



CASE STUDY

Philips Consumer Electronics Revamps Distribution With Outsourced Solution

BY JEAN V. MURPHY

The North American division of the electronics giant wanted to improve customer service and reduce costs with a more integrated logistics operation. It elected to achieve that goal by outsourcing all outbound logistics.

Improved customer service, along with better inventory and cost controls, were the key “deliverables” that Philips Consumer Electronics of North America was after when it decided in 2001 to outsource all finished goods distribution/logistics.

A third objective was to team up with an end-to-end provider, says Danny Garst, vice president of logistics and supply chain at Philips CE. “We wanted a provider who would be responsible for both distribution and transportation, so that once we turned over an order, the 3PL would manage the entire process. The provider would manage everything required to meet our customer’s requests within their established delivery windows.”

Philips’ customers, which include many of the nation’s biggest and highest-volume retailers, set high, encompassing standards for delivery performance. These

include such companies as Wal-Mart, Best Buy, Circuit City and Costco to name just a few. Philips’ customer list also includes high-end specialty retailers like The Good Guys and a multitude of other national and regional stores. Macy’s flagship at Herald Square in New York City, for example, will begin soon to showcase Philips video products exclusively in a “store-within-store” concept known as The Experience.

The North American unit of Consumer Electronics, a \$2bn division of Philips’ global CE company — itself part of Royal Philips Electronics of The Netherlands — sells under the Philips and Magnavox brand names. Products include traditional televisions, big-screen and flat-screen TVs, DVD and video players, audio products, and handheld devices.

Philips’ outbound supply chain has a number of complicating factors. For one,

consumer electronics products have short life spans and it is hard to predict which products will be “hot” in a specific area during any given time period. Certain products, like big-screen televisions, are large and heavy, but still fragile, and are subject to strict loading rules. And nearly all of the products are high-value and/or easy to sell on the street, making theft a constant concern and extra security a must.

All these factors were part of the picture when Philips sent out Requests for Proposals to third-party logistics providers in the fall of 2001.

Previously, Philips had used a mixture of in-house and outsourced distribution/transportation services. “The lack of end-to-end supply chain management produced a result which was neither consistent nor dependable,” says Garst. “We needed a change.”

About 20 providers were included in the first round of RFPs, but that number

was quickly whittled down. Using both internal resources and outside consulting assistance from IBM, Philips CE developed a strenuous grading process to evaluate the proposals it received.

"This included everything from IT to human resources management, to relevant past experience, to quality control, to project management," says Garst. The top three candidates were then invited to present to the Philips executive team, including the CEO. At the end of this process, Ryder System of Miami was at the top of the list and was awarded the business in late 2001.

As part of its presentation to the executive committee, Ryder had done an assessment of Philips' network and material flows. It recommended that Philips close its distribution center in El Paso, Texas, and replace it with a new, larger DC at Alliance Park near Dallas/Ft. Worth. Smaller DCs in Greenville, Tenn., and in Riverside, Calif., were to remain open, at least for the present. Additionally, the Texas center could serve as the U.S. receiving point for large-screen televisions being built at a Philips plant in Juarez, Mexico. Handling that cross-border traffic also

was part of the outsourcing contract.

"In the past, the cross-border operation was managed in-house," says Garst, "but Ryder brought some solid experience with other clients in this area." For this service, Ryder works with customs brokers with whom it has long-standing relationships. Ryder-designated carriers pick up the freight in Juarez, Mexico and deliver it to the Texas DC and/or direct to customers.

"The issue here is to coordinate the delays that often occur at a border crossing and then factor that into the delivery schedules from the DCs," says Bob Fatovic, senior vice president of Ryder's U.S. logistics operations. "We have to have constant communication between our cross-border team and our Transportation Management Center (TMC)."

New DC

Ryder used its in-house engineering staff and proprietary software to assess the Philips network, says Fatovic. "We basically did the study based on the location of Philips customers and the freight volumes they projected over the next couple of years."

