Retail logistics: One size doesn't fit all

RETAILERS IN THE US have seen a decade of unprecedented change. In the last 10 years there has been a flood of new retail space, with the top 50 retailers increasing their square footage by 55 percent. And not only are there more stores, but many offer similar products. The same brand of toothpaste can be bought at convenience stores, grocery stores, drug stores, supercenters, discounters, and warehouse clubs. Denim jeans can be found at the discounters and warehouse clubs, as well as at department stores, mass merchandisers, specialty stores, and other outlets. So much consumer choice puts tremendous pressure on retailers, with many historical leaders struggling in today's tougher environment. Of the 15 most profitable retailers in 1985, only 6 remained on the list by 1995.

To survive in such a competitive market, it is no longer enough to buy the right goods at the right cost – retailers must also get them to the right place at the right time, and with the right operational costs. Doing this well requires the best possible logistics, combining the information that determines buying decisions with the product flows that get goods to customers most cost effectively (Exhibit 1).

Robert E. Dvorak ◆ Frits van Paasschen

*Low-cost retailers discovered the power of logistics; now even high fashion leaders are paying attention ◆ The problem? Different incentives and no cooperation ◆ Do **not** minimize costs at the distribution center*

Many low-price retail leaders such as Wal-Mart, Sams, Price Costco, and Payless ShoeSource are famous for having built their financial success on logistical prowess. Take Wal-Mart. It sells similar product categories and sometimes identical products to fellow discounter Kmart. But Wal-Mart incurs non-product operating costs of about 18 percent, compared with Kmart's 24 percent. What drives the difference? To a great extent, Wal-Mart's ability to use its sophisticated logistical information system to give customers exactly what they want, and a product flow set-up that gets goods from supplier to store shelf with the lowest costs. Speedy restocking of goods, elimination of poor sellers, and promotion of successes also contribute to a clear sales advantage: Wal-Mart's discount stores register twice as many sales per square foot as Kmart.

But it is not only discounters who use logistics as a competitive weapon. Consider the other end of the price-scale – high-fashion retailers. Some

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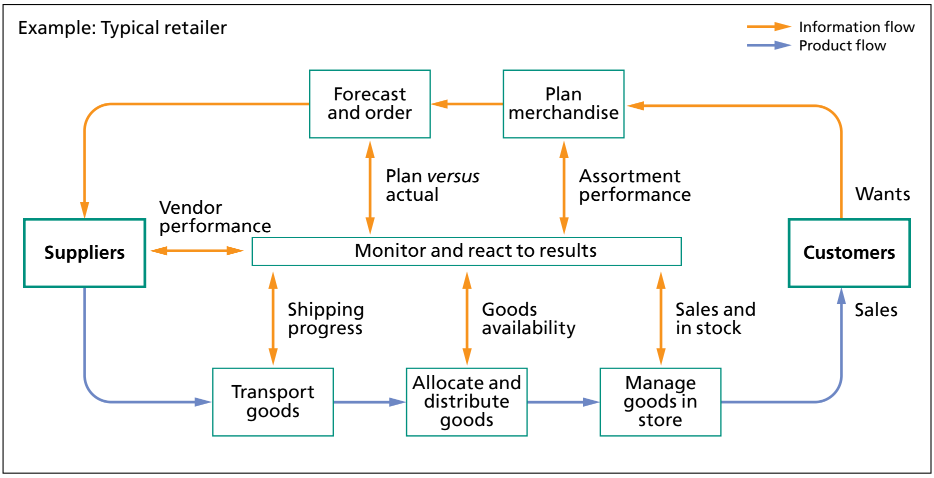
Exhibit 1

The logistical supply chain



European shoe stores used to manufacture their entire collection in large, low-cost batches (mostly in the Far East) before the season started. Predictably, some styles proved popular and quickly sold out, while others needed huge mark-downs to sell. To avoid both problems, retailers now make only 60 to 70 percent of their goods in large batches. They then track early sales and use quick-response European manufacturers to produce smaller batches of fast-selling items – albeit at higher cost. But despite the higher cost, quick-response logistics have greatly improved overall profits through increased sales and fewer mark-downs.

