16   Whirlpool Corporation— Giving ERP a Spin[1]

Introduction

Whirlpool Corporation is one of the world's leading manufacturers and marketers of major home appliances. The company has principal manufacturing operations and marketing activities in North and South America, Europe and Asia. Whirlpool's primary brand names—KitchenAid, Roper, Bauknecht, Ignis, Brastemp, Consul and its global Whirlpool brand—are marketed in more than 170 countries worldwide. In North America, Whirlpool is the largest supplier of major appliances to Sears, under the Kenmore brand. This accounts for nearly 20% of Whirlpool's sales. Whirlpool, which manufactures its products in 13 countries, makes about 25% of its sales in Europe and is concentrating on emerging markets in Asia and Latin America.

Regional Operations Summary

North America Whirlpool operations in the United States, Canada and Mexico together form the North American Region. The combined operations work with a unified strategy for manufacturing and marketing appliances in the three countries.

Latin America Whirlpool includes Central and South America and the Caribbean. The Latin American Appliance Group of Whirlpool and its affiliates have the largest market share and one-third of the manufacturing capacity of the region. The Latin American home appliance market is expected to expand more rapidly than either North America or Europe.

Asia Whirlpool has been exporting home appliances to Asia for over 30 years. From 1993 to 1995, Whirlpool moved aggressively to increase its presence throughout the region by establishing marketing and manufacturing joint ventures. In Asia, Whirlpool focuses on four key products: clothes washers, refrigerators, air conditioners and microwave ovens. Today, the company enjoys the number one position among non-Asian competitors in the region.

With a staff of approximately 11,000 and eleven factories in six countries, Whirlpool Europe ranks as the third-largest producer and marketer in Western Europe. It commands the leading position in Central and Eastern Europe, and is growing steadily in the Middle East and Africa. A strong focus on the needs of customers in each of Europe's various markets, combined with a coordinated, pan-European approach to many common operations and activities, provides Whirlpool Europe with a strong foundation to build for the future.

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Company Vision, Values and Social Responsibility

- *The Whirlpool Vision*—Every Home . . . Everywhere with Pride, Passion, Performance. We create the world's best home appliances that make life a little easier and more enjoyable for all people. Our goal is a Whirlpool product in every home, everywhere. We will achieve this by creating: Pride . . . in our work and each other; Passion . . . for creating unmatched customer loyalty for our brands and Performance . . . results that excite and reward global investors with superior returns.

- *Values*—Five fundamental values: Respect, Integrity, Teamwork, Learning to Lead and Spirit of Winning, represent the essence of who we are as a company. They provide a framework of expectations for how we behave and relate with others. The power of these values and the behaviors that support them lies in how they help us achieve a consistently high level of performance, regardless of business or economic cycles.

- *Social Responsibility*—Whirlpool Corporation meets its societal obligations by extensive commitments to Habitat for Humanity International. It is donating a Whirlpool brand refrigerator and freestanding range for homes built in the United States and Canada under Habitat's new More Than Houses Program, a campaign to build 100,000 new homes by the year 2005. The company previously announced that it would donate up to U.S. $5 million in appliances for homes built by Habitat. "We are truly grateful to Whirlpool for making such a generous pledge of support," said Millard Fuller, President and CEO, Habitat for Humanity. "Literally, thousands of families will benefit from this exciting partnership."

ERP at Whirlpool

The following topics concerned with the enterprise resource planning (ERP) at Whirlpool are provided for analyses: dispatcher assignment, centralized pricing, vendor interfaces and Internet application problems. Within these topics are side issues including the Internet application decision, response time monitoring, and application integration.

Dispatcher Assignment

Sophisticated geographic routing software is helping Whirlpool Corp. consolidate 22 field service offices into a single hub operation, slashing millions of dollars in real estate costs in the process. The U.S. $200,000 Resources in Motion Management System (RIMMS) from Lightstone Group in Mineola, New York, is expected to help Whirlpool manage and coordinate its 440 appliance technicians across the U.S. from one service hub in Knoxville, Tennessee.

The Benton Harbor, Michigan-based appliance maker has already consolidated seven of its 22 field locations. The remainder will be brought into the fold by year's end. Whirlpool is replacing the colored pins and giant wall maps that have been used in its regional service centers for years. Automation will mean dispatchers may lose the intimate knowledge they had of local routes and traffic trouble spots. (With the manual system, it sometimes took dispatchers a full day to plot a daily service route for a single technician). Using RIMMS, Whirlpool dispatchers can lay out each technician's route within an hour.

