SUPPLYCHAINBRAIN
ONE FORUM • ONE FOCUS • MANY MINDS

2011 SUPPLY CHAIN INNOVATION AWARDS

GIANT® SUPERMARKET'S SUPER DISTRIBUTION

Finalists:

Motorola Mobility
ADT Security Services
Dow Chemical Co.
IBM
Polo Ralph Lauren

Direct-to-Store Takes Giant Step, and the Top Prize

For this year's Supply Chain Innovation Award, first place goes to Ahold USA and its partners—ES3 and Del Monte Foods—for a distribution system that streamlines order-to-store deliveries from days to hours.

When you've got a problem or challenge, you can tinker with it, massage it, slap a Band-aid on it—or you can go back to the drawing board, determine where you went wrong and start over from scratch. Ahold USA, Del Monte Foods and ES3 did just that. They figured that the traditional method of distributing manufacturer's product to grocery stores was a tried-and-failed process. Wasteful of time, money and resources, there had to be a better way, and indeed there is.

Just off Interstate 83 in York, Pa., stands what is said to be the world's largest grocery warehouse. Through it passes food products destined for Ahold's supermarkets—and from it come this year's Supply Chain Innovation Award winners.

The direct-to-store vision was to create a streamlined supply solution for the grocery industry that eliminated a distribution center and leg of transportation. By leveraging ES3's scale, manufacturers like Del Monte Foods (and others) and Ahold USA—whose supermarket portfolio includes Giant Food Stores—combined their mixing centers and distribution centers into one large facility. This streamlining of the supply chain requires scale, automation, information technology, and collaboration. Calling their initiative unprecedented, this year's winners say it has resulted in a synchronized, efficient, end-to-end supply chain solution that is faster, cheaper and greener than the current supply chain models.

The impact? Combining multiple manufacturers' mixing centers and a retail distribution center into a single facility has resulted in savings of more than 30 percent of supply chain costs for both the participating manufacturers and retailers. Additionally, retailers are seeing savings in store labor as selected pallets are better organized to align with store layouts and more accurately picked due to automation.

But back to the drawing board. Don Sussman, executive vice president, Supply Chain, Ahold USA, has noted that traditional supply chain network design ignored the basic principle that the shortest distance between two points is a straight line.

"Instead, we built our design on the premise that filling a truck is the most important thing—extra miles could be managed as long as the truck was full," he says.

Skyrocketing oil prices brought the industry back to its senses. The grocery supply chain needed to change the industry's economic order quantity from a truckload to a case without increasing the transportation costs. The challenge? No manufacturer or retailer has the scale to really streamline the supply chain in a significant way. How do you turn the collection of hub-and-spoke solutions, each optimized for a single manufacturer or retailer, into a straight line from factory to store?

ES3, a supply network designer based in Keene, N.H., has brought the grocery supply chain into alignment, Sussman says. It has eliminated the duplicate miles of the hub-and-spoke supply chains by putting the manufacturers' mixing centers and the retailers' distribution centers together under the same roof. In this model, product flows from the factory to the collaborative warehouse and then directly to the store.

This year's award-winning innovation was 10 ten years in the making as it required that infrastructure be built to support multiple manufacturers and retailers in the same facility. ES3's Pennsylvania facility supports storage of 400,000 pallets, annual selection of 300 million cases, and management of more than 25,000 items.

This supply chain innovation eliminates a warehouse touch, reduces supply chain inventory, eliminates a leg of transportation, reduces errors and damages, and provides better organized pallets to the store, according to Brenda Hambleton, ES3 chief strategy officer.

"The current supply chain is optimized not for regions but for one manufacturer and one retailer," Hambleton says. "Our model, the shared supply chain, is a really big deal."

The industry's approach to distribution and cost containment has evolved from Just-in-Time (JIT) in the 1980s to the inventory/product "pull" strategy of the Efficient Consumer Response approach in the 1990s. Manufacturers' mixing centers were vital components of ECR. Product from all of their manufacturing facilities was shipped to these centers. In this model, the retailer could order a truckload of product across all of a manufacturer's product lines. The truckload of mixed products was then shipped to the retail "distribution center" for selection into store orders and distribution, with product from other manufacturers, out to the stores.

By 2000, the industry's new initiative was Collaborative Planning, Forecasting, and Replenishment, or CPFR. It did little to change the underlying economics of distribution.

Two years later, ES3 has its own set of letters to join with JIT, ECR and CPFR. Called RBCW, for Really Big Consolidated Warehouse, the concept was designed to address the economics of the supply chain that had kept the other initiatives from achieving their professed savings, says Hambleton.

The vision is simple: fewer touch points and fewer miles are better. The path to the vision is consolidation of inventory into "one big pile" that supports servicing the stores or consumers directly. The inevitable challenges fall into three main areas:

Collaboration: The vision requires many levels of collaboration from collaborative warehousing to agreement on the order flow, financial transactions, and rules of engagement across suppliers and competitors.

Synchronization: All parties must engage in a "real-time" exchange of information that has clear meaning to each party.

Value sharing: There are clear cost savings and value creation that result from the streamlining of the supply chain. Aligning the benefits to incent participation and reward risks taken requires a careful balance of each participant's needs.

ES3 and its partners figured out that if you put the manufacturers' mixing centers in the same facility as the retailer's DC "magic happens." Handling, inventory and transportation costs are dramatically reduced as the supply chain becomes more streamlined and efficient. If manufacturers don't have to wait for retail orders, product can be shipped straight off the factory line, improving efficiency at manufacturing plants. Inbound product to retailers that once had to travel on trucks can now travel at a lower cost via rail. Retailers once had to protect their fill rates to the shelf by buying safety stock. They now pull their product from the manufacturers' pool of inventory for the entire region—this reduces the need for safety stock and lowers inventory throughout the supply chain.

The removal of a distribution center and leg of transportation reduces the supply chain cost of getting product from the manufacturer to the store by 30 percent for both manufacturers and retailers, says Dave Allen, executive vice president for operations at Del Monte Foods. This translates into about $0.54 to $0.78 per case based on research done by A.T. Kearney. These savings are dramatic in an industry where money is made in pennies on a case. "I think it's really time for CPG companies to start investing in technology like this," Allen says.

Manufacturers are guaranteed savings through reductions in case pick and transportation costs. (Also, ES3 says its systems and automation are so accurate, it will assume all responsibility for shipping errors: overs, shorts, and damages).

In 2010, product shipped to Giant of Carlisle stores (one of Ahold USA's supermarket brands) no longer moved through a traditional DC. Instead, the product flows directly from the manufacturers' inventories in York to the stores in less than 24 hours from order to delivery.

"The supply chain is really the glue and the grease to other parts of any organization," says Walt Lentz, Ahold USA senior vice president of supply chain. "The proliferation of SKUs is really good for Ahold, and ES3 enables that."

ES3 may be responsible for some of that "grease." Its automation supports building "aisle-friendly" pallets that match the category layout of each store. By all accounts, this improvement in pallet design, along with greater shipping accuracy, and enhanced paper and electronic documentation, reduces the labor required to move the product from the back room of the store to the shelf. The savings are estimated at more than 30 minutes per store per day.

Activity can now be focused on improving on-shelf availability, making sure product is there when the consumer wants it—and on continuing to streamline the direct-to-store grocery supply chain.

To access this article online, visit www.SupplyChainBrain.com.

Resource Link

ES3, www.es3.com