All manner of retailers are waking up to the power of logistics, realizing that they entail more than trucking and distributing goods. For without good information about sales and insight into customer needs, the finest distribution center and transport capabilities are likely to send the wrong thing to the wrong place at the wrong time. Effective logistics therefore require an efficient information system as well as good transport, distribution center, and store-handling capabilities.

And that's just the start. Those who excel at logistics in today's environment use logistical expertise not only to survive, but to sustain real competitive advantage. They have discovered that just as one strategy does not work for all retailers, neither does one logistics system suit everyone. No longer a generic capability, logistics can be tailored to support each company's distinct strategy. Fashion leaders, for example, need to make speed their priority, and typically incur higher transport costs, whereas discounters focus more on cost and would not consider flying in goods from the Far East for speedy delivery.

Senior executives thinking about how to compete should therefore consider how to tailor their own logistics. To do so they'll need a sound understanding of the fundamentals of good logistics, as well as logistics' new capabilities. Only then will they be able to make the choices and trade-offs required to deliver their specific strategy.

Logistical fundamentals

Whatever the retailer's strategy, it needs to be built upon certain fundamental capabilities.

First, the entire logistical system needs to be integrated, as managing logistics requires close coordination across several organizations – merchants (or buyers), planners and product placement, distribution and stores. Often each group is motivated and rewarded in different ways, providing little incentive to cooperate. Merchants, for example, are traditionally rewarded on sales, gross margin, mark-down management, and whether they live within their plans or budget (often managed as an "open-to-buy" account). Their focus is on finding popular goods, keeping the purchase price low and minimizing mark-downs. Planners and product placement people are conventionally rewarded on adequacy of stock levels and inventory turnover, so focus on purchase quantities and timings, while distribution hustles to deliver goods quickly and cheaply. Store management is interested in sales, the store's appearance, making customers feel welcome and ready to spend, and never being out of stock.

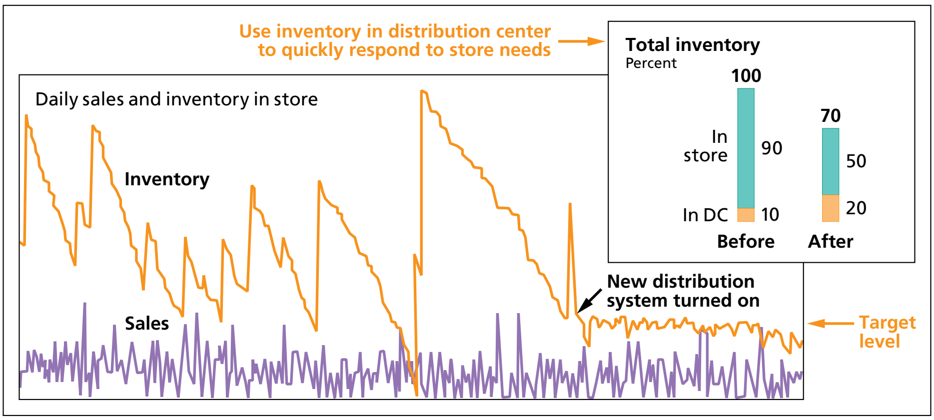
The entire logistical system needs to be integrated, as managing logistics requires close coordination across several organizations

With so many different objectives conflict is inevitable. To meet their budgets, buyers often seek the lowest product cost – even if everyone else has to pay for it in the form of longer lead times, higher inventories, and higher transport and handling costs because of increased processing in the distribution center or stores. Frequently, budget restrictions mean buyers are unable to reorder a fast-selling item until slower-selling goods have cleared – leaving stores with low stocks of what they need most, and too much of what isn't selling. To avoid open-to-buy limitations, they might also be tempted to delay distribution center receipts from the last two weeks of the month into the next month, leaving the distribution center with little to do at the end of the month and too much at the beginning.