The consolidation has presented Whirlpool with some tricky personnel problems. Under the service overhaul, technicians are being asked to cover new territories and squeeze in extra work in the same amount of time. Whirlpool's technicians typically handle ten customer calls per day. The hope is that by utilizing the most efficient routes from one customer call to another, each service technician will be able to squeeze in an extra customer job each day, said Tom Mender, a senior analyst at Whirlpool's LaPorte, Ind., parts distribution center. "Even if we can get an extra half a job a day, the [full-year] benefits are staggering," said Mender. "Our biggest challenge has been managing the expectations of our technicians," Mender said.

Whirlpool's service center consolidation also means it will probably need only five or six dispatchers, not the 24 it once used to support its field service centers. Downsizing "is something we've wrestled with from the beginning," Mender said. By centralizing and automating its service centers, Whirlpool loses "the quirks of knowing your hometowns," he said. Mender said the fate of its dispatchers hasn't been decided.

Centralized Pricing

When Frigidaire Co. drops freezer prices, a flurry of faxes and FedExes fly from Whirlpool Corp.'s offices in a fight to match those prices. But soon Whirlpool will be able to match competitors' pricing with a few keystrokes, allowing the company to react quickly to market changes or launch a special promotion for a single product. Whirlpool is implementing a centralized pricing configuration system from Trilogy Development Group, Inc. in Austin, Texas. The pricing software will allow Whirlpool to cut by more than half the 110 days it now takes to reprice its entire product line of more than 2,000 models each quarter.

Most important, the application will give Whirlpool a centralized pricing structure. Previously, the company used separate pricing models and order entry systems for each Whirlpool division, from small appliances to large goods to spare parts. "The big driver for all of this is to make Whirlpool easier to do business with," said Bill Hester, a senior information systems project manager at Whirlpool.

Whirlpool's technology overhaul, which also includes implementing SAP AG's R/3 and a massive operational reorganization, is necessary to prime Whirlpool for the dishwasher wars in years to come. The entire IT overhaul is estimated to cut U.S. $160 million from Whirlpool's operational budget over five years.

Hester said the company expects the new pricing system will pay for itself within a few years. Historically, Whirlpool's customer claims usually resulted from pricing discrepancies. "We would tell trading partners we were going to sell them something at 'x' price, but the system was charging them 'y'," said Kathleen Descamps, business project manager for Whirlpool's new pricing system. "So we would have to issue them a credit. It creates dissatisfied customers. It's much easier to say we are charging them 'x' and that is what is on the invoice."

With one centralized pricing system, sales agents will be able to meet that goal. The same information will be replicated in sales agents' laptops for quick reference when making field calls to trading partners. "They will have the same sales history information that is used to make [production] forecasts," Descamps said, so they will have the same information to help meet the forecasts. Whirlpool's current pricing system is highly dependent on spreadsheets, a laborious and time-consuming system.

Bill Hester, project manager at the appliance giant, said the quarterly job of revamping the pricing of every product takes 110 days and is prone to errors. Pricing has to be entered for every product under eleven different brand names. "It took roughly 180,000 cells in the spreadsheet," Hester said. "Since pricing is formula-driven, if someone

changed a formula, you wouldn't know the effects somewhere else in the spreadsheet. It took a lot of work to get the pricing masters printed."

If a marketing manager needs to change the price of dishwashers to match General Electric's pricing, that person can now enter the information, do a profitability analysis on the change and then, if acceptable, enter the new price. "Then a message is automatically sent to the pricing administrator, who sets up any rules for the pricing, and as soon as they hit 'enter,' if the pricing is effective today, the next person that places an order gets that new price," Hester said.

Vendor Interfaces

A warehouse automation system has propelled Whirlpool Corporation's Parts Distribution Center in LaPorte, Indiana, into a new era of customer satisfaction. The system, comprised of an elaborate configuration of computers and automatic conveyors, reduces the order-processing cycle time for customers around the world. "It helps us better manage our inventories with the ultimate improvement being customer satisfaction," says Tom Harrow, customer service supervisor.

Whirlpool Corp. hopes a new e-commerce initiative, Easy EDI, will cut down supply chain expenses and enhance efficiencies. Easy EDI's goal is twofold: to eliminate the paper process used by Whirlpool's 300 smaller suppliers, and to save Whirlpool up to U.S. $600,000 a year in operational costs for the electronic data interchange network used by Whirlpool's 300 largest suppliers, says David Tibbitts, manager of strategy and planning in global procurement at Whirlpool.

Initially, Easy EDI will involve four small and midsize suppliers that rely on paper transactions to conduct business with Whirlpool's fourteen North American manufacturing facilities. Four to six weeks later, the service will expand to about 30 suppliers; all small and midsize suppliers should be online by year's end. Whirlpool then expects to gradually roll out Easy EDI to its largest suppliers, which use a public value-added network (VAN) for EDI transactions. The company hopes to phase out VAN-based EDI, Tibbitts says—along with the U.S. $40,000 to U.S. $50,000 a month it pays for the service.

