IBM

Whirlpool's B2B trading portal cuts per-order costs significantly.

Application	B2B order fulfillment portal, B2C small appliance and appliance-accessory ordering site
Business Benefits	For B2B portal: 100% ROI in 8 months For B2C site: 100% ROI in 5 months Overall: order processing savings in excess of 80%
Software	IBM WebSphere® Application Server, Advanced Edition IBM Net.Commerce IBM DB2® Universal Database™ for OS/390® IBM HTTP Server IBM VisualAge® for Java™ IBM Commerce Integrator with IBM MQSeries®
Servers	IBM RS/6000® SP™ IBM S/390® Parallel Enterprise Server™

There's a good chance that you chill your milk in its refrigerators, wash your clothes in its washers or bake cookies in its ovens. After all, Whirlpool strives to be in "Every home…Everywhere." As the world's leading manufacturer and marketer of major home appliances, the company has certainly forged a strong presence in households around the globe.
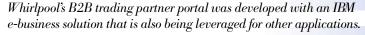
A $10.5 billion corporation, Whirlpool has its home base in Benton Harbor, Michigan. Competing in a $70 billion global industry for major home appliances, the 61,000-employee company considers its distributors and partners to be critical players in its continual quest to maintain industry leadership. This being the case, it is in Whirlpool's best interests to operate with utmost efficiency while providing top-notch service to members of its selling chain.

"IBM is on top of industry Web standards like Java and XML."

– Jim Haney, Vice President of Architecture and Planning, Whirlpool Corporation

Whirlpool's B2B trading partner portal was developed with an IBM e-business solution that is also being leveraged for other applications.

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e-business

e-business — accelerating the pace of business and the pace of change.

Using WebSphere Application Server, Whirlpool has developed an e-commerce site where customers can order small appliances as well as accessories.

Until recently, providing outstanding service was no problem. But Whirlpool's other processing methods, particularly for its middle-tier trade partners — which comprise 25 percent of its total partner base — were inefficient and costly in time and money. These are the sellers who generate 10 percent of the company's revenue, but aren't large enough to have dedicated, system-to-system connections with Whirlpool — so they typically submitted orders by phone or fax.

Wanting to infuse greater efficiency into this process, Whirlpool turned to e-business, developing a business-to-business (B2B) trading partner portal that enables these sellers to order online. To make the portal work, the company needed to integrate it with its SAP R/3 inventory system and Tivoli systems management tools. Whirlpool looked no farther than the company with which it has collaborated on several other projects over the years: IBM.

Following the guidelines of the IBM Application Framework for e-business, Whirlpool built its portal with IBM WebSphere Application Server, Advanced Edition, IBM Net.Commerce (now part of the IBM WebSphere Commerce Suite family), IBM HTTP Server, IBM VisualAge for Java and IBM Commerce Integrator with IBM MQSeries.

Working in concert, these technologies have enabled a fast, easy Web self-service ordering process that has cut the cost per order to under $5 — a saving of at least 80 percent. Whirlpool has also gained an unexpected benefit — an extendible e-business platform that it plans to leverage for other applications.

"IBM e-business solutions run on many different platforms that scale from the very small to the very large," says Jim Haney, vice president of architecture and planning at Whirlpool. "When you've got that level of scalability as well as flexibility, that's pretty powerful."

Exceeding expectations

Through the portal, called Whirlpool Web World, several thousand middle-tier trade partners select the goods they want to order by checking off the appropriate SKUs and indicating quantities. Aside from appliance ordering, they can also log on to the password-protected site to track the status of their orders.

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– Jim Haney

"By going with a B2B, Web-based model, we've been able to make ordering easier for both sides of the fence," says Haney. "Before, it was very cumbersome, costly and time-consuming to service this level of trading partner."

Whirlpool's B2B portal is actually in its second generation. Its first-generation portal was developed with low-level products, giving the company a chance to test the Web waters. "It took off faster than we had expected," Haney recalls. "In its first 3 months, the amount of revenue that flowed through the portal was what we thought we would generate in its first 12 months. We got a 100 percent return on our investment in only eight months."

A platform for now and the future

With the success of its first-generation trading partner portal, Whirlpool was ready to migrate the solution to a bigger, more scalable and easier to manage platform. At the same time, the company was also implementing SAP R/3 for order entry. So, it was important for its second-generation portal to integrate with SAP R/3.

"We wanted to invest with a vendor that would be with us for a while, so we checked out IBM and a few others. IBM was our choice for many reasons," explains Haney. "First, IBM has worked with us on joint product development as well as with our SAP R/3 system design and architecture. And, when we talked to analysts, we found that an overwhelming number of Fortune 100 companies use IBM e-business solutions. Finally, we saw that IBM is on top of industry Web standards like Java and XML, which provide the development flexibility that enables us to grow in this space."

After committing to IBM, Whirlpool also decided to develop its e-business platform following the Application Framework for e-business, taking advantage of its rapid development cycles and associated cost reductions. Says Haney, "There are features that come out of the box in the current suite of IBM tools that, a year and a half ago, we tried to build ourselves. Now, we can bring applications to market much faster."

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Whirlpool's trading partners can easily stock up on their inventory using the company's B2B order fulfillment site.

A first with SAP R/3 integration

Whirlpool is one of the first companies in the world to integrate a Web-based, B2B solution with SAP R/3. Depending on the type of application and transaction involved, Whirlpool's portal can access SAP R/3 either through Commerce Integrator and MQSeries or through WebSphere Application Server. The portal also provides a direct connection to SAP R/3 through the Business Application Programming Interface (BAPI) standard for Java.

The portal's ordering facility was created with Net.Commerce. IBM DB2 Universal Database for OS/390 resides on Whirlpool's back-end S/390 Parallel Enterprise Servers, in support of SAP R/3. The site itself is powered by IBM HTTP Server and runs on multiple IBM RS/6000 SP servers.

"We didn't have to rewrite any of our order-processing business logic for the Web environment because the logic is still handled by SAP R/3," says Haney. "And now, when we change the rules for calculating delivery dates or pricing promotions, we only need to make those changes in SAP R/3. For our customers, whether they're submitting an order over the phone or online, the end result will be consistent because the same back-end system is handling it."

Evolving with IBM

With the same IBM e-business platform it used for the trading partner portal, Whirlpool has launched a business-to-consumer (B2C) site for U.S. customers to order small appliances and appliance accessories. Drawing 3.8 million visitors each month, the site has generated enough success to enable Whirlpool to achieve 100 percent return on investment in just five months.

Together, Whirlpool's B2B portal and B2C appliance accessory site draw $400 million in annual revenues—8 percent of the company's total revenues. However, the long-term value of Whirlpool's IBM e-business platform—which integrates customer relationship management (CRM) and ERP—lies in its adaptability for future e-business applications. For example, in the company's overseas markets, where major appliances are sold to consumers through direct channels, a B2C ordering site makes good business sense.

"Like anything in this Internet space, our applications will probably evolve every six months or so," says Haney. "With the environment we have in place, we'll first look to IBM and its suite of e-business tools to provide the scalability, high availability and capacity needed to support the evolution of our Web applications."