

**SAP Case Study**



# **mySAP™ SUPPLY CHAIN MANAGEMENT AT NIBCO**

THE BEST-RUN E-BUSINESSES RUN SAP



**NIBCO**  
AHEAD OF THE FLOW™

# A FOCUS ON EXECUTION FUNDAMENTALS ENABLES E-BUSINESS AND IMPROVES PERFORMANCE

## AT A GLANCE: mySAP™ SUPPLY CHAIN MANAGEMENT AT NIBCO

### Strategic Goals:

- Continually enhance market position
- Improve return on assets by reducing inventory and capital equipment requirements
- Minimize costs and improve service through precision and efficiency in operations

### Approach

NIBCO improved customer service by enhancing fulfillment performance and implementing electronic partnerships with customers. It targeted enterprise-wide supply chain enhancements by concentrating on demand-pull inventory management and more effective processes at the warehouse and factory floor levels. This approach was enabled by mySAP™ Supply Chain Management (mySAP™ SCM) capabilities in sales and distribution, materials management, production planning, warehouse management (SAP® Logistics Execution System) coupled with bar code automation, and other SAP solutions.

### Results achieved over the period 1997 to 2001 include:

- Increased the perfect order rate from 29.5% to 87.0% by focusing on order accuracy, product availability, other elements
- Improved on time delivery performance from 60% to 99%
- Reduced stock-outs from 11% to 2%
- Lowered inventory levels from \$102.1 to \$76.0 million, and improved inventory turns by 17% from 3.66 to 4.27
- Reduced annual sales and administrative costs from \$56.8 to \$45.9 million and decreased support staff by 16%
- Lowered annual distribution costs from \$51.1 to \$40.7 million
- Positioned the company for broader e-commerce initiatives and a comprehensive focus on factory and warehouse processes

## SUMMARY

NIBCO INC. is an international leader in the flow control industry. The company manufactures a diverse range of valves, fittings and other piping products for various markets including residential and commercial construction, industrial, and irrigation markets.

NIBCO opened its doors as a foundry called Northern Indiana Brass Company in 1904. Today NIBCO remains a privately-held company and has sales of more than \$400 million. The company serves 6,000 customers worldwide, employs 2,900 associates, and manufactures at eleven locations in North America and Europe.

NIBCO is a complex business that supports diverse manufacturing and distribution processes. The company builds both commodity and specialty products from a wide range of materials including bronze, iron, steel, and thermoplastics. Commodity products such as copper and plastic fittings have long product life cycles and represent about two-thirds of the company's product line. Specialty plastic and metal products, primarily valves and actuation, require advanced design and manufacturing capabilities, and account for one-third of NIBCO's sales.

In recent years, the flow control industry has faced both consolidation throughout the value chain and a substantial increase of competition in many markets. Consolidation among NIBCO's customers and suppliers has caused significant margin pressure, and a desire to improve service is driving the need for NIBCO to serve customers in innovative ways.

In order to continue to grow profitably given evolving industry dynamics, NIBCO has focused concurrently on its internal operations as well as on customer-facing business processes. The aim of its concentration on internal operations has been to reduce production, distribution, order service, and other costs by addressing manufacturing planning, warehouse logistics, and reengineering at the shop floor level. In order to improve

customer satisfaction as measured by shipment timeliness, product availability, and other elements, NIBCO targeted fundamental order service improvements and electronic commerce offerings that made it easier and less costly to do business with NIBCO.

NIBCO recognized that sound business processes would be key to its success in reducing costs and improving service, and the company selected mySAP™ SCM and other SAP solutions to enable reliable execution of these processes. With nearly one hundred years experience in flow control, NIBCO understands that information flow too, depends on efficient connections within a structure that lasts.

### **OBJECTIVES**

Although the company dominated its markets during the 1990s, the competitive landscape began to change for NIBCO, its customers, and its suppliers. Customers consolidated and improved their negotiating positions; pricing pressures required NIBCO to reduce costs throughout its operations; and there were significant opportunities to improve rates of on time delivery, order accuracy, and other customer service metrics to improve competitive position. NIBCO's traditional approach to serving its customers and managing internal operations was no longer sustainable.

In late 1995, NIBCO realized that it had serious problems with visibility into its internal operations. The company did not understand its own cost structure and could not determine how best to improve profitability. Customer service suffered due to stock-outs, late shipments, and errors in order and invoice information. Lack of accurate customer and inventory data prevented NIBCO from connecting its systems with those of its customers and suppliers.

