The Supply Chain: Who Knew that Every Oreo Makes a Journey?

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Emily Zhen, 17, is a senior at Naperville Central High School in Naperville, Ill. Zhen spent part of her summer participating in Wharton's Leadership in the Business World (LBW) program, during which she and her classmates traveled to ES3 in York, Pa., a leading company in the field of supply chain management. From restocking to robots, she got an in-depth view into what it takes to get products onto supermarket shelves. Here is her report of the visit.

Take a moment to consider the great number of grocery stores in the world and the fact that most days, they are stacked to the rafters with colorful, purchase-ready products of all types and tastes.
[“Whether it's frozen Lean Cuisines or Oreo cookies, these products change hands many times before reaching their final destination: the supermarket. ”?](#)
The process is a true study in business logistics, or the flow of material within the supply chain — a network of facilities and activities associated with making and delivering products, all the way from the procurement of raw materials and the assembly of components to the storage and distribution. The systematic supervision over moving products from manufacturer to consumer through the supply chain is known as supply chain management.

Portuguese Greek Yogurt

I got an interesting inside look into supply chain management this summer during a visit to ES3 in York, Pa., one of the world's largest grocery warehouses that combines product storage, a mixing center (which in part allows retailers to mix frozen and dry foods in one delivery truck) and a retail distribution center in one location. For ES3 chief strategy and marketing officer Brenda Hambleton, supply chain management means collaborating with customers to reduce costs, increase service levels and, most importantly, make the product available when it matters most.

In simple terms, ES3 strives to provide retailers with ample supplies when grocery shoppers reach for them. To avoid out-of-stock situations, ES3 must communicate effectively with retail grocery stores and constantly monitor consumer trends.

[“To illustrate the supply chain management process, ES3 challenged us to think about a case study for the product Saboroso, a fictitious Portuguese Greek yogurt brand”?](#)

. We were divided into groups of 10 and given the role of Saboroso's supply chain team.

My team considered real issues that ES3 faces every day, like making sure grocery shelves remained stocked with yogurt cups and ensuring the proper rotation of stored product, or inventory. We had to decide how many yogurt cups to place on the shelves at a time, how many delivery trucks to have on hand, how often to send trucks out to the retail stores to restock and how to respond to sales promotions that might cause yogurt purchases to spike. Since we were dealing with a product that had a relatively short shelf life, we also thought about how to move the product fast enough to keep the yogurt from expiring. After designing a plan, we presented our supply chain strategies using charts, graphs and other diagrams to ES3 management.

I learned a lot about supply chain management and teamwork from my Saboroso experience. Here are some highlights:

- Communication is key: Each grocery store is different, so understanding how the individual stores operate is critical. For each retail center, a supply chain management company must ask, "What is your total shelf space? How much refrigerated space do you have? How much does the out-of-stock rate increase for promoted items versus non-promoted items? Will the store be expanding? How does a store handle inventory?" Ultimately, supply chain companies like ES3 and retailers are working toward the same goals of efficiency and lower costs. Retailers often try to avoid having too much inventory, so quick and constant delivery of food products is crucial. This requires constant communication between the retail stores and the warehouses.
- Be flexible: Hambleton pointed out that in the supply chain management world, conditions are always changing based on consumer demands and trends. It's necessary to stay up-to-date with consumers' changing tastes and preferences. For instance, in the Saboroso case study, we had to consider that the popularity of Greek yogurt was rising while non-Greek yogurt experienced declining sales. We took this into serious consideration when organizing our supply chain scheme.
- Work together: Supply chain management projects are not a one-person job. Hambleton stressed the importance of being on the same page with other team members and ensuring everyone knows the goal and is aligned with the actions to achieve that common goal. As she noted, "Any organization can hire countless individuals to accomplish a goal, but if no one communicates and [works] together, they will never be able to reach that point."

The Missing Christmas Tree

My visit also featured an extensive tour of the warehouse, a bustling factory-like environment with robots and state-of-the-art automation at every turn. The company claims it is the largest automated multi-manufacturer warehouse in the world. And if you need an image of the sheer vastness of this facility, Hambleton offered an amusing ES3 anecdote: "The first year that we opened, we had a fake Christmas tree in the lobby. After the holidays, we decided to store it up in the racking. We have not seen it since."

The robots are sophisticated, equipped with technology to measure the dimensions of boxes and pack the boxes into pallets for store delivery. They are precise with their work, helping ES3 to maintain its high quality standards. An automated quality management system scans regularly for errors in packaging.

For those interested in pursuing careers in supply chain management, Hambleton and ES3 marketing and communications specialist Sarah Raffelt offered their insights:

- Supply chain management is a rewarding career, said Raffelt, who loves the inherent variety of her marketing job. While one day she could be gathering stories for the next employee newsletter, the next day she might be developing customer surveys, and the day after that, coordinating with individuals in York to prepare for an employee event. One of the more rewarding aspects of the job for Hambleton is the chance to work on a project from start to finish and see its end result. "It's easy to get caught up in multiple projects and lose sight of the

main goal," she said.

- In terms of academic preparation,
  "while some schools are now beginning to offer degrees in supply chain management, Raffelt noted that broad majors like business, communications and economics are common among SCM workers"?
  . However, if interested in the technical side, Raffelt advised pursuing degrees in analytics or engineering.
- Both women agreed that interpersonal and analytical skills are needed to be successful in SCM. "Having the interpersonal skills to speak with customers or partners outside of your own company is extremely important," said Raffelt. An analytical mind helps navigate the diversity in grocer and consumer demands.

These days, I consider myself an enlightened grocery shopper. My biggest takeaway from my ES3 visit: Supply chain management is a complex, technologically advanced, fascinating business that, in the end, keeps food on our plates. I have a whole new appreciation for the logistics process – and a lingering infatuation with Greek yogurt.

Questions

What are consumer trends and why are they so critical to effective grocery supply chain management? Other than Greek yogurt, can you think of other recent grocery-related consumer trends that might influence store supplies one way or another?

Why might a field like supply chain management rely so heavily on high-tech processes?

What skills are valuable in the field of supply chain management? Can you think of a few more that are not listed here?

Related Links

- ES3
- Supermarket News
- WSJ: The Hot New MBA: Supply Chain Management
- WSJ: Supply Chain
- KWHS: The Logistics Journey from Container to Customer