

CASE STUDY

Major European Chemical Producer Implements Planning and Scheduling Software for Elastomers and Styrenics

“One of the primary purposes of the production planning and scheduling project was to put us in the position of being able to respond more quickly to market changes. Agility was a key driver for this initiative.”

- Head of Logistics, Production Planning and Purchasing, Styrenics Division



This major European petrochemical leader manages four business divisions—Styrenics, Elastomers, Polyethylene, and Basic Chemicals—and coordinates the production and sales of their whole portfolio of products and brands. Over 77,000 employees in more than 77 countries across the world take part in this success.

This company initiated a production planning and scheduling project as part of a major initiative focused on process re-engineering and automation. The overall goal of the production planning and scheduling project was to support the following business initiatives:

Worldwide petrochemical company obtained a 97% on-time accuracy for deliveries and 10-20% reduction in the number of campaign transitions using aspenONE® Supply Chain Management software.

CUSTOMER PROFILE - Chemicals	
<p>CHALLENGE</p> <p>Replace manual planning and scheduling tools with a standardized solution that helps reduce costs and improve customer service.</p>	<p>BENEFITS</p> <ul style="list-style-type: none"> • 97% on-time accuracy for deliveries • 10-20% reduction in inventory • 10-20% reduction in the number of campaign transitions • Reduction in packaging and transportation costs • Improved customer service levels in terms of promised delivery date and order status information
<p>SOLUTION</p> <p>Implement aspenONE Supply Chain Management software to standardize planning and scheduling while being able to rapidly respond to changes in the business environment.</p>	

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- Replace the manual scheduling process
- Improve customer service
- Optimize raw material and finished products inventories
- Reduce costs associated with off-specification quality, campaign transitions, packaging, and logistics and distribution
- Share information and improve cooperation between
 - marketing/sales and production planning functions
 - headquarters and individual plants
- Integrate planning and scheduling with the ERP system

After evaluating several vendors, AspenTech's aspenONE Supply Chain Management solution was chosen for production planning and scheduling. AspenTech was selected based on its software's built-in scheduling and task sequencing capabilities, its user-friendly interface, and the ease with which it could be configured to address this customer's specific business process requirements.

IMPLEMENTING aspenONE SUPPLY CHAIN MANAGEMENT

AspenTech's supply chain solution was implemented using a phased implementation approach, addressing the most critical areas of business first. Then, an integrated prototype for the Styrenics division that consisted of one planning model and three scheduling models was

"Having more accurate and shared visibility into the data through AspenTech's planning and scheduling solutions has not only allowed us to improve our relationship with customers via fewer stock-outs, more on-time deliveries, and greater flexibility to take on spot orders to meet customers demand, but also by improving transparency and increasing alignment and cooperation between marketing, sales, and production planning functions."

- IT Business Analyst

"We attribute the 10-20% reduction in campaign transitioning to our capability to schedule more effectively. Because of better scheduling with aspenONE Supply Chain Management, we are able to optimize grade changes and reduce our transitions."

- Head of Logistics, Production Planning and Purchasing, Styrenics division



developed. These models were fully integrated with SAP and with the custom applications that this company used for managing inventory and sales forecast data. Based on the success of this prototype, the planning and scheduling solution was rolled out to the remaining Styrenics products families. The following year, AspenTech's planning and scheduling solution was extended to the Elastomers products, reaching a total of 32 product families across eight plants.

USING aspenONE SUPPLY CHAIN MANAGEMENT

The planning models are used for multi-site batch and continuous production planning over a rolling three-month horizon. Production and distribution groups, located at the company's headquarters, develop plans based primarily upon sales forecast data. The scheduling models, which include detailed production parameters and constraints for each plant, are then used by plant planners to generate a multi-week

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production schedule with day-by-day detail. These plans are then used to check projected inventory levels against customer orders, as well as sales and demand forecasts. The company can then quickly identify potential problems with product availability that would impact the level of service it can deliver to its customers.

BUSINESS BENEFITS

Implementing AspenTech's supply chain solution has improved the planning and scheduling activities of this company's Elastomers and Styrenics divisions by standardizing and improving their business processes—from the automation of data management through the optimization of the production schedule. Some of the most significant benefits are:

- 97% on-time accuracy for deliveries
- 10-20% reduction in inventory
- 10-20% reduction in the number of campaign transitions
- Reduction in packaging and transportation costs
- Improved customer service levels in terms of promised delivery date and order status information

LOOKING AHEAD

Due to the success of both the Styrene and Elastomer product lines, AspenTech's planning and scheduling software has been expanded to this company's Polyethylene business. This European leader has also implemented and recently upgraded AspenTech's forecasting solution to ensure a successful next generation demand planning process that deeply integrates with the production planning and scheduling applications it is already using. AspenTech's Supply Chain Management suite consisting of forecasting, planning, and scheduling solutions will improve the response of the overall polymers supply chain in terms of increasing production efficiency, reducing sales orders lead time, reducing inventory, and being able to provide better overall customer service.

AspenTech is a leading supplier of software that optimizes process manufacturing—for energy, chemicals, engineering and construction, and other industries that manufacture and produce products from a chemical process. With integrated aspenONE® solutions, process manufacturers can implement best practices for optimizing their engineering, manufacturing, and supply chain operations. As a result, AspenTech customers are better able to increase capacity, improve margins, reduce costs, and become more energy efficient. To see how the world's leading process manufacturers rely on AspenTech to achieve their operational excellence goals, visit www.aspentech.com.

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