"As a result of Ryder's modeling, we

made a big decision to move our primary distribution center," says Garst. "By moving from El Paso to Dallas/Ft. Worth, we got our product within two days of 80 percent of our customers." This move enabled Philips, in one stroke, to improve customer service and reduce transportation costs.

Even so, deciding to build a new 756,000-square-foot warehouse was a big undertaking, given the time-line Philips had adopted. Philips' goal was to have the new system fully operational by July 2002, barely nine months after beginning the process.

"Because we had fairly serious issues with our service levels and also with inventory control, we needed to make this happen as fast as it could. So the biggest challenge was our very aggressive time frame. It was a very fast, very complex project with very tight deadlines," says Garst.

Meeting this demanding schedule was made easier by Ryder's existing relationship with Alliance Park and with Hillwood Development, with whom Ryder has developed more than 1m square feet of space at the industrial park. Ryder's high-tech Transportation Management Center is



Ryder's Transportation Management Center is a centralized hub for planning, routing and executing shipments via truck, air, rail and ocean. Located in a 42,000-square-foot facility at the Alliance industrial park near Dallas/Ft. Worth, the TMC houses five giant reader boards that display activities by Ryder's shipment, carrier and freight management groups. Approximately 80 employees execute close to 10,000 shipments per week and manage \$2bn in annual freight movements.

located at Alliance, as well as warehousing facilities for other clients.

“Clearly, one of the reasons we were able to do this so quickly is because of our partnership with these specialists,” says Fatovic. “They were able to lead us through the real estate issues.”

There were no phases to this implementation — it was “big bang” all the way, says Garst. “We put up the building, developed and designed a whole new distribution system, put in a warehouse management system and transportation planning system, removed our own people and replaced them with the outsourced operations,” all in a little more than eight months. “Everything had to be integrated and ready to go on day one.”

Next to the time schedule, integration was the second biggest challenge, Garst says. “We weren’t just outsourcing the contracting of carriers or planning of loads, we outsourced the whole thing, so we had completely new systems, completely new processes, completely new ways of working.”

Ryder designed all the interfaces between its systems and Philips’ SAP. “We have a lot of integration expertise and we feel doing it ourselves is the best way to deliver value to the customer,” says Fatovic.

Given the complexity, “implementation went pretty well,” says Garst. “The system came up on the first day and we started shipping.

“I’m not going to tell you that there weren’t glitches. Anyone who has gone through a project of this magnitude would know I was lying if I said that, but when we had a problem we hunkered down with the Ryder team and corrected it. We had middle-of-the-night phone calls, weekend phone calls — whatever it took to work through the issues.”

How it Works

Ryder’s responsibility begins with electronic receipt of shipment delivery notes generated by Philips’ SAP system. These specify the delivery date that Philips has promised, based on its inventory and production schedules.

These delivery notes come into an order repository system designed by Ryder for Philips and located at Ryder’s Transportation Management Center in Alliance Park. The orders typically give Ryder a 48-hour lead-time. “That allows us to collect the orders and optimize them for the best load configuration and shipping method,” says Fatovic.



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Ryder uses a combination of in-house tools and optimization software from i2 Technologies for this purpose. “We find the most cost-effective transportation option that meets the delivery commitment and allows us to keep the freight secure,” Fatovic says. That may be truckload, less-than-truckload or rail intermodal.

Planning loads is a challenge because “we are dealing with everything from little handheld devices to 60-inch, large-screen TVs,” says Fatovic. “Trying to fit as much weight as you can into a truckload is difficult with these restrictions and odd-sized products. The optimizer takes all that into account.”

Philips ships “a couple of million units a month,” says Garst, but there is considerable variability in the size and timing of orders.

“There obviously are peaks,” agrees Fatovic. “The end of the quarter and the end of each month are big in consumer electronics, but our systems are designed to handle those surges.”

After the optimizer has done its work, pick/pack and loading information is sent to the warehouse management system at each of the DCs, which is Manhattan Associates’ PkMS.

