

**As Seen In**  
**GLOBAL LOGISTICS & SUPPLY CHAIN STRATEGIES**  
**APRIL 2005**

**SPX: Getting Suppliers in Line Means Starting Small, But Thinking Big**

By Robert J. Bowman

**A large industrial-products manufacturer works to bring its supplier base into the 21st Century, but not through the use of expensive EDI systems.**

**C**all it one small step for a four-billion-dollar company.

SPX Corp., a diversified maker of industrial products, has begun automating communications with its army of suppliers. A year ago, just five out of 500 suppliers to the company's Service Solutions business unit were using electronic data interchange (EDI) to receive purchase orders and exchange other documents. Together they accounted for 20 percent of the division's total spend, notes Matt Ballard, vice president of information technology for Service Solutions. Yet there was plenty of room for improvement. The only problem: EDI was an expensive and complex proposition. Few suppliers could afford the time, training and value-added network provider needed to make the technology work. The rest were still stuck in IT's equivalent of the Cretaceous Period—in other words, the age of the fax machine.

Charlotte, N.C.-based SPX, which lost \$17m in 2004, could hardly be considered a visionary firm or high-tech innovator like Cisco or Apple Computer. And it's far from being a household name. But the company is a big player in the world of industrial products. It operates in more than 20 countries, with 22,000 employees. The organization consists of five divisions: Technical Products and Systems (for security and fire detection), Industrial Products and Services (power systems, automotive parts and compactors), Cooling Technologies and Services (plant cooling towers), Flow Technology (pumps, valves and related fluid-handling devices), and Service Solutions (automotive tools and diagnostic equipment).

That last division is Ballard's domain. It generated revenues of more than \$870m in 2004, with a gross profit of nearly \$233m. Service Solutions is made up of three units: diagnostic systems and service equipment, specialty tools, and technical information and services. Diagnostic products are sold under the brand names of OTC, Tecnotest and Robinair. For specialty tools, SPX claims to be primary supplier to the dealership networks of General Motors, Ford Motor Co. and DaimlerChrysler. It is also the top U.S. domestic provider to Toyota, BMW and Nissan. Many of the same top automakers call on SPX for technical services.

Trends spurring growth at Service Solutions include demand for new technology and increased outsourcing by original equipment manufacturers. Still, much of the division's supplier base remains mired in old ways of doing business. The venerable fax machine is notoriously unreliable, Ballard says. SPX uses it to convey purchase orders to suppliers, but the equipment can break down or get jammed, and the sender has no way of knowing for sure whether its transmission was received.

Clearly, there was a need for new technology—but it would have to be cheaper and easy to use than EDI. It was hard enough getting five suppliers up and running on EDI, Ballard says. Extending that technology to 500 regular suppliers, or even the 200 who account for 80 percent of the Service Solution unit's procurement spend, was unthinkable.

## Search for a System

SPX began casting about for a solution in the late spring of 2004. The company wasn't exactly a newcomer to supplier management software; it had been conducting auctions through FreeMarkets (later acquired by Ariba) for some time. But SPX wanted a tool that specifically addressed supplier communications.

Its goals were modest and clearly defined. The technology had to create a closed-loop system in which suppliers could confirm receipt of P.O.s and other material in near-real time, at least as fast as ERP. To reach the next tier of suppliers, the software would have to be simple and affordable. It would have to be internet-based. It would have to be hosted by the vendor, to avoid headaches of ownership, installation and maintenance of systems onsite. And it would have to integrate easily with the company's enterprise resource planning system, which was to remain the sole source of information for direct procurement.

Most of all, SPX was determined to avoid the kind of multi-year, multi-million-dollar engagement that was common to so many IT projects in the late 1990s and early 2000s. Ballard says the company saw the chance to pick some "low-hanging fruit," not address inefficiencies hidden deep within corporate procedures. To SPX, it was a matter of acquiring a simple system to solve a simple problem.

Nevertheless, to the winning vendor, SPX presented some major challenges. The Service Solutions unit manages a fairly large number of engineering changes, Ballard says. Suppliers must keep pace with ever-shifting requirements, caused by an endless progression of new models by SPX's automaker customers. In a world where all parties in the manufacturing chain struggle to hold down inventory and ship product at the last possible moment, it's usually the upstream supplier who gets stuck with out-of-date parts. SPX, too, must innovate continually, to maintain its dominant position with auto dealerships. And suppliers must respond in kind.

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— Matt Ballard of SPX Corp.