To overcome these barriers to integration, all personnel have to realize the financial effects of their logistical actions. One way to do this is to move the buyer, planner/product placer and even store department managers to an all-inclusive profit and loss account. Using a single performance measure will force each department to coordinate its decisions carefully, taking into account the revenue and cost implications of their actions on the entire

Exhibit 2

Effect of changing inventory management



logistical chain. If work can be done more cost effectively at the distribution center or at the vendor, for example, then all parties are motivated to have the work done in the right place. If total inventory can be reduced by adding reserve stocks at the distribution center and reducing holding levels at the store, again everyone has an incentive to do so (Exhibit 2).

Once all departments are inspired to cooperate, the second key logistical capability – "end-to-end optimization" – can be set up. Too often, efforts to optimize efficiency in each step of the logistical process cause massive inefficiency overall. Probably the worst case of this is the singular optimization of distribution center costs. For most retailers the distribution center is the equivalent of the factory – a cost-controlled environment where scale, automation, and work efficiency can be brought to bear. The store is a comparatively high-cost environment, yet it is common for companies to push work or inventory from the distribution center to the store. Instead, they should be looking for ways to pull it back in the opposite direction. This might mean managing the flow of goods differently through the distribution center so that there is minimal back-stock handling within the store, or so that goods can go straight to the store floor. Frequently, a small amount of extra work at the distribution center can eliminate a lot of work in hundreds of stores.

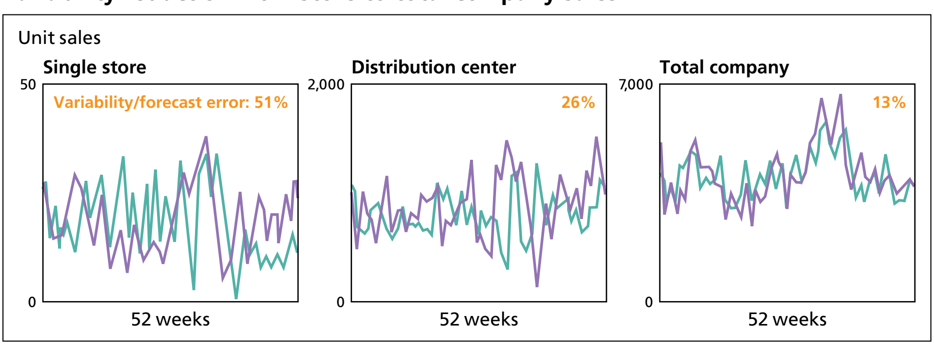
For example, stocks of fast-selling items should frequently be held in the distribution center and stores replenished on demand with full cases of items. For slow-selling, high-value goods, it is worth breaking open the cases and shipping individual items packed with other such slow-selling products in totes out to stores. And for yet other items, such as very large or cumbersome goods, there should be little or no intermediate handling between supplier and store, moving straight through the distribution center or even shipped directly from the supplier to the store. The aim is to find the most cost-effective way of getting goods all the way from the supplier to the customer – not step-by-step optimization.

The third capability is forecasting. Clever use of information can improve on the guess-work that plays too prominent a role in retail planning and greatly improve a company's ability to get the right goods to the right place at the right time.

With the exception of some fashion programs that are handled as collections, successful inventory management is store- and item- specific. Down at the individual item and store level, however, sales are highly variable. Apart from a few top-selling items or big promotional sales, buying patterns are random and hard to predict. But they become more predictable if you look at a group of stores served by a distribution center, or overall company sales. So, minimize the amount of time spent forecasting at individual store level and take full advantage of your distribution center or total company scale, where sales forecasts are more reliable (Exhibit 3).

Exhibit 3

Variability reduction from store to total company sales



Even in fashion categories sales guess-work can be improved. Some high-fashion retailers use catalogue sales to gauge demand and test their spring collections ahead of the season in a warmer climate. Some improve forecasts by asking a group of buyers to assess the collection then carrying out simple statistical analysis on, for example, the variability of buyers' predictions. Others ask core customers for their reactions at a pre-season video fashion show.

Yet good forecasting also entails recognizing its limitations, and learning to manage around unpredictability. In high-fashion retailing again, slow-selling items need to be cleared before they get stale or start taking up valuable space meant for the next collection, and popular items need to be rapidly identified and reordered. If reordering isn't possible, at least the knowledge of what has proven successful can be factored into the next collection.

