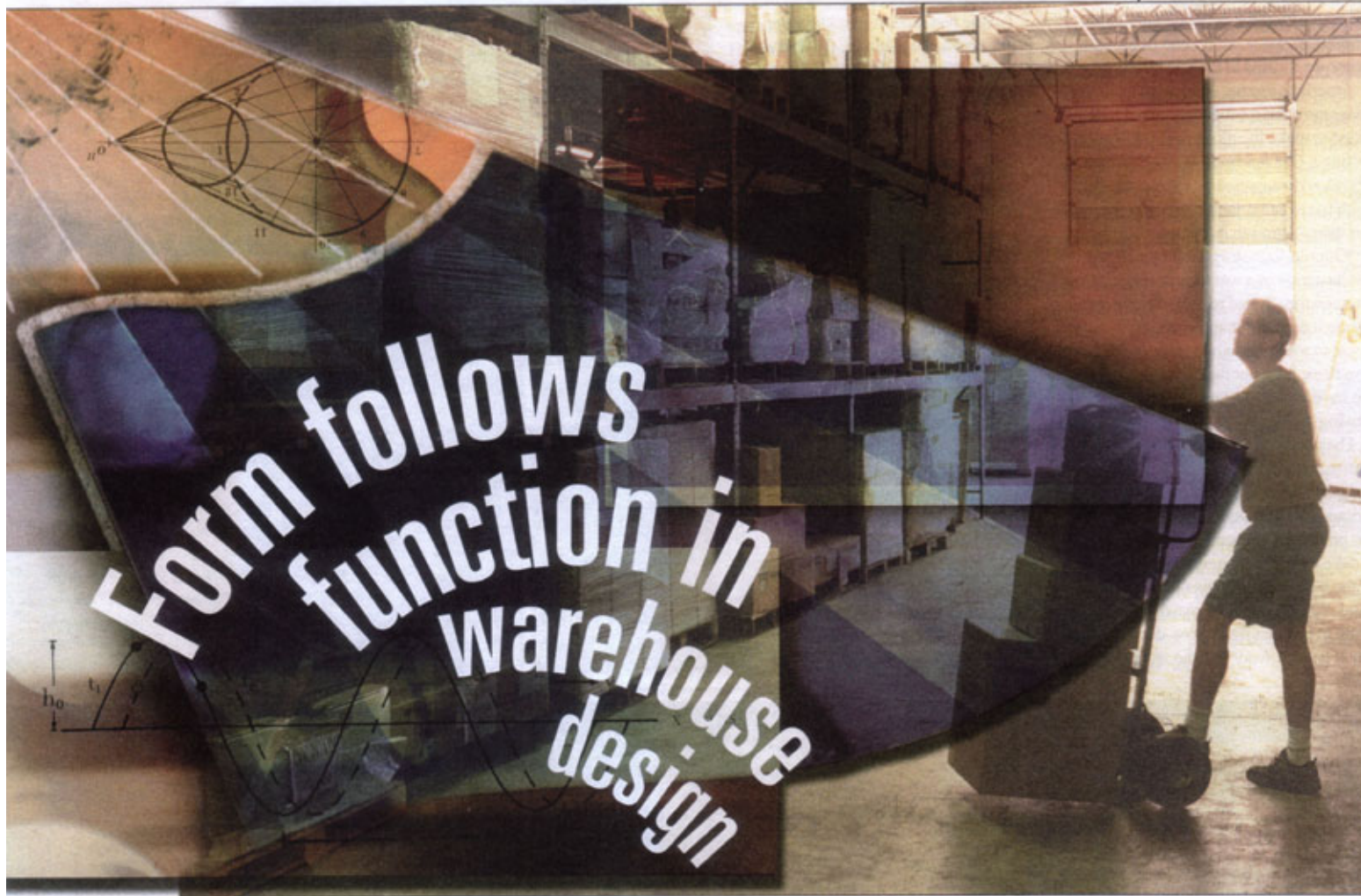


at a glance

This article looks at how shippers are designing new distribution facilities and adding modifications to existing warehouses.



