



DOW CORNING

SAP® EHS MANAGEMENT FOR SUSTAINABILITY AND COMPLIANCE

QUICK FACTS

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Dave Johnson, Business Process Team Leader,
Dow Corning Corporation.

Company

- Name: Dow Corning Corporation
- Location: Midland, Michigan
- Industry: Chemicals
- Products and services: Silicones and silicon-based technologies
- Revenue: US\$5.5 billion
- Employees: 10,000
- Web site: www.dowcorning.com
- Implementation partners: SAP® Consulting and TechniData AG

Challenges and Opportunities

- Ensure safe transportation, storage, and use of hazardous goods as directed by ADR, International Air Transport Association, and other regulations
- Meet stringent regulations including Registration, Evaluation, Authorization, and Restriction of Chemicals (REACH) and Globally Harmonized Systems (GHS)
- Minimize risk, time, and costs in achieving safety and compliance

Objectives

- Implement a single, highly integrated solution for managing environmental, health, and safety (EHS) issues
- Improve flexibility and responsiveness to requirements and opportunities

SAP Solutions and Services

SAP Environment, Health, and Safety Management (SAP EHS Management) application

Implementation Highlights

- Pioneered the use of SAP EHS Management in production
- Met schedule and budget goals

Why SAP

- Tight integration with the SAP ERP application
- Comprehensive functionality in a single EHS application

Benefits

- Recovered investment within 2 years through cost savings
- Improved efficiency by implementing a single EHS database worldwide
- Consolidated point solutions for label management from 35 sites into 1
- Consolidated many point solutions for material safety data sheet (MSDS) generation into 1
- Prepared to consolidate multiple point solutions for substance volume tracking into 1
- Cut time to comply with requirements of new geographies by over 75%
- Reduced processes for shipment compliance verification and MSDS population from days or weeks to the push of a button
- Increased confidence in customer and employee safety
- Optimized use of experts' time by automating decision-making processes
- Shifted timing of compliance checking from shipping to receipt of order
- Improved ability to ship on time
- Increased the number of MSDS and label languages from 7 to 31

DOW CORNING

Dow Corning Corporation develops silicones and silicon-based technologies for a host of industries. The firm is a giant in the chemicals industry, serving the diverse needs of more than 25,000 customers in over 30 countries on five continents.

A Passion for Sustainability

One of Dow Corning's core principles, as stated on its Web site, is sustainability: "Working with our customers to develop materials and solutions that help address some of the most pressing needs of our society. It means acting responsibly in our own operations to protect our environment and our people." This philosophy drives the firm to protect customers and employees during all phases of product design, creation, distribution, and use. Governments at many levels are issuing increasingly tight restrictions on all aspects of a product's lifecycle to ensure environmental protection and consumer safety. To make sure everyone understands their importance, top management has issued a firm dictum: there is zero tolerance for noncompliance.

For these reasons Dow Corning has always dedicated considerable resources to sustainability, initially with a variety of legacy software solutions. These applications required access to data in the SAP® ERP software that runs the business, but connecting them was difficult, and the processes for using them were labor intensive, error prone, and inconsistent. Therefore, the firm welcomed the release of the SAP Environment, Health, and Safety Management (SAP EHS

Management) application, which comprehensively addresses sustainability issues, and became the world's first production user of most of its functionalities.

"SAP EHS Management has a great deal to offer in many ways, but its single stand-out benefit is integration with SAP ERP," explains Dave Johnson, business process team leader for Dow Corning. "There is a day-and-night difference between integrated SAP software and trying to interface a menagerie of third-party and home-grown applications."

To help with implementation, the firm engaged SAP Consulting, with its unequalled knowledge of the application, and TechniData AG, which brought its extensive compliance management experience. They implemented a single instance that covers the entire enterprise, and one by one they addressed each environment, health, and safety area. Despite all its pioneering efforts, the team was remarkably successful in holding to schedules and budgets.

Product Safety – Proactive and Efficient

To protect customers and comply with regulations, Dow Corning must produce, maintain, and distribute a material safety

data sheet (MSDS) for every material it produces that states how to use and handle the chemical safely, information that is also printed on the product's label. Maintaining this information is a huge challenge that requires access to data about materials, customers, regulations, and much more.

With previous MSDS solutions, it was laborious to capture and analyze information and ensure compliance with the regulations of every jurisdiction where the company does business. The process was costly and made it difficult to meet shipment dates, respond quickly to requests for proposals, and expand into new geographies.

The team built a single specification database for SAP EHS Management that stores all important substance, packaging, agent, and classification information in a central location that is readily accessible globally. Using the application's expert rules functionality, the team created a set of automatic checks – mimicking the behavior of experts – that are executed in MSDS generation, saving considerable time.