In short, make sure you forecast well what can be forecast, and set up practices to react quickly to what cannot be forecast.

Delivering strategic advantage

Exhibit 4

Product flow comparison

Three example strategies

	Fast to market	Waves of fresh assortments	Low cost
Manufacturer cost	Trade off some cost for speed and flexibility	Live with longer lead times in order to drive lower purchase cost	Drive lowest purchase cost and off-load as much work as possible to manufacturers
Transportation from manufacturer to distribution center (DC)	Frequently use highest cost transportation mode (airfreight) to gain speed	Balance speed and cost using low cost transportation mode to small number of regional DCs	Maximize use of lowest cost transportation modes by establishing many local DCs close to stores
Distribution center cost	Look for speed	Balance speed and cost in handling new product waves	Operate DCs to minimize work done in stores
Transportation from distribution center to store	Small, fast, and expensive store deliveries	More cost effective small store deliveries	Most cost effective full truckload delivery to stores
Store operation	Full service	Full service	Self service

Some of the best retailers go beyond these three fundamentals to tailor their entire logistical systems to support their individual strategies. We have outlined three distinct strategies and shown how successful retailers have configured their logistics accordingly (Exhibit 4).

Fast to market

High fashion is a high-risk business. Trend-setters cannot simply react to consumer demand. They have to amaze customers with original collections, but need to know their innovations will sell. Meticulous planning therefore goes into every stage of design, production, and marketing to reduce risk in this fast-paced industry. Here is how one leading fashion retailer has tailored its logistics to support its business.

The cycle of innovation and market testing is calendar driven. Five ranges of clothing are created each year, with styles, fabrics, and pricing all subject to extensive market research. Mail order is used to gauge early customer appeal, tests are conducted in different regions to take account of variations in taste, and statistics gathered from bellwether stores where the new fashions are introduced early.

So far, so sensible. Where this company has scored its greatest logistical advantage is in ensuring that designs which pass market tests can be rushed to stores before fashion moves on. Part of that effort lies in cultivating relationships with suppliers, sometimes becoming the supplier's only buyer. Through long-standing relationships, the retailers can be sure that suppliers will be able quickly to translate its designs into clothes, while meeting stringent quality requirements. To create extra time for market testing and innovation, it typically reserves production capacity with suppliers, not specifying exactly what is to be made until the last minute.

The rush continues throughout the distribution chain. Retailers usually air-ship only those items that have unexpectedly run out. But this retailer air-ships all items that have sold better than expected during tests. Sometimes more than half of all deliveries are made by air. And to buffer variations in demand, stock is held in a single, centralized warehouse from which goods are flown to stores or freighted in company-owned trucks, organized to guarantee delivery within three days. None of this speed in distribution is cheap, but the expense is more than covered by higher sales and fewer mark-downs. The entire operation is designed to make the most of sales opportunities. Careful market research spots possible sales; then fast, focused logistics deliver the goods to make sure each potential sale is captured.

The logistics system is also well equipped to deal with losers. Monitoring sales against market-testing predictions shows up losers quickly, so that central merchants can force stores to mark them down early and move items before the season passes. In some cases, orders to vendors can be switched to the fast sellers, or pre-ordered fabrics can simply be cut differently to meet prevailing demand.

At every opportunity speed – even if it means higher transport costs – is the priority to maximize sales and profits.

Waves of fresh assortments

Not all retailers need to be so aggressive to keep up with changing tastes. Those that seek to satisfy more predictable demand can lure customers by providing a consistent selection.

Several US chains compete to sell casual cotton clothes. The most successful prosper because they keep the same old thing looking fresh by regularly introducing new assortments. What is important is to make sure stores are always stocked with the right variations in color, size, and design. For, unlike a high-fashion store customer who may be prepared to wait a few days for the appropriate size or color to be brought in from the warehouse, buyers of casual clothes will probably wander off if what they want is not immediately available. Their demand for fresh assortments and well stocked stores is met by a disciplined, regimented, and highly efficient logistics chain.