The more you gain control of your inventory, the quicker you can move it to the final customer

by Roger Morton

Even though *American Textile Co.* off-shores some of its manufacturing in China and Central America, it maintains complete control of its inventory by having all products return to the U.S. and move through its new distribution center (DC) near Pittsburgh. The company makes protective bedding products, most of which are private labeled for customers throughout the U.S. and Canada. Since packaging must be specifically tailored for different retailers, the company needs to maintain a large finished goods inventory.

American Textile has approximately 1,000 SKUs, every one of which arrives at the company's U.S. facility completely packaged and ready for retail distribution. All detail work,

packaging and labeling is performed at the manufacturing site.

Previously American Textile performed all manufacturing in the U.S. Today, it manufactures its protective bedding products in China and El Salvador. It still maintains one manufacturing line in the U.S. — special pillows that provide relief for allergy sufferers and those with skin disorders.

Most of its products are not sensitive to freight charges, since hundreds of thousands of them can be fit into a small area. As Lance Ruttenburg, the company's vice president operations, explains, the cost per unit for freight on a pillow cover — when 100,000 can fit in a container — is not material to its overall cost. "However, that's not the case for our filled articles," he notes, "which is one of the reasons we keep that manufacturing here in the U.S. The loft of a pillow does not ship efficiently."

Before creating its new facility, American Textile had two facilities. One was a four-story building and the other, located five miles away, was what Ruttenburg describes as a one-story,

strangely configured building that wasn't necessarily conducive to efficient warehousing. The company consolidated those two facilities into one very large warehouse space, all on one floor, with everyone located in the one building.

American Textile conducted an extensive search for a consultant when it decided to make the move, eventually selecting *KOM International Inc.*, which was already engaged in a project to expand the existing facility to meet the company's growth in volume.

"Our old four-story facility was just not designed as a warehouse space," says Ruttenburg. "It had manufacturing starting on the top floor and working its way down to a finished good state on the bottom floor, then out the door. The facility we have now is designed for inbound receiving, put away, picking and shipping."

The new facility has **fixed racking and primary pick locations** for each of the company's SKUs. Additionally, there is storage for the inventory that replenishes the primary pick locations.

"We have all of our dock on one side of the building," explains Ruttenburg, "and it's that way for a reason. We often bring in product from cross-docking that never get put away into the warehouse.

They may come in and just move to the next door over."

In terms of technology, American Textile had reconfigured its enterprise resource planning (ERP) system to have specific warehouse management functions unique to its needs.

"As we've grown," says Ruttenburg, "we've decided we need an even more sophisticated system and are in the process of implementing a **warehouse management system (WMS)** from *Manhattan Associates*. Retailers want to do what we want to do: handle product as little as possible, have the least amount of inventory on hand and get it as quickly as possible to the floor so it can be converted into a sale. Everyone is trying to do the same thing. We want to have the product available to ship, then ship it, and get the next product in and be prepared to do the same thing. **An integrated system ties everyone together.**"

Headquartered in Scarborough, Maine, *Hannaford Bros. Co.* operates more than 140 supermarkets and combination food and drug stores

How to get the most out of your DC

Many shippers in the Northeast, such as *American Textile* and *Hannaford Bros.* (see main article), are trying to upgrade within their existing four walls. "The reason," says Mike McRae, senior project director with supply chain consulting firm *KOM International*, "is to avoid capital spending by getting the most out of their present facilities before they expand."

A typical first step is to reduce inventory, which has a big impact on extending the life of facilities and storing boxes.

"Once inventory is down as far as it can go — in terms of getting the most out of buying and having safety stock on hand, companies begin to look at different handling methods for all product lines," McRae observes. "They try to come up with cross dock methods that help take labor out of the warehouse."

Technology is then used to increase throughput even further as well as to improve accuracy. For instance, many of KOM's clients are using voice technology for picking, McRae notes. When all of these avenues are exhausted in terms of getting the most out of what's in existing facilities, companies will consider expansion or outsourcing. KOM doesn't see a big move to outsourcing warehousing and distribution because its clients want to maintain control of their own inventory and customer service, which they tend to lose when they go to a third party.

Omer Rashid, another senior project director at KOM, points to the growing use of deconsolidation centers close to port locations as opposed to DCs for companies that source offshore. "Smaller companies might make use of a common deconsolidation center — let's call it a consolidation/mixing center — where they bring in product from different locations around the world," he suggests.

