Network Analysis and Optimization Leads to More Efficient Operations

Top U.S. Food Manufacturer

A regional food company has skyrocketed in popularity to become the best-selling brand in its category in the U.S. Their explosive growth presented some operational and logistics challenges for the manufacturer. They were working hard to keep up with customer demand which required rapid expansion. This launched an initiative to reduce transportation costs and improve the efficiency in their fulfillment operation.
Challenge

The food company has two manufacturing sites and four third party distribution centers to produce and transport over 100 SKU’s. Management was very interested in determining if the existing operations were as efficient as they could be. They considered everything from adding a 5th distribution center to removing poorly-utilized distribution centers. The challenges included:

- Highly perishable products
- Large number of SKUs driving complexity
- Order variability and short shelf life forces them to regularly look at this problem
- Certain SKUs are only produced in one factory
- Order size and weight determines the transport cost

Solution

AIMMS was selected as the modeling technology for the Network Assessment. While using only a spreadsheet plugin was briefly considered, the model was too large and complex for any spreadsheet to handle. The team created the AIMMS model in only two weeks and used it to address the following key questions:

- Can the fulfillment strategy be changed to reduce the logistics network cost?
- Can the overall fulfillment cost be reduced using the current network? Will introducing a new distribution center further reduce costs? Or will removing a distribution center reduce costs?
- Can we do a side-by-side comparison of fulfillment scenarios to see the trade-offs and which generates the most savings?

Results

Conducting What-If Analysis and reviewing over 20 different scenarios helped the team identify options for cost reductions that ranged from 10-25%, which amounts to millions of dollars annually. The cost savings helped the company further invest in R&D and subsequently launch several new product lines.

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<td>+31 23 5 511 512</td>
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About AIMMS

The AIMMS Prescriptive Analytics Platform helps you evaluate and identify the best options to tackle your most pressing challenges with sophisticated analytics that leverage mathematical modeling and scenarios while pulling from multiple data sources. You can immediately gauge, not just what is likely to happen, but what you should do about it for the best possible outcome. Whether you seek to improve your strategy, planning, operations or transform your entire supply chain, AIMMS software is the ideal combination of being tailored to your unique situation paired with speed to value (ROI). That’s why teams at Shell, Johnson & Johnson, GE and Heineken and many more fire up AIMMS every day.

www.aimms.com     info@aimms.com

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