Easy EDI is an example of how the consumer-goods manufacturing industry is moving in the same direction as the automotive industry, says Susan Cournoyer, an analyst at Dataquest. "Agile, just-in-time manufacturing and its use of the Internet will cut costs and improve communications and responsiveness to customers," she says. Whirlpool is working with integrator Litton Enterprise Solutions, a division of government contractor Litton Industries, to develop Easy EDI.

Internet Application Problems

Late this year, Whirlpool Corp. plans to turn on SAP R/3 and link it to the Internet so retailers can place and track orders online. But that doesn't mean the call-center workers who take orders over the phone will go away. In fact, their jobs will become more important—and more complex, said senior project manager Bob Briggs. He said Whirlpool plans to use SAP AG's R/3 applications to give call-center employees access to all the information they need to answer questions about pricing, promotions and billing from retailers that sell its appliances.

That data currently is split into stand-alone mainframe systems, forcing retailers to get answers from multiple departments, Briggs said. Whirlpool isn't the only company that's still depending on its call center while moving more routine business transactions to the Web. But the call center is still vital "because the most complex problems are

going to go there," he added. "The nature of the work has changed, but I think its importance goes up."

But change won't be easy. At Whirlpool, for example, call center workers will be fielding "bigger and more sophisticated questions" on matters such as credit and pricing promotions, Briggs said. That will require them to learn both R/3 and a new set of business processes before the combination of SAP's software and Whirlpool's retailer extranet goes into use in the fourth quarter.

Whirlpool made a risky and ultimately damaging business decision by going live with its SAP R/3 implementation over the Labor Day weekend knowing that "red flags" had been raised, according to SAP AG officials. Fixing the problem would have delayed Whirlpool's go-live date by a week, SAP said. But pressure to take advantage of the long holiday weekend and to get off of its legacy system well before 2000 pushed Whirlpool ahead.

The decision resulted in a botched shipping system that, until it was fixed Nov. 1, left appliances sitting in warehouses. Some stores experienced six to eight-week delays before receiving their orders. "We suspected there would be problems, but the customer made a decision to go live despite warning signals," said Jeff Zimmerman, senior vice president of customer support services at SAP.

Officials at Benton Harbor, Michigan-based Whirlpool wouldn't discuss details of the snafu. "We have had some delays, partially due to the new [SAP] implementation and also due to record levels of orders," said Christopher Wyse, a Whirlpool spokesman. In a statement, Whirlpool Chairman and CEO David R. Whitwam said shipping delays, "most of which are already behind us, are due as much to the strength of our North American business . . . as to issues we've already addressed with the new system." He added that the problems shouldn't force the company to miss its fourth-quarter earnings targets.

Things seemed to be running smoothly days after the launch when 1,000 system users processed appliance orders. But by Sept. 18, with 4,000 users placing orders, performance started to disintegrate, Zimmerman said. That's when stores selling Whirlpool appliances started feeling the pinch. Foremost Appliance in Chantilly, Virginia, which gets one-third of its revenue from Whirlpool sales, had shipments from Whirlpool's Carlisle, Pennsylvania distribution center delayed six to eight weeks. "Some people are ordering four or five appliances, and we get one this week, none for them the next week. Then one more the week after. It's been a dilemma," said Bill Brennan, store manager. Brennan said he's been steering customers who don't want the long wait to other brands.

Whirlpool is the latest in a recent spate of ERP implementations in which user companies have grossly underestimated the complexity.

"These implementations are like doing open-heart surgery. There was an expectation on the part of the companies that was completely unreasonable," said Chris Selland, an analyst at The Yankee Group in Boston. Selland said that SAP has recorded more implementation successes than failures and that it's common to find "a hundred little problems and ten that are major" when going live—not just two like Whirlpool had. SAP has been under pressure to change its image from that of a company whose software requires multiyear, multimillion-dollar implementations to one that offers shorter, easier projects, Zimmerman said. SAP's plan to bring in project overseers 90 days before going live is relatively new, he said, but users would be better served if SAP were present at the project from beginning to end. Regardless of who's fueling the impression that companies can launch an ERP application quickly, "companies have to realize that the onus is on you and the consulting firm to make it work" Selland said.

Discussion Questions

1. How was the organization prepared for the change?

2. Was the problem with employees, whose jobs had changed, dealt with properly?

3. How were the customers and vendors communicated with about the changed procedures for interfacing in various transactions with Whirlpool?

4. How were IT employees prepared for interfacing with external consultants?

5. Evaluate the steps that were taken in the ERP activities. Which were done well and which could be improved?

6. Do you think SAP should be held accountable for any of the problems faced by Whirlpool? Why?

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