

The New Borderless Marketplace

Repositioning Retail and Warehouse
Properties for Tomorrow



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**A White Paper Prepared for
NAIOP Research Foundation and the
International Council of Shopping Centers**



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Executive Summary

Historic shifts in consumerism are occurring globally. These shifts are driven by consumers who seek added convenience in their purchasing and shopping experiences. Electronic/mobile/social-media commerce creates a variety of new options and conveniences for consumers. These multiple virtual shopping channels, along with traditional physical stores, create complexity for the producer or manufacturing company that must now manage multiple supply chains to deliver goods that are purchased through any or all of these venues.

These changes in physical and virtual commerce already are having a profound impact on global supply chains and the delivery of products between manufacturing centers and individual consumers.

This study explored the backroom — if you will — of the shop. How does an order get processed and delivered to the end user — the consumer. On the surface, this may not seem like a real estate issue, but it is. Where is that warehouse or distribution center? How far is the distribution center from the retail store? How far is the distribution center from the transportation point — either for incoming or outgoing goods? **Even in this virtual world, the physical reality of where the merchandise is and where it is going still makes this a very physical retail world.**

But with that said, the physical locations are changing to meet the challenges from this new virtual world. The key takeaways from this review are:

- The storefront of tomorrow must **seamlessly integrate its physical and virtual channels** with emerging electronic, mobile and social-media technologies.
- Retailers must **balance the complexity of the product search, selection, financial transaction and delivery processes with the simplicity desired by the consumer.**
- Retailers must **offer a suite of delivery and return options** for the consumer.
- Retailers must **actively manage their transportation costs** taking into account the benefits of strategic packaging and locating distribution centers closer to the end user.
- Retailers must **implement new cost-effective ways to deliver merchandise**, which may include reconfiguration of retail properties and/or distribution centers or outsourcing the logistics to third-party vendors.
- Finally, retailers must **embrace a borderless strategy** to enhance their opportunities and stay ahead of the competition.

Introduction

Technological assaults on the traditional retailer — from the Internet, mobile devices, third parties without storefronts, and soon from global retailers — are changing how the retail industry operates. And as the industry changes, so too will the supporting cast of logistics delivery, fulfillment and replenishment systems and the pace at which these systems must respond to the many delivery modes and transaction methods. Survival in the face of new and advancing competition will require the retailer to move quickly to adapt to the fresh wave of how retail business is being conducted.

Retail transactions by electronic or Internet commerce (e-commerce), mobile device supported commerce (m-commerce) and social media supported commerce (s-commerce) are supplementing purchases once solely done at the cash register in a storefront. This new physical-and-virtual storefront is a multi-channel retailer. Here, customers can save time and money and businesses can make a profit and retain the customer. The success of this multi-channel sales integration is vital for a storefront to survive in today's ever-more competitive marketplace.

Although the storefront has changed (see page 5 for the breadth of what a storefront is today), the consumers' motivation for buying remains the same. These drivers include:

- Is the product available?
- Can I get it when I want it?
- Is the selection suitable?
- Is the buying experience memorable?
- Is the transaction price right or competitive?

In turn, retail- and warehouse-property owners will need to strategize how the answers to these questions today will affect their future business with regard to the location and size of distribution centers and retail stores.

The New Storefront

What is Today's Storefront?

A **building** of concrete, brick, glass and doors that welcomes customers to a location where advertising, product placement and merchandising drive traffic and prompt sales transactions.

A **catalogue** mailed to prospective customers that provides visibility into retail showrooms, motivating buyers to come to a store and conduct a transaction.

An **electronic browser** catalogue and a virtual showroom to support Internet commerce, where access to electronic advertising, available price checking and secure payment options offers customers a choice for when, where and how to conduct a transaction and receive purchased goods.

A **physical-virtual place** where customers in a physical store can simultaneously browse a competitor's products online. Through a new application that is available for mobile devices, customers can scan a product's bar code to receive pricing from competitors, determine product availability and choose which transaction to complete.

A **virtual space** where social networks will host social interaction, advertising, publishing, movies, finance, payments, entertainment, tickets, gaming, television and retail, all bundled into one mobile device, which is used to inform, entertain and conduct transactions.

The Evolving Traditional Storefront

The traditional storefront is a physical location where stock is kept on hand to support customers' choices and purchases. But the physical store has been evolving in recent years because of better inventory management and control, more coordinated logistics and advancements in payment systems. Nordstrom, for example, will ship directly to the consumer from any store location if that store has the merchandise the consumer wants, but the local store does not. This required an integrated inventory management system.

Another example of this change is at some furniture stores, which have become only showrooms, built without any inventory on hand at the store. In fact, regional warehouses can support more than 100 furniture stores, delivering customized products (in some cases assembled and finished) after the storefront order is made and paid for. This "storefront showroom" is supported by assemblers who take "knocked-down" furniture manufactured around the world, finish and upholster the goods for direct delivery to the consumer within days of the order transaction.

Retail stores also are becoming depots where online customers can opt for a store-pick-up rather than a home delivery. This in-store pickup benefits the store, as pick-up orders could include additional purchases made by the consumer while shopping there. In order to enhance the prospect of additional sales, many retailers produce an advertisement targeted to provide a discount to the buyer for use when the storefront is visited to recover the goods. This option, however, must also be integrated within the retailer's supply chain and distribution strategy and reflect the flexibility of the retailer to fulfill the order and deliver as promised to their customer. It may also be necessary to separate out floor space so that customers who pick up their online purchases at a store are able to access these products easily. By astutely arranging floor space within the store floor-plan, the savvy retailer can position the pick-up area in a manner that provides customers with additional in-store shopping and buying opportunities.