While NIBCO recognized that new business processes must be implemented to address these issues, the company also realized that sound, integrated information technology (IT) systems

were the essential enablers of these processes. In short, the company knew that it could prosper only by moving from its fragmented IT environment to an integrated systems platform.

NIBCO's first goal in implementing mySAP SCM and other SAP enabling systems was to cover the basics. The company needed to improve accuracy of orders, enhance on time delivery, lower inventory, and reduce costs in various areas including distribution and administrative processes.

Moreover, NIBCO needed to innovate in the arena of customer service in order to retain customers and grow. The use of vendor-managed inventory (VMI), for example, to implement single source arrangements with customers, could help stabilize customer inventory levels and reduce administrative costs. Another NIBCO objective was to build a sound execution platform upon which to develop Web-based customer service applications and provide marketing information to help distributors promote products. Using data obtained via SAP® R/3®, NIBCO could improve profitability by developing pricing and distribution strategies that were based on a deeper understanding of customer buying patterns and manufacturing costs. In addition, more accurate data would allow the company to develop programs to achieve faster order-to-ship times — moving from a 48+ hour time frame to commitments as short as 8 hours for key customers. These actions taken together would enable the company to move closer to its wholesale and retail customers, providing continually improving value-added services that in turn allowed these customers to achieve success through reduced costs and higher sales.

### **IMPLEMENTATION**

In 1995, NIBCO commissioned a strategic IT study which recommended implementation of an integrated enterprise system over a three- to five-year time frame. NIBCO considered this, but ultimately decided that implementing R/3 quickly with a big bang approach would be most cost-effective, have the highest likelihood of success, and meet long-term needs in the most

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comprehensive way. The company focused on milestone-based project management and assigned dedicated team members with capabilities in business, technology, and change management, from September 1996 through year-end 1997. NIBCO went live with its R/3 big bang on December 30, 1997 and achieved its initial goals.

Following the go-live, NIBCO focused on key business processes – including sales order-to-cash, production order-to-inventory, and purchase order-to-payables – to make continual improvements to its operations. Using mySAP SCM to enable these processes, NIBCO furthered its strategy to create a demand-pull environment for its sales to wholesale distributors and major retailers. NIBCO established inventory zones for its 15,000 make-to-stock stock keeping units (SKUs), and defined the zones by product type, volume, forecast, and other information. Customer demand now pulls inventory across the zones and launches replenishment orders to manufacturing for these items. NIBCO's business strategy is premised on its ability to efficiently provide a complete range of flow control products to the market, and this use of mySAP SCM's flexible planning and production order management capabilities contribute to the achievement of this goal.

NIBCO also started using radio frequency (RF) scanning devices to provide data to the warehouse management capability of mySAP SCM for direct handling of inventory transactions. Receiving, internal stock movements, stock selection for customer shipment, and continuous cycle counting transactions are managed at NIBCO's distribution centers in this way, improving efficiency and driving inventory variances from their formerly high levels to nearly zero. As a result of more precise operational data, NIBCO has reduced its financial closing cycle time from 10 to 2.5 days.

Since its initial 1997 implementation, NIBCO has increasingly implemented EDI with key retailers such as Home Depot. In fact, the company has increased the number of trading partners using electronic data interchange (EDI) from fewer than forty to more than seventy-five, and has increased the share of orders using EDI from 28% to 54%. NIBCO found that its solid mySAP SCM foundation has been key to enabling the basic EDI implementations, and this architecture is central to extending the customer-focused strategy to other areas of electronic commerce. NIBCO is now using mySAP SCM to:

- Implement VMI programs with wholesale and retail customers to smooth demand on its production resources
- Establish inbound supplier-managed inventory (SMI) relationships with producers of resins and metals in order to improve inventory turns
- Provide key product and order information on the Internet to extend its customer relationships

NIBCO continues to concentrate on improvements to its core business processes. The company is extending its implementation of bar code automation and RF scanning in warehouses to encompass these mySAP SCM-supported applications in manufacturing areas. Also, NIBCO is increasingly using mySAP SCM to shift factory scheduling from the administrative offices to the shop floor. These actions will allow the company to increase the number of NIBCO workers who use the system from 650 in 2001 to 1,800 in the near future. Moreover, NIBCO's customers and suppliers will increasingly engage with the company through diverse e-commerce avenues. Through these measures, NIBCO will continue to meet its goals of providing superior, long-term prosperity for its stakeholders.