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Such factors have been commonplace in the automotive supply chain for years. But recent events have raised the compliance bar even higher. In the wake of several high-profile cases of corporate accounting malfeasance, all companies must adhere to the higher reporting standards of the new Sarbanes-Oxley Act. A good supplier-enablement program can furnish some of the key data that flow back into company records. In effect, modern-day electronic systems give users a virtual paper trail for regulatory compliance.

The sensitivity of intellectual property is another concern. Ballard says SPX regularly removes older engineering drawings from its web site. Once a P.O. is closed and the component "aged out," the company takes care to eliminate material that might still be of value to competitors. A well-protected system of electronic communications, with strict monitoring of transmission and receipt, can help to ensure better control over technology transfer.

## Making the Choice

Following a process that stretched over several months, SPX went with Bedford, Mass.-based SupplyWorks, Inc., a specialist in procurement software for discrete manufacturers. Jeff Herrmann, chairman and chief marketing officer of SupplyWorks, says the vendor had a lot of experience in working with companies like SPX. "It lined up very well with what we've done before," he says.

The contract was signed in early summer, and the system went live in the first week of October. Mindful of tales about painful ERP installations in the late 1990s, "nobody was interested in lengthy projects," Herrmann says. "They wanted a reasonable time frame."

Implementation of SupplyWorks MAX began with a pilot project at just two of the Service Solutions division's plants, outside Minneapolis, Minn. Initially, SPX brought 60 suppliers into the system. Plans call for 200 by April of this year, says Ballard, who calls the experience so far "relatively painless and inexpensive."

When it came to winning supplier acceptance, SPX's small-scale approach to the technology proved fortuitous. Suppliers have tended to balk at systems that pit them against each other on price, but the lack of an auction-style feature meant that wasn't a problem this time around. In the form acquired by SPX, the SupplyWorks technology was clearly of benefit to all, says Ballard. Both sides were aiming to smooth the flow of documents and obtain confirmation of receipt. And the cost of adoption on the supplier side was minimal, compared with that of a full-fledged EDI network.

Training was fast and easy, says Herrmann. SupplyWorks took suppliers in waves of 10 to 20 at a time, enrolling them in a two-hour internet course conducted by a customer-support specialist. "For us," he says, "it was a very routine kind of implementation."

SPX had no trouble linking up the system with the ERP from Baan (now part of SSA Global Technologies, Chicago). It selected webMethods Inc., based in Fairfax, Va., as the vendor of application integration software. "SupplyWorks had done this with a numerous applications," Ballard notes. "We didn't want to be a guinea pig."

Through SupplyWorks MAX, SPX now transmits P.O.s to participating suppliers, who relay confirmation of receipt as well as advance ship notices (ASNs). The latter tell SPX which orders are on the way and which carriers are transporting them, and supplies tracking numbers for the relevant shipments. The information is then fed back into the data repository within SPX's ERP.

Should a shipment fail to arrive in line with its ASN, the system automatically generates an alert. Lacking such a capability, Herrmann says, the manufacturer might not know that a shipment is delayed until it's too late to take corrective action. With exception-based systems such as that of SupplyWorks, no news is good news.

The technology also allows suppliers to print barcoded labels for each carton prior to shipment, in a format specified by SPX. That eliminates the need for the manufacturer to affix labels at the time of receipt, and makes for an easier job of inventory control.

### **The Design Angle**

Orders aren't the only messages that get sent to suppliers. SPX can also furnish component design changes through the electronic transmission of engineering drawings and notices. The practice helps to ensure that supplier inventories are up to date, that the wrong generation of part doesn't get sent, and that obsolete materials are kept to a minimum.

Finally, suppliers can perform electronic invoicing through SupplyWorks MAX. By expediting that crucial document, they get paid faster—another selling point for any supplier reluctant to step up to the new technology. Formatting is easier, too, since most of the information on the invoice is supplied directly from SPX's database, then finalized and confirmed by the supplier. Notes Herrmann: "It eliminates a tedious and error-prone process of matching up invoices, as well as the problem of invoices that are sent in late."

Ballard won't put a number on the amount of money saved by the supplier-enablement software, but says it has dramatically reduced the amount of manual labor required to do things like invoice management. And there are fewer errors in the system generally, thanks to the elimination of data re-keying and better information up front. He says the division met its goal of achieving a return on investment from the system within one year of implementation.

