IBM

Baldor creates guaranteed delivery solutions with SAP and IBM.

Overview

■ *Challenge*

Electric motor manufacturer Baldor has turned its U.S. location into a major competitive advantage, despite intense competition from low-cost offshore manufacturers. Very fast delivery timescales could turn into an unbeatable proposition if order process efficiency could be transformed to exploit the delivery advantage offered by the geographic location.

■ *Why Become an On Demand Business?*

Baldor serves customers requiring a variety of electric motors, electronic controls and generators— for a production line or similar machinery. If Baldor could provide stock and process information direct to customers, the company could become more responsive,

» **On Demand Business defined**
An enterprise whose business processes—integrated end-to-end across the company and with key partners, suppliers and customers— can respond with speed to any cus- tomer demand, market opportunity or external threat.

with confirmed orders and guaranteed delivery times—and cut delivery costs into the bargain.

■ *Solution*

Baldor created a new Customer/ Supplier Connect solution based on SAP software that enables both suppliers and customers to gain a direct view of product order status. This new process brings delivery service levels that offshore competitors find it impos- sible to match, and Baldor's U.S. location has become a key com- petitive advantage.

■ *Key Benefits*

Customers can now see, in real-time, the price and delivery schedules for Baldor products. The enhanced customer service helps Baldor attract and retain business, and the associated reduction in paperwork through the use of advanced SAP Web/AS solutions is driving cost out of the company.

Baldor Electric Company located in Fort Smith, Arkansas, builds industrial electric motors, drives and genera- tors. The company employs almost 3,500 people, has 15 U.S. manufac- turing operations and one in England, and sales offices in 55 countries generating around $650 million revenues annually.

ON DEMAND BUSINESS™

Creating guaranteed delivery solutions with IBM

To compete with manufacturers which have moved production out of the U.S., Baldor focuses on customer service and on constant innovation to drive costs out of the business.

Mark Shackelford, Director of Information Services, explains: "In 1995 we had around 35 separate systems, which either did not talk with each other or were too slow, and there was no multi-language or currency support. After extensive reviews of the major vendors' offerings, we selected SAP solutions, and have been building ever since."

The integrated SAP solutions rapidly demonstrated the potential to assist Baldor in driving costs down throughout the business. After many successful years running SAP R/3 software, the company chose to move to mySAP Business Suite, and took the opportunity to review its server infrastructure, too.

Availability is king

With manufacturers able to take advantage of low-wage economies and favorable currency rates, Baldor needs to implement innovative measures to compete effectively.

"At Baldor we say the business is like a three legged stool, customers, shareholders and employees. Deliver the highest value product to customers on time; drive profits up by driving costs out; and give employees the training and tools to achieve those objectives."

To meet these needs, Baldor consolidated its SAP applications and IBM DB2® databases to a single IBM @server® zSeries® model 990 server. The DB2 database runs in IBM z/OS®, and the SAP applications run in 24 Linux® virtual machines on the same server.

" The IBM and SAP solution is truly a key part of our competitive strategy."
– Mark Shackelford, Director of Information Services, Baldor

With this new infrastructure in place, Baldor has enabled portal technology, which allows customers and distributors to order products and schedule deliveries on systems using live manufacturing data.

"Investing in the IBM z990 server and mySAP Business Suite is part of a long-term strategy to grow the company by helping us to cut costs, raise our production efficiency, and enhance our customer service," says Mark Shackelford.

Minimize paperwork, maximize service

In the process of manufacturing electric motors, Baldor prints some one million sheets of paper a month. These include parts lists, customer special order details and quality control data, representing a significant cost. By moving to electronic data presented using SAP Portal, Baldor will eliminate almost all of these printing costs, and enable the business to grow without a corresponding rise in infrastructure costs.

Mark Shackelford comments, "Customers will be able to see right into our production systems, including time-to-delivery, using the SAP Portal technology over the Web. This reduces paperwork and costs, and enables Baldor to offer a faster service for customers who simply cannot wait for an overseas delivery. The IBM and SAP solution is truly a key part of our competitive strategy."

Taking information to the shop floor

Baldor is now working on its FlexFlow ShopFloor portal, which will use SAP Portal to deliver live manufacturing data direct from the SAP systems to shop-floor terminals, using barcodes and radio-frequency identification (RFID) to track motors through production. The solution will not only replace the existing paper-based system, it will also enrich the delivery of information, providing training videos and dynamic updates.

Choosing SAP and IBM solutions

Information on the stock catalog, including prices, location and shipping details, is stored on an IBM TotalStorage® DS8100 system, which supports all SAP solution data.

Mark Shackelford explains the logic behind selecting IBM: "We have 3,800 users and 7,000 customers using our SAP systems worldwide, and downtime costs us more than $100,000 an hour. Availability is king for Baldor, and the IBM @server zSeries gives us what we need. We moved workload from three z800 servers to the new z990 with no service interruptions."

Shackelford continues, "The migration of our SAP application servers to Linux on the zSeries produced an immediate increase in performance, and has made it easier to manage and maintain our systems. It has also significantly trimmed the total cost of IT and reduced the administrative workload on our department – requiring less than 40 technology professionals to run our global operation."

Key Components

Software

• IBM DB2

• IBM z/OS

• IBM z/VM®

• IBM Parallel Sysplex®

• Linux

• mySAP Business Suite

Hardware

• IBM @server zSeries model 990

• IBM TotalStorage DS8100

Services

• IBM Global Services

The IBM z/VM technology allows each SAP application to run in its own separate Linux environment hosted by the z990 server, alongside the DB2 database in the z/OS partition. The partitions are connected via an internal virtual network, using IBM HiperSockets,™ and this single z990 server offers sub-second response time for all the SAP users.

The HiperSockets technology provides network services between applications and partitions, and is able to allocate bandwidth dynamically where it is most needed, ensuring very fast operations.

"In all our years running zSeries, Baldor has never experienced an outage," says Mark Shackelford. "The fast internal connections enable sub-second response, and maintenance and license costs are significantly lower than running multiple servers."

Global competitive advantage
For Baldor – the U.S. location – has become, through the SAP and IBM solutions, a competitive advantage. Baldor is a high value, high customer service business, winning in the global economy.

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