In terms of innovative moves, Rashid notes that ergonomically friendly designs are moving into warehouse and DC space. "What companies are finding is that **improving ergonomics is improving productivity**, as well," he says.

A number of companies are also showing interest in automated cranes, particularly when they look at a new facility, adds McRae. "Companies really need to look at what they're paying their forklift drivers. That would be a starting point for considering a crane system. Cranes are ergonomically friendly, as well."

With the need for speedy delivery to final customers, KOM recommends 100-foot docks. As Rashid explains, "It's where you receive a load and break it down right on the dock to different routes that are ready to go out. In that way, dock space becomes key to the operation. If product doesn't have to be put in storage, that's a big advantage. A too small dock can strangle operations."

throughout New England. It owns and operates three DCs and transportation centers. Two of the DCs are full case, full service warehouses and the third is for specialty, slow moving products.

For transportation, the company uses partner providers in addition to its private fleet, *Hannaford Trucking Co.*, which handles its deliveries as well as some in-network backhauls and for-hire business.

Gerry Greenleaf, the company's vice president of distribution and transportation, is responsible for Hannaford operations as well as its sister company in Florida, *Kash 'N Karry Sweetbay*. They are both owned by *Delhaize America*, the U.S. division of Belgium-based *Delhaize Group*. In many respects, Greenleaf replicates Hannaford operations with *Kash 'N Karry Sweetbay*.

The company's procurement department forecasts needs and determines what products are to be carried. Greenleaf's job is to receive product, warehouse it and deliver it to the stores. In the regular course of business, every three years Greenleaf updates or revises strategic plans for the distribution network. "That's because what I thought were challenges three years ago may or may not exist now," he explains, "especially

in what drives our facilities — when do we expand, create, refurbish?"

Hannaford also works with KOM in its distribution needs analysis. Greenleaf explains that he looks at three drivers that influence warehousing and distribution requirements. The first driver is **sales and volume growth**, which is derived from data furnished by Hannaford's procurement and merchandising departments. "We have some of the highest turn numbers in the grocery industry,"

claims Greenleaf. "The challenge for the distribution network comes from frequently receiving product. We use our tools to analyze **what's most efficient for the supply chain.**"

The second factor is **item life cycle**, where new and discontinued products play a role. "What's needed is insight as to SKU growth," says Greenleaf. "With a lot of changes on the part of consumers, our emphasis as a consumer-driven organization has meant a

great deal of change for us. Ten years ago it would have been one SKU comes in, one SKU goes out. Now we're actually micro-marketing."

The third business aspect is **process changes** — what the company plans to do differently. "As an industry we talk about leveraging cross-dock and fast flow," notes Greenleaf. Hannaford is working with KOM to develop long-range assessments of the distribution network to 2010.

"We're looking at what's going to be different and what it'll mean for the DCs," he says. "For example, we might see growth in cross docking for the next three years, but in the fourth year we might need more dock space. I'm using my last three-year plan to drive my current facility strategy, which includes a couple of expansions. But while I'm doing that, I'm creating more dock space and enabling it so we can either reduce touches coming in and

out of the warehouse or prepare for the opportunity to cross-dock more items."

Hannaford uses a collection of tightly coupled systems in which its WMS is linked to the purchase order procurement system as well as to its transportation management system (TMS). "We usually buy solutions and modify them to our needs," Greenleaf says.

The company's most recent modifications include adopting voice technology from *Vocollect Inc.* for its warehouse. "We have voice selection in our full case warehouses," he notes. "We've had pick-to-light technology in our slow moving break pack operation for the past 10 years or so. Most of our warehouse functions are on **radio frequency for put-away and replenishment.**"

Hannaford has conducted pilot studies on radio frequency identification (RFID). The pilot made the company aware that it's not process-ready for RFID, so for the time being it's concentrating on ASN (advance shipping notice) RF receiving with the mindset that RF receiving can be easily replaced as RFID technology. "It just means a change in technology, not the process," Greenleaf observes. **LT**

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American Textile Co.
www.americantextile.com

Hannaford Bros. Co.
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KOM International Inc.
www.komintl.com

Manhattan Associates
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Vocollect Inc.
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