Leading paint manufacturer formulates optimal supply-chain chemistry with HP Services' .NET integration

Akzo Nobel Coatings

Business need:
Akzo Nobel Coatings is the world’s leading producer of coatings and paints for cars, homes, boats, aerospace, wood, and metals. This division of Akzo Nobel sought to replace its traditional purchase order system with an integrated supply-chain-management solution to streamline communications between its thousands of suppliers and customers. Its goals included reducing raw materials inventory, transportation costs, document handling – while increasing competitive advantages for Akzo Nobel Coatings and its suppliers and customers.

Solution overview:
Akzo Nobel Coatings teamed with HP Services and Microsoft to design, pilot, and implement a Vendor Managed Inventory (VMI) solution based on reliable, flexible HP ProLiant servers and the Microsoft .NET strategic framework. HP created an adaptive, global supply-chain management system, which integrates Akzo with its existing suppliers, enables cost reductions, and scales as new suppliers are added. Microsoft BizTalk Server, SQL Server, and BizTalk adapters, running on clustered ProLiant DL380 servers under Windows 2000, comprise the messaging hub for this globally accessible solution.

Supply chain shines with .NET base
As a leading paint manufacturer, Akzo Nobel Coatings relies on thousands of global suppliers for raw materials – including solvents, pigments, binders, additives, resins, and packaging. Previously, these suppliers provided material in response to traditional purchase orders, generated by Akzo Nobel Coatings as material inventories ran low.

This largely manual supply-chain process required the production and handling of many thousands of documents related to orders, shipping, and processing. Akzo Nobel Coatings wanted to automate the supply-chain-management process by providing a common, standards-based messaging infrastructure – one that would shift much of the responsibility for raw material tracking, ordering, and delivery to suppliers.

The coating division’s highly diversified global operations – including 29 business units – required a powerful, secure architecture to handle integration of disparate supplier data flows. The electronic supply-chain-management project became known as P@CCESS (Procurement Akzo Nobel Coatings Common Electronic Sourcing Support). P@CCESS includes four sub-components:

- eProcurement – purchasing of supplies and services
- eAuctions – for price reduction on commodity goods
- eSupply Chain Integration – for purchasing of strategic goods
- eInfrastructure – for a common infrastructure for all of the above
Akzo Nobel Coatings chose the team of HP Services and Microsoft to design, pilot and implement the eSupply Chain Integration and eInfrastructure portions of P@cCESS. The division selected HP Services for HP’s experience with global implementations of the Microsoft .NET framework; SAP connectivity experience and tools; superior knowledge of heterogeneous platforms, software, and applications; managed services offerings; and proven ProLiant server technology. Microsoft was already a strategic partner, as Akzo Nobel Coatings had standardized on Microsoft technology worldwide.

**HP Services’ .NET team is catalyst for connectivity**

The goal of the project was to provide the messaging infrastructure and business-to-business connectivity required for VMI. The HP Services .NET integration team used Microsoft .NET framework components, including BizTalk Server, SQL Server, and Internet Information Services, as well as BizTalk adapters for SAP R3 developed by HP Services. The HP-developed SAP R3 adapters are intelligent adapters and wrappers that support direct and remote interfaces between BizTalk and other critical applications.

The HP Services .NET team worked closely with Microsoft and Akzo Nobel Coatings experts to provide an integration infrastructure to accommodate disparate data flows from multiple enterprise resource planning (ERP) systems and various document types, including eXtensible Markup Language (XML), SAP Edifact, and RosettaNet. The HP Services/Microsoft .NET team worked closely to document key business requirements for the IT solution, and translated this into a comprehensive solution architecture.

HP Services’ .NET consultants created a central messaging hub on a platform of clustered ProLiant DL380 servers running Microsoft BizTalk Server and the adapter components. The messaging hub connects each Akzo Nobel Coatings site to its suppliers, performs all format conversions and routes documents to the correct recipients. In addition, HP Services developed a supplier Web site using eSCL from Interface & Control Systems to streamline order processing even further. eSCL is a toolset for e-business applications, which enables the building of scalable, maintainable Web sites for business-to-business, business-to-customer, and Web-enabled systems.

The Web site allows for fast and early supplier adoption by making it easy for suppliers to connect. Later, suppliers can establish a direct ERP link to the messaging hub for direct and efficient communications. The intelligent messaging hub converts all incoming messages to a common industry format, the Chemical Industry Data Exchange.

The new electronic supply-chain-management solution achieved success in pilot testing with four suppliers and four buyers in Europe. As of early 2004, 25 Akzo Nobel Coatings sites in Europe and United States connect with 44 suppliers, with the number of connections expanding rapidly. Akzo Nobel Coatings easily justified the costs of the VMI solution via expected return on investment from reductions in raw materials inventories, purchasing administration, transportation, and document processing.
Teamwork pays off
Recognizing HP’s comprehensive .NET commitment and capabilities, Microsoft endorses HP as a “worldwide prime integrator” for Microsoft .NET technologies, which incorporate Microsoft’s .NET connected software and HP’s broad array of industry-leading technology platforms. In turn, HP names Microsoft .NET as its No.1 application development platform for industry-standard HP ProLiant servers. Together, HP and Microsoft have committed to creating one of the world’s largest, most specialized forces of .NET consultants and systems architects who are enabling competitive advantages for enterprises.

Akzo Nobel Coatings is at the cutting edge in business practices and technology. The efficiency and adaptability of the division’s new supply-chain-management solution will help the division maintain its leadership position and deliver a competitive advantage for the company and its business partners.

About Akzo Nobel Coatings
With 64,500 employees worldwide, Akzo Nobel (www.akzonobel.com) divides its global activities into three divisions: Pharmaceuticals, Coatings, and Chemicals. The Akzo Nobel Coatings division employs 30,000 and operates in 60 countries. With 2003 sales of 5.2 billion Euros, the division is the world’s leading producer of coatings and paints for cars, homes, boats, aerospace, wood, and metals.
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<th>Challenge</th>
<th>Solution</th>
<th>Results</th>
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<td>• Streamline communication and reduce costs between Akzo Nobel Coatings and thousands of current and potential suppliers&lt;br&gt;• Reduce inventory, document handling, and transportation costs with electronic supply-chain integration</td>
<td><strong>Hardware</strong>&lt;br&gt;• Two clustered HP ProLiant DL380 servers</td>
<td>• Anticipated ROI benefits from supply chain integration:&lt;br&gt;• Up to five times return on initial investment and operation cost&lt;br&gt;• One-time reduction in inventories of 25 – 50 percent&lt;br&gt;• Less stock in the supply chain, coupled with improved product availability&lt;br&gt;• Ongoing, annual five percent reduction in transportation costs&lt;br&gt;• 20 percent annual savings in document handling&lt;br&gt;• One-time saving of 65 million Euros on invested capital&lt;br&gt;• Yearly savings of more than 10 million Euros&lt;br&gt;• Standards-based infrastructure to handle all current and future business-to-business processes&lt;br&gt;• Supplier benefits:&lt;br&gt;• Integration of ERP systems with those of Akzo Nobel Coatings offers advantage over other suppliers&lt;br&gt;• Stronger partner position&lt;br&gt;• Lower costs&lt;br&gt;• Quicker turnaround on order processing, improving customer satisfaction</td>
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