team was able to provide an application that helped the winery realize a capital cost avoidance benefit of over $1 Million. Also, this work will allow management personnel to focus on analysis instead of plan creation. Likewise, the company will produce products on-time, with minimal cycle time and low work-in-process costs.

Business description & background

Wine-making involves a resource intensive process. Expensive resources need to be planned ahead of time to support crush, blending, and bottling operations. The business was looking for a Decision Support Tool to make efficient strategic capital planning decisions as well as for exploiting tactical opportunities presented in the market.

The challenge

Design and implement a Decision Support Tool that allows the business to analyze a variety of ‘what if’ cases for quick, fact-based, optimal decision-making. Present extensive reports so that the management has assessed all corners of possibilities and business constraints.

The solution

We built a customized simulator that models the process and connected to the corporate Database to leverage available data. Attention was paid to the user-friendliness of the application and ready-reporting capabilities so decision-makers can run scenarios in short order (days vs. weeks) and focus on analysis and creation of multiple scenarios.

The benefits

Our decision support tool provides the following benefits –

1. Over $1 Million of capital avoidance in the first year of model usage
2. Model is operational since 2008 and over two dozen ‘what if’ scenarios are assessed since then with significant benefits in each of the decisions supported
3. Business has used the tool to assess performance of new technologies in their processes (a side benefit)
4. The tool is also used as a training simulator for new employees to learn the business details
5. A dedicated person is appointed to maintain the baseline data and use the model periodically
6. Supply Chain has also used the tool (side benefit) to assess the effects of changes in their demand pattern, EOQ strategy, and such

About the client
Our client is a global leader in the Wines and Spirits markets with thousands of SKUs in production every year.

Optimal Solutions, Inc. (OSI)
OSI was established specifically to serve the need of the process industry for advanced decision support systems, including Operations Research, Sales & Operations Planning (S&OP), Advanced Planning & Scheduling (APS), & process optimization. With over 25 years of experience in process and operations research within the process industry, OSI develops cost-effective decision support applications incorporating state-of-the-art technology, such as AIMMS.

More information, please visit our website at: www.osiopt.com. You can also contact us at (908) 393 1316.