Retail competition for the physical store also is evolving. Retail companies that do not have a traditional storefront are impacting how in-store business occurs. This competition may be from a company's own virtual store or some other virtual competitor — which now has vastly changed the concept of a "trade area" for a physical retailer. To be sure, there always was some of this competition from mail-order businesses, but today the breadth, depth and even international reach of the virtual store has permanently altered the physical storefront.



Key Points

- Retail companies that do not have a traditional storefront are impacting how in-store business occurs. This competition may be from a company's own virtual store or some other virtual competitor—which now has vastly changed the concept of a “trade area” for a physical retailer.
- Electronic commerce (e-commerce), mobile-device commerce (m-commerce) and social-networking-based commerce (s-commerce) are all growing and evolving at different speeds. Already the distribution and facility strategy may require new, re-configured facilities and networks in order to support the demands of multi-channel fulfillment. Furthermore, some retailers will need to add new purpose-built distribution centers which strictly support their multi-distribution platforms; others will utilize a third party, such as Amazon.com, to perform their new commerce fulfillment requirements.

As a result, the traditional concept of a store is blurring and “multi-channel distribution” is the mantra of the retail industry today.

The Virtual Retail Impact

In 2011, about one-third of Americans owned an Internet-enabled smartphone.¹ But as people trade in their cell phones for smartphones, they will naturally take more advantage of their devices' powerful capabilities for doing a range of mobile activities, including shopping and buying. Although a Federal Reserve study found that, “consumers [today only] have a limited interest in using their mobile phone as a ‘mobile wallet’: 25 percent indicate they would like to use their mobile phone to pay at the point of sale. Given the current mobile payment adoption rate of 12 percent, this would double the use of mobile payments.”² The Federal Reserve also noted that, “The adoption of smartphones with barcode scanning software and Internet access has the potential to substantially alter consumer behavior in the retail environment. With this technology, consumers can quickly and easily compare prices across retailers while in store or online, or locate an item that is out of stock.”³

With more smartphone adoption, the use of and comfort with mobile commerce will likely increase transactions over time. These expected changes in commerce will have a profound impact on global supply chains and the delivery of products between manufacturing centers and individual consumers. **This “customized for-the-consumer” delivery system must be managed in parallel with the traditional distribution center replenishment strategy used by the largest retailers today. In many cases, this delivery system also must continue to support a catalogue sales strategy that generates additional sales.** Logistics and facility decisions must be made to assess the value of utilizing current retail distribution networks or adding new channels for fulfillment to support Internet commerce.

Electronic commerce (e-commerce), mobile-device commerce (m-commerce) and social-networking-based commerce (s-commerce) are all growing and evolving at different speeds. Already the distribution and facility strategy may require new, re-configured facilities and networks in order to support the demands of multi-channel fulfillment. Furthermore, some retailers will need to add new purpose-built distribution centers which strictly support their multi-distribution platforms; others will utilize a third party, such as Amazon.com, to perform their new commerce fulfillment requirements.

1 A May 2011 survey by the Pew Research Center reports that 35 percent of American adults owned a smartphone. Aaron Smith, “35% of American Adults Own a Smartphone,” Pew Internet & American Life Project, July 11, 2011, http://pewinternet.org/~media/Files/Reports/2011/PIP_Smartphones.pdf, retrieved April 3, 2012.

2 *Consumers and Mobile Financial Services*, Federal Reserve Board, Washington, D.C., March 2012, p. 15.

3 *Ibid.* p. 15-16.

Key Point

- According to a projection by Deloitte Research, within five years the current percentage of sales closed at physical stores versus alternative sales channels will drop to 76 percent from 91 percent today.

According to a projection by Deloitte Research,⁴ within five years the current percentage of sales closed at physical stores versus alternative sales channels will drop to 76 percent from 91 percent today. That organization also concluded that “brick and mortar” stores in the future will require a smaller footprint.

This white paper explains the context for the changes in the supply chain and distribution systems that will be required to accommodate the demand for multi-channel sales and products delivery. The multi-channel strategy will impact manufacturing systems, inventory control systems, packaging and shipping requirements. This will likely entail partnerships with new vendors to accomplish single-item delivery from around the world and will require new storefront configurations and locations, order-picking protocols and fulfillment strategies. Having a physical location that allows late departures of shipments to meet next-day delivery demands for products also may play a key role in future site selections and product-storage procedures. Returns, reverse logistics, claims and damage protocols will need an updated process to support repeat shopping, regardless of which channel the consumer chooses. Change also is occurring in how transactions are conducted; in the new storefront, payment options may include checks, electronic funds transfer, debit and credit cards, layaway programs, gift cards and new electronic payment applications for mobile devices.

As revolutionary as these changes already are for the traditional storefront retailer, the next challenge will be about creating and sustaining a storefront in the global marketplace. With Internet users currently accounting for 32.7 percent of the world’s 6.9 billion inhabitants⁵ at the end of 2011, the retailer that wants to reach this new marketplace must manage its international payment transactions and the delivery of those products in a total landed cost⁶ context through a method that meets the demand of the buyer. As the poster child of the online-only retail segment, Amazon.com already generated 41 percent of its operating income in 2011 from outside of North America and the global marketplace is likely to continue to expand much further with potential future competition, even for Amazon.com, likely to be from foreign shores.

4 This study was summarized in Elaine Misonzhnik, “Deloitte Study Discusses the Store of the Future,” *Retail Traffic*, January 24, 2012, http://retailtrafficmag.com/management/siteoptimizer/deloitte_study_store_future_01242012/index.html, retrieved April 6, 2012.

5 See “Internet World Stats: Usage and Population Statistics,” “World Internet