The leading retailer in this sector rolls out several waves of new assortments each year. Production lead times are long, because goods are manufactured overseas to keep costs to a minimum. Price constraints also rule out shipping goods by air, so long transportation lead times further extend the time it takes to get goods to stores. The thrust of the logistics strategy is therefore to achieve not speed, but a smooth, seamless transition from one wave of goods to the next, and a steady flow of goods from factories, through stores, to the customer.

A sizeable fraction of shipments are already designated for a particular store when they leave the factory, pausing in the distribution centers only long enough to be reloaded. Each store starts out with a fairly standard assortment of merchandise in quantities to match its historical selling patterns. Sales are closely monitored, and each week stores are notified which slow-moving items must be marked down.

The standard selection, however, is unlikely to meet the whole of a store's actual demand, so to cope with variations in demand – for specific colors, sizes, or designs – a second strand of the retailer's strategy introduces flexibility. Regional warehouses, located close enough to stores to allow cost-effective, frequent replenishment, provide buffer stocks ready to fill gaps on the stores' shelves. Deliveries up to three times a week from these warehouses typically fill in the gaps by putting the right items in the right place a the right time.

The overall result is a constant stream of moderately priced basic fashion items, achieved by keeping a careful balance between costs and customer service.

Low cost

Keeping logistics costs down is the hallmark of retailers which, like Wal-Mart, prosper on their ability to keep prices low. Wal-Mart famously tailored its expansion to its distribution centers. Stores are clustered around distribution centers to cut the time and cost of replacing inventory. But leaders in the field have added some new tricks to the cost-cutter's repertoire.

> Set your logistics to give you real competitive advantage, to support the goods and products that make you most distinctive to your customers

One tactic increasingly adopted by the most price-conscious retailers is to push responsibility for inventory and logistics on to vendors, enabling them to manage their own production as efficiently as possible by giving them information about sales. The result is reduced stocking costs for both parties. In some cases work is pushed back to the manufacturer. For example, fringe items not stocked in every store and not stocked in the distribution center are ordered in special pallets. To get the business, the manufacturer must deliver mixed-item pallets that contain exactly what the retailer specifies so the goods can flow cost-effectively through the distribution center straight to trailers bound for individual stores. Goods are then set to go directly on to the floor in their shipment cases or totes, rather than having to be very inefficiently sorted and stocked into back stock and later pulled out by shop-floor employees.

When promotional items are sent ahead of a promotion, the cases or totes are specially marked and held in a special back-stock location, so that minimal extra handling is required. The goods are then efficiently brought out in bulk to the setup location at the time of the promotion. Finally, all the work that can be taken out of the store is pushed back to either the distribution center or supplier where it can be done more cheaply. Special tagging, placing clothes on hangers, building displays – all is done well before the goods reach the stores, enabling store staff to focus on their highest-value purpose: serving the customer.

This strategy rigorously eliminates costs starting from the store all the way back to the vendor, the aim being to lower total delivered cost.

One size won't fit all

There are of course many other successful retail strategies, each of which needs carefully tailored logistical support. One retailer that aims to provide low-priced but high-fashion goods has designed its logistics to deliver both. Like the drivers of high fashion, this retailer uses extensive testing to anticipate sales volumes, and a single distribution center to smooth inevitable variations in demand. What sets it apart, however, is that it waits to see what is selling in higher-priced competitors' stores before totally commiting orders to vendors. It claims no expertise in guessing what will appeal this season. But once the latest fashion is apparent, it works quickly with a network of off-shore, low-cost manufacturers which it controls by being their sole customer. The result is current – if not leading-edge – fashion at low prices.

Developing any logistics system is expensive in terms both of capital and the accumulated expertise that comes with managing any highly complex and evolving system. Trying to create a system that could simultaneously support all strategies is almost impossible: you cannot fly your goods in to ensure speedy delivery if you want to be the absolute low-cost competitor. And if you aim too broadly with a spectrum of goods to fit different market segments, you will always be outperformed by a company with a sharper focus that has fine-tuned its logistics accordingly. So set your logistics to give you real competitive advantage, to support the goods and products that make you most distinctive to your customers. Realize you are likely to have to compromise over support for your other products, but consciously make those compromises so that where it matters most, you win. Q