

MG Industries

Vendor-managed inventory bulk gas delivery



Objective

Chemical makers depend on MG Industries to manufacture and deliver gases essential for their production operations. The company's bulk gas division has a fleet of 200 tanker trucks equipped to deliver liquefied gas in large volume, from 4,500 to 7,000 gallons. The trucks operate out of 18 distribution terminals that support 34 gas plants and serve 3,200 customer sites. To lower the division's transportation costs, as well as production and planning expenses, MG Industries needed a supply-chain management (SCM) system that could handle the company's unique constraints. The system had to back MG Industries' vendor managed inventory (VMI) program, assigning and routing trucks to fill 500 orders per day and cover 700,000 transportation lanes (origination-destination pairs).

Solution

After considering other systems, MG Industries selected SAP APO, one of the world's most successful SCM solution platforms. To extend SAP APO to exactly match the company's specific needs for dispatching vehicles, MG Industries chose ILOG ODF, ILOG's vertical extension kit for SAP APO, and the consulting support of ILOG Professional Services (ILOG PS) to develop and maintain the ILOG solution. The new system enables MG Industries to solve extremely complex transportation problems, and achieve a 2.5 percent increase in cubic feet per mile, an industry performance indicator that translates into cost savings of hundreds of thousands of dollars.

ILOG Product: ILOG ODF (with ILOG Dispatcher and ILOG Scheduler)

- **Industry:**
Industrial gas
- **Application:**
Transportation management
- **Geographic Coverage:** *United States*
- **Benefits:**
 - *Extended planning horizon*
 - *Huge cost savings*



Minimizing costs for bulk gas delivery

MG Industries makes and delivers liquefied gases in bulk. The gases are highly perishable, constantly leaking away, so they have to be delivered to customers immediately. MG Industries addresses this problem by monitoring customers' onsite tanks, refilling them automatically through a VMI program that includes 80 percent of the company's customers. The VMI program also tells the company which gases to produce and at what volumes. By using an SCM solution to coordinate production and delivery operations, MG Industries is able to spend less, even on electricity, the greatest expense in gas production.

Accurate forecasting is essential for the company to keep costs down while meeting demand and maintaining VMI contracts. MG Industries' production and forecasting problems are primarily addressed with SAP APO. It feeds data on projected production into the ILOG ODF extension to schedule transportation operations. SAP APO and ILOG ODF work together to find the best cost-saving solution for assigning and routing deliveries. Currently, MGI has 45 planners using SAP APO, and 25 using the ILOG ODF extension. About 90 percent of the company's transport operations are planned with ILOG ODF. The SCM solution has also received the American Production and Inventory Control Society's 2003 Corporate Award of Excellence in the Technology Partnership category, recognizing the close cooperation of SAP, ILOG and MG Industries in creating the system.

Benefits

By giving MG Industries the ability to accurately represent its business model, ILOG ODF enabled the company to create a fully customized solution for managing transport operations. No other software product MG Industries looked at allowed the company to implement its industry-specific requirements and algorithms. The ILOG-SAP solution has also allowed MGI to optimally balance three separate processes at once: VMI, production and transportation.

Other benefits:

- Increase of 2.5 cubic feet per mile, which is expected to continue to rise
- Extended forecasting horizon, from five days to 18 months
- Far better production planning, and communications and coordination among MG Industries' operations

MG Industries selected ILOG ODF because it could provide computational and route scheduling optimization capabilities not included in SAP APO. Other reasons included:

- ILOG ODF's access to SAP APO through a partnership between SAP and ILOG
- Predefined libraries and tools for developing and testing code

Project

The SAP APO-ILOG ODF solution replaced a manual system supported with limited forecasting software. It took three people working fulltime to develop the solution over 11 months, or 33 man-months. ILOG PS participated by implementing constraints and algorithms specific to MG Industries. ILOG consultants continue to provide support through an application maintenance agreement.

ABOUT ILOG

ILOG's innovative enterprise-class software components and services have helped companies maximize their business agility and improve operating efficiency for over 10 years. Over 1,000 global corporations and more than 300 leading software vendors rely on ILOG's business rules, optimization and visualization technologies to achieve dramatic returns on investment, create market-defining products and services, and sharpen their competitive edge. For more details, please visit www.ilog.com

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“ILOG's innovative software and ongoing consulting support will ensure the transport scheduler always meets MG Industries' unique needs. We have the value of a tailored solution, but with the total cost of ownership that comes with an off-the-shelf solution.”

- Matt Brown
Vice President
Supply-Chain Management
MG Industries



MG Industry screenshot

About MG Industries

A member of the Messer Group, MG Industries is a leading industrial gas company with a network of strategically placed production and distribution sites. It supplies industrial and process gases, as well as the technology to use them effectively. In addition to bulk gas sales, MG Industries builds pipelines and onsite plants for customers. The company employs nearly 1,000 people and operates over 80 facilities. For more information, visit the company's website, at www.mgindustries.com.



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