

Chemical Manufacturer S&OP Model Provides Optimal Foundation for All Monthly Supply Planning



Challenge

With demand and raw material availability on the decline, a global chemical manufacturer wanted to find the best way to decrease its North American footprint. They aimed to eliminate excess capacity and identify a forward-looking plan for its three manufacturing facilities. With a strong European presence as well, the company knew that the individually-operated European and North American supply chains could benefit from end-to-end supply chain visibility. How could the two separate supply chains, with both shared and localized customers, be merged to operate as one business unit? Supply chain designers needed to optimize the overall business to satisfy customer demand at the lowest cost.

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Engineering Director for Global
Chemical Manufacturer

OBJECTIVE



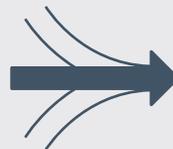
Create a cloud-based model to serve as foundation for monthly S&OP process

SOLUTIONS



Distribution Network Optimization, S&OP model

RESULTS



LLamasoft model enables end-to-end optimization and provides analysts with a single version of the truth on which they base demand planning decisions

Solution

The manufacturer worked with a LLamasoft consultant to build a cloud-based supply chain model. The goal was to create a model which could be easily rerun at least quarterly with minimal time and effort required. With the elimination of installation time two modelers were able to collaborate to build the model and scenarios simultaneously and complete the model in just two months' time.



Results

Today, the 18-month time horizon model is run quarterly to support the company's monthly S&OP process for North America and Europe. It is the foundation of all business supply planning with production, logistics and sales personnel. The model shows where there is available manufacturing capacity and constraints. While the model recommendations can't always be followed exactly, planners begin with the model as the optimal solution and adjust as needed.

As with any business accustomed to operating with divided business units, it can be difficult to adjust to considering the benefits and trade-off analysis of end-to-end supply chain optimization. With the LLamasoft model, subjectivity is removed and scenario comparisons provide analysts with a single version of the truth on which they base their decisions. The team is now able to easily see and communicate the effect even small changes have on the big picture.

Previously, supplier decisions were made based on lowest bids and required many days of back-and-forth discussion. Now the company can connect the supply chain network back to the raw material source and make decisions that may mean higher shipping costs at individual locations but lower overall network cost. The model results indicating that the company could reduce revenue and increase profit were counter-intuitive, but drew positive attention from around the business and demonstrated how more cost-effective decisions can be made using end-to-end data.

"The LLamasoft model often comes up with a solution no one thought about before," said the company's engineering director. "When we have the optimal plan in hand, it really challenges our team to explain and defend why we aren't doing things the optimal way. It's helping us learn a different way of thinking with a wider supply chain perspective."