In laying out the Texas distribution center, Ryder used detailed information on Philips’ products, including demand projection on its 3,000 SKUs, to determine the optimal configuration for picking. “We followed an ABC strategy, with the fastest selling products located closer to the dock,” says Fatovic, “but this is a continual

learning experience. This has to be dynamic because in an area like consumer electronics, one month a DVD player might be the 'hot' product, possibly because it is being promoted, and the next month the high-demand item is a 27-inch TV. We constantly update our slotting analysis for the warehouse to optimize the location of each product."

Security also was a key issue in warehouse design. "Obviously with consumer products and a large DC and hundreds of employees, we rely heavily on cameras," says Fatovic. "We use a combination of cameras, door alarms and actual security guards to maintain a really world-class security system." The highest value products are caged off in a special area of the center, he notes, and all exits and entrances are monitored. "Also, anyone entering the building has to have appropriate identification and follow a set procedure."

As orders are being processed in the warehouses, transportation specialists schedule appointments with carriers to pick up the shipments. Ryder previously selected core carriers and negotiated contracts and/or rates for the Philips business.

"We handle all procurement of transportation as well as freight bill audit and freight bill payment," says Fatovic. "Of course, this also includes monitoring performance of carriers and replacing carriers should the need arise."

Currently, core carriers include Saia, Roadway and Southeastern for less-than-truckload and Swift, J.B. Hunt, Schneider and American Eagle for truckload. When making carrier appointments, TMC specialists also confirm the type of equipment and any special requirements. Where the customer requests it, a delivery appointment is made.

"A number of customers give us 15 minute or 20 minute windows for delivery," says Fatovic. "We hit those windows with a high degree of accuracy," he says, adding that Ryder works closely with Philips' retail customers to "better understand their delivery needs."

Carriers send an EDI message when an order has been delivered and that shipment confirmation is sent back to Philips' SAP system so customer service representatives know that the order has been closed out. The delivery confirmation also is used by Philips to measure whether Ryder is delivering on time.



During this process, Philips has total visibility to its shipments through Ryder's online tracking system, RyderTrac. "We certainly don't track all the shipments, or I would need a staff of a thousand people," says Garst. "It's all exception based. If we have an issue, or if we receive an alert from Ryder regarding a shipment, then we track it, but most orders flow through the system and arrive as scheduled."

At the very beginning stages of the contract, Philips and Ryder agreed on key performance measurements. "We have detailed contract appendices based on extensive KPIs," adds Garst. "Service levels — hitting our customers delivery window — is the most important. I would say the second most important is cost and third is inventory accuracy, but we measure a lot of things."

From Ryder's perspective, this process "helped us understand what Philips expected to achieve and helped them understand what we were capable of delivering. We defined our critical measurements around that," says Fatovic.

Because of the data Ryder collects, it also is able to provide Philips with information that it did not have before, Fatovic says. "We are able to show them things like transportation cost per product," he says. "It's information they can take to their business development folks to help them price their products correctly."

Garst is reluctant to quantify results from the relationship, with one excep-

tion. "Inventory accuracy is an area where we have seen great improvement," he says. "Before, our counts were in the low 80 percentile for accuracy. Now, accuracy is at 99 percent. That's huge, because when a warehouse takes an order, if the product is not there 20 percent of the time, your chances of making customers happy are pretty slim — not to mention that when you can't find it you have to write it off, creating a profit and loss impact. So that was a huge benefit and one that we saw pretty quickly. Inventory improved, and we have sustained that improvement."

The partners set up processes for daily and weekly inventory checks between their two systems, he says, to make certain that inventory data remains in sync. "And, of course, we do random cycle counts," he says.

While Garst declines to give numbers on other key measurements, "they have trended up since the conversion," he says. "We're happy with our progress. Of course, we must continually improve in order to stay competitive given that supply chain is becoming key in relationships with customers." ○