"There's enough volume flowing through the system that avoiding all manual steps is a huge benefit," Ballard explains. Instead of spending time tracking down shipments and rectifying invoice mismatches, SPX's buyers can concentrate on price improvements through value-added engineering, reverse auctions and other methods.

Fax, phone, mail and e-mail now play a much smaller role in controlling the flow of parts and materials into SPX's plants. Says Herrmann: "Reduced overhead can be translated back into strategic sourcing and higher-level development work instead of mundane tasks." Suppliers, meanwhile, enjoy the benefits of faster and more accurate communications with a major customer. Eventually, says Herrmann, even EDI-enabled suppliers will likely migrate to the simpler, Web-based system.

Now that it's comfortable with the use of SupplyWorks MAX at two plants, SPX intends to roll it out to additional locations. Herrmann says the Service Solutions division operates a total of around 10 plants around the country. It was expecting to have no problems in meeting the target of 200 suppliers using SupplyWorks MAX by April.

But the unit is more ambitious than that. Like it or not, Service Solutions has turned out to be something of a guinea pig after all. Its experience will form the basis of a company-wide migration of supplier enablement, touching all five of SPX's operating divisions. The project will affect thousands of suppliers of SPX, both domestic and international, Ballard says. Herrmann says SupplyWorks is preparing for the expansion by developing a more globalized version of MAX, able to handle multiple languages, currencies, and sites.

#### **Some Possible Roadblocks**

Even with Service Solutions' experience as a guide, the rollout could hit some snags. SPX is a decentralized organization, with each division managing its own ERP system. The company even runs multiple instances of Baan, says Ballard, and has no immediate plans to standardize them all. So each installation of SupplyWorks MAX will differ in some way from all the others.

Moreover, SPX is constantly buying and selling pieces of business. Acquisitions by Service Solutions over the past year include Actron Manufacturing Co., a maker of automotive test equipment, and AutoXray Inc., a designer of diagnostic test units for professional users. In 2005 alone, the parent organization has sold off three operations: Kendro, its laboratory and life sciences products unit; BOMAG, a compaction-equipment business, and Cofimco, which makes axial fans. The deals were all part of the company's Value Improvement Process, which constantly scrutinizes every aspect of operations to maximize profits. And while the strategy keeps SPX on its toes, it also ensures that things never settle down long enough to make any widespread application of technology easy.

None of which is stopping Ballard and his team from pushing the gospel of supplier enablement throughout the organization. They are currently identifying the next candidate for implementation, while negotiating with SupplyWorks for extending the technology to additional users.

At the same time, Ballard will consider using more of SupplyWorks' capability, which embraces a wide range of supplier-management procedures. Migration of the basic tool to other divisions of SPX should occupy most of his time over the next few months, but he has also launched a conceptual-design phase for implementing new pieces of the technology.

The expanded use of reverse auctions is one possibility, although Ballard doesn't expect much pushback from suppliers, given the company's existing use of the Ariba/FreeMarkets auctioning tool. He even envisions the possibility of SPX's suppliers accessing multiple portals to do business with the company, especially one dedicated to the still-developing practice of product lifecycle management. While suppliers will need training on the enhanced software, he doubts they will have a problem using more than one portal.

Nor will SPX, although the company will continue to approach the issue of new technology in a cautious, step-by-step manner. Says Ballard: "We only go down an avenue of capability if we can prove the return."

### **SPX Corp. at a Glance**

**The company:** A diversified manufacturer of industrial products.

**Headquarters:** Charlotte, N.C.

**Business segments:** Technical Products and Systems, Industrial Products and Services, Cooling Technologies and Services, Flow Technology, Service Solutions.

**Financial results:** Revenues of \$4.37bn in 2004, up from \$3.8bn in 2003. Posted a net loss of \$17.1m (a loss of 23 cents per share) in 2004, versus net income of \$236m (\$3.07) a share in 2003. Took a \$175.3m charge in the fourth quarter related to several discontinued operations. It generated revenues of more than \$870m in 2004, with a gross profit of nearly \$233m.

**Top executive:** Chris Kearney, president and chief executive officer.

**Number of employees:** 22,200, in 20 countries.

**Supply-chain objective:** Beginning with the Service Solutions business segment, to automate communications with suppliers who lack the size or volume to justify expensive investment in EDI.

**Supply-chain vendor partners:** SupplyWorks, Inc. (supplier communications), SSA Global Technologies (enterprise resource planning), Ariba (procurement and auctioning), webMethods (application integration).