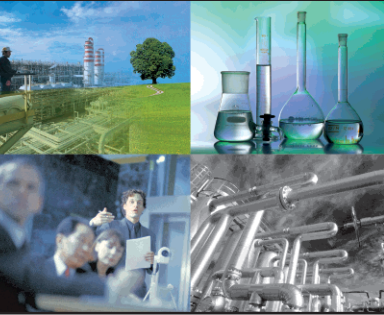


Implementing a Demand-Driven Supply Chain with Capable-To-Promise (CTP) Capabilities



Profile

Polimeri Europa, an Eni Group company based in Milan (Italy), manages four business divisions – Styrenics, Elastomers, Polyethylene and Basic Chemicals – and coordinates the production and sales of their whole portfolio of products and brands. With 4.5 Billion Euros in revenue, 7,200 employees, 19 production plants across the world and a far-reaching sales network, Polimeri Europa is a leader within the Italian petrochemical industry and the leading European supplier of Ethylene, Cumene, Phenol, Butadiene, Benzene, Toluene, Xylene, E-SBR, BR and EPR rubbers as well as one of the top producers of Polystyrene, ABS and Polyethylene.

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Francesco Passaniti
Head of Logistics, Production
Planning and Purchasing
Styrenics division, Polimeri Europa

Business Challenge

In the mid 1990s, Polimeri Europa (formerly EniChem) 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:

- 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 (1) marketing/sales and production planning functions and (2) headquarters and individual plants
- integrate planning and scheduling with the ERP system

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Solution

After evaluating several vendors, Polimeri Europa selected AspenTech's supply chain management solution, MIMI™, for production planning and scheduling. MIMI was selected based on its built-in scheduling and task sequencing capabilities, its user-friendly interface and the ease with which it could be configured to address Polimeri Europa's specific business process requirements. "Polimeri Europa recognized that MIMI's flexibility, configurability and ability to simply integrate to SAP R/3 and other custom applications would allow us to map our business processes to exactly the way we wanted to do business," said Mario Piccinino, I.T. Business Analyst, Polimeri Europa.

Polimeri Europa implemented AspenTech's supply chain solution using a phased implementation approach, addressing the most critical areas of its business first. Polimeri Europa developed an integrated prototype for the Styrenics division that consisted of one MIMI planning model and three MIMI scheduling models. These models were fully integrated with SAP R/3 and with the custom applications that Polimeri Europa used for managing inventory and sales forecast data. Based on the success of this prototype Polimeri Europa rolled out the planning and scheduling solution to the remaining Styrenics products families. The following year the MIMI implementation was extended to the Elastomers products, reaching a total of 32 product families at eight plants, both Styrenics (Mantova,

Ravenna, Settimo M.se, Feluy and Budapest) and Elastomers (Ferrara, Ravenna and P.to Torres).

MIMI 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 Milan headquarters, develop plans based primarily upon sales forecast data. MIMI scheduling models, which include detailed production parameters and constraints for each plant, are then used by plant planners to generate a multi-week production schedule with day-by-day detail. These plans are then used to check projected inventory levels against customer orders and sales and demand forecasts so that Polimeri Europa can quickly identify potential problems with product availability that would impact the level of service it can deliver to its customers.

Polimeri Europa must have the flexibility to quickly check the fitting of its production schedule based upon customer demand to find the best solution in terms of efficiency and service. **"We realized early on that in order to position Polimeri Europa with the ability to react quickly to customer demand, we would need to implement Capable-To-Promise (CTP) capabilities. AspenTech's supply chain solution provides us with the knowledge to know immediately when a certain product, not in stock, is planned to be produced and where it can be produced, whether at one or across multiple sites, to meet customer demand,"** said Passaniti.

Business Benefits

In addition to being able to rapidly respond to changes in the business environment and demand, Polimeri Europa has been able to better define the optimum safety stock levels and scheduling practices for each of its products. "For example, we attribute the 10-20% reduction in campaign transitioning to our capability to schedule more effectively. Because of better scheduling with MIMI, we are able to optimize grade changes and reduce our transitions," said Passaniti.

About AspenTech

Aspen Technology, Inc. is a leading supplier of enterprise software to the process industries, enabling its customers to increase their margins and optimize their business performance. AspenTech's engineering solutions, incorporating Hyprotech's technologies, help companies design and improve their plants and processes, maximizing returns throughout their operational life. AspenTech's supply chain manufacturing solutions allow companies to run their plants and supply chain more profitably, from customer demand through to the delivery of the finished product. Over 1,200 leading companies rely on AspenTech's software every day to drive improvements across their most important engineering and operational processes. AspenTech's customers include Air Liquide, AstraZeneca, Bayer, BASF, BP, ChevronTexaco, Dow Chemical, DuPont, ExxonMobil, GlaxoSmithKline, Lyondell Equistar, Merck, Mitsubishi Chemical, Shell and Unilever. For more information, visit www.aspentech.com.

Business benefits include:

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

"Having more accurate and shared visibility into the data through MIMI has not only allowed Polimeri Europa to improve its 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 to improve transparency and increase alignment and cooperation between marketing, sales and production planning functions," said Piccinino.

Vision

Polimeri Europa's implementation of AspenTech's supply chain solution has improved the planning and scheduling activities of its Elastomers and Styrenics divisions by standardizing and improving their business processes – from the automation of data management through the optimization of the production schedule. In the future, Polimeri Europa hopes to extend its supply chain implementation to include AspenTech's Demand Management solution in order to deeply integrate with the production planning and scheduling applications it is already using.



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