

DOW CORNING

OPTIMIZING OPERATIONAL PERFORMANCE TO SHARPEN COMPETITIVE ADVANTAGE

QUICK FACTS

Industry

Chemicals – specialty chemicals

Revenue

US\$4 billion

Employees

About 10,000

Location

Midland, Michigan

Web Site

www.dowcorning.com

SAP® Solution and Services

SAP® xApp™ Manufacturing Integration and Intelligence composite application development platform

Implementation Partner

Internal IT and business personnel

Specializing in silicone-based materials, Dow Corning Corporation offers some 7,000 chemicals products and services to 25,000 global customers. To link manufacturing operations with its SAP® ERP application, the company chose the SAP xApp™ Manufacturing Integration and Intelligence composite application development platform. The software connects process, business, and quality data throughout Dow Corning's global supply chain.

DOW CORNING

Key Challenges

- Enable use of global key performance indicators (KPIs) to streamline production and delivery
- Ensure visibility into disparate data sources, easy access to information, and ability to build analytics to support processes
- Reduce response times to customer inquiries
- Optimize operational performance and improve yields
- Enhance decision making, boost product-delivery performance, and ensure manufacturing excellence throughout supply chain

Implementation Best Practices

- Detailed evaluation of top 5 solutions
- Tight collaboration among corporate IT, manufacturing, and business units
- Involvement of business unit supply chain leaders, planners/schedulers, and production leaders
- In-house workshops and drop-in labs
- Reusable components and use of balanced scorecards

Financial and Strategic Benefits

- Increased customer satisfaction and sales via improved response times, product quality, and delivery performance
- Savings of millions of dollars via more accurate, timely information and visibility of KPIs
- Greater overall employee productivity; reduction in non-value-add activities
- Enhanced decision making via real-time visibility into data and business unit performance
- Significant waste reduction
- Ability for business units enterprise-wide to achieve their goals via composite analytics

Why SAP Was Selected

- SAP's and Dow Corning's commitment to manufacturing innovation
- Dow Corning's previous success with SAP® software
- Ability to link the SAP ERP application with the plant floor at a lower total cost of ownership
- Ability to deliver real-time, unified, role-based data throughout global organization and drill down to critical information
- Standards-based platform for business logic with leading functionality

Low Total Cost of Ownership

- Rapid global implementation with a common framework
- Flexible solution to create corporate applications or site-specific point solutions
- Cross-functional integration, reducing number of systems, applications, interfaces, and IT resource support
- Prebuilt standards-compliant interfaces

Operational Benefits

Key Performance Indicator	Impact
Customer inquiry response time	~+70% faster (from 5 to 7 days down to less than 1 hour)
KPI creation time	~+222% faster (from 3 to 6 months down to 2 days)
Scrap material costs	- several million dollars
Requests for analytic development tools	+100%
Application deployment time	75% faster (compressed 3-year implementation into 9 months)

“SAP xMII delivers a standard platform, enabling consistent global analytics. It helps us provide more value to our customers and respond to business needs quickly.”

Keith Carey, Associate Architecture Consultant, Dow Corning Corporation

www.sap.com/contactsap

Mountains of Data and Nowhere to Put It

Specialty chemicals giant Dow Corning Corporation had volumes of production and enterprise data, but could not use it to enhance operations. “We had limited visibility to our product quality, manufacturing processes, and business systems,” says Keith Carey, Dow Corning’s associate architecture consultant.

After deploying the SAP® ERP application to standardize global business processes, Dow Corning decided to add a single, integrated solution to enable composite analytics and link manufacturing operations with the rest of its business. The purpose: to help speed responses to customer inquiries, boost product quality and delivery times, and improve the performance of supply chain operations. After rigorously evaluating 5 of 75 potential solutions, Dow Corning chose the SAP xApp™ Manufacturing Integration and Intelligence (SAP xMII) composite application development platform.

Corporate IT and manufacturing worked closely together, with input from supply chain managers from each business unit (BU), to assure the software met all critical needs. After several successful pilot projects in its BUs, Dow Corning began a two-year global rollout of SAP xMII that would begin in the United States and culminate in Europe and Asia.

Common Framework, Common Metrics

By directly connecting shop-floor processes and business operations via a common platform, SAP xMII ensures that all data affecting manufacturing is visible in real time, regardless of its source. With a transparent view of order, materials, equipment-status, costing, and product-quality data, the company can ensure on-time, accurate deliveries.

The ability to analyze data from various perspectives is critical as well. A real-time analytics engine aggregates and calculates data and delivers a single view of relevant events, alerts, key performance indicators (KPIs), and information to production personnel via role-based dashboards. Dashboards display critical metrics – including inventory levels, production costs, and more – so that production personnel can monitor, measure, and control processes. Leading functionality such as statistical process control tracks the data identifying potentially negative trends. Analysts can also drill into the details of critical data for root cause analyses, enabling support for Dow Corning’s Six Sigma initiatives. The result: sustained profitability via intelligent decision making. SAP xMII also sends event-triggered alerts about manufacturing variations to managers in real time, helping them resolve problems quickly. “SAP xMII provides visibility into a large number of key performance indicators, which helps Dow Corning sharpen its competitive advantage,” states Carey.

Trimming Deployment Time by Reuse

The ability to create reusable components helped Dow Corning deploy the application rapidly to its global subsidiaries. In fact, Dow Corning shrunk a typically three-year project in Asia to nine months. “In a day and a half, we delivered 6 of 16 identified metrics,” says Carey. “The Asian subsidiary had 16 metrics in its initial plan. We extended them to more than 21 and still compressed the time frame into nine months.”

Since the implementation, several sites have saved millions of dollars via more accurate, timely data and visibility into KPIs. Employee productivity and customer satisfaction are up, due mostly to faster response times (customer service agents can respond to inquiries within an hour instead of five to seven days). Tight integration between the shop floor and enterprise systems has also helped Dow Corning significantly cut costs, complexity, and time to value.

As a result of the project’s success, user demand has doubled, and by late 2007, all employees were using SAP xMII. Dow Corning plans to expand its use of the application to enhance manufacturing and business processes further, says Carey.

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