"By helping us automate all the data analysis, classification, and compliance checks, SAP EHS Management saves a huge amount of labor while speeding up MSDS generation," says Ina Lerner, IT business process manager for Dow Corning. "Once we enter a substance's properties, all it takes is the click of a button to populate an MSDS. We also save time and effort on order fulfillment, generation of proposals, reaction to changes



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Ina Lerner, IT Business Process Manager, Dow Corning Corporation

in regulations, and entry into new geographies. Once we understand a new set of requirements, we take advantage of existing data and formatting to more quickly comply with them.”

Dangerous Goods – More Efficiency in Safety and Compliance

Before making deliveries in the past, highly trained experts had to perform manual compliance checks on all products, even those that are not hazardous. This checking took place at shipping time, risking delivery delays, and was an all-consuming task for these experts who had much to contribute on higher levels. Therefore, Dow Corning made dangerous goods management its next priority. Using integration to materials data, it used rules to segregate nonhazardous from hazardous products. Now the 70% of products that are nonhazardous are checked automatically on receipt of order, and the experts spend time only on the 30% that are hazardous – for big savings.

“It is hard to envision how we could be accomplishing so much in product and REACH compliance without SAP EHS Management.”

Dave Johnson, Business Process Team Leader, Dow Corning Corporation

Automated checking employs the same specification database, which has become the basis for all sustainability areas, as well as the latest revision of regulations that are automatically downloaded from third parties.

“Now we see compliance issues immediately when an order is received, not

when we have a deadline to meet,” says Johnson. “In addition, our valuable people have a lot more time for making us more proactive on compliance.”

Dow Corning took advantage of its global instance to institute common worldwide practices for dangerous goods management. This allows experts anywhere in the world to oversee shipments anywhere else in the world, enabling 24x5 coverage and averting the need for at least one person per region. Furthermore, the application increased the number of languages supported for MSDS production from 7 to 31. This enabled many countries that were previously using manual processes to leverage the global database and processes, greatly increasing Dow Corning’s confidence in its safety processes.

Global Label Management

Labels and MSDSs include a large amount of complex, ever-changing data. Managing them was a highly dispersed

function in the past, when each of the firm’s 35 warehouses and manufacturing sites had its own system – leading to inefficiency, inconsistency, and risk of errors. By moving label management and printing to SAP EHS Management, Dow Corning can now generate documents for many different purposes efficiently, quickly, and accurately while

gaining global consistency and important features such as audit trails and customer-specific labels. SAP EHS Management is also very fast and can scale to handle large numbers of labels, which are printed in parallel with MSDSs at an average rate of 100,000 per day.

Product and REACH Compliance and Substance Volume Tracking

One of the most important sustainability initiatives at Dow Corning is compliance with REACH, the European Community’s set of regulations for registration, evaluation, authorization, and restriction of chemical substances. REACH requires that companies register and monitor the amount of regulated substances shipped to each specific customer.

With help from the SAP Ramp-Up program, the team took the next step with SAP EHS Management by implementing its REACH management functionality and integrating it with a portal for supply chain collaboration on compliance issues. Deployment is now underway.

The application uses substance volume tracking functionality to monitor amounts shipped and issues alerts when volumes approach regulatory limits, easing compliance while saving time and effort. Dow Corning is finding it easier to enter new markets that REACH covers and is better prepared for similar regulations emerging from other parts of the world, such as Japan. “It is hard to envision how we could be accomplishing so much in product and REACH compliance without SAP EHS Management,” observes Johnson.

Industrial Hygiene and Occupational Health and Safety

SAP EHS Management is now helping Dow Corning's industrial hygienists better assess environmental risks to employees. Rollout of this functionality has begun, and the company plans widespread deployment. The application is also beginning to replace manual records and spreadsheets for managing employee medical information. Already in China, and soon elsewhere, the application tracks protocols for monitoring and treating employees and scheduling medical visits. "Occupational health is an excellent example of the benefits of tightly coupled applications," notes Lerner. "Constant exchange of data is required between SAP EHS Management and the human capital management functionality of SAP ERP."

Payback Within Two Years

Dow Corning has many plans to take further advantage of SAP EHS Management but has long since recovered its investment through cost savings alone, not to mention all the peace of mind and other benefits. "Instead of having a huge number of applications around the world supporting our sustainability initiatives, we now have a single, reliable application that is centrally managed by a small team," concludes Johnson. "The savings in IT are obvious, but that's only the beginning. Through the software's ease of use, we are seeing better productivity throughout the user base. Our improved ability to enter new regions and make shipments on time helps retain existing customers and attract new ones. But SAP EHS Management is helping us do a lot more than save money. It's helping us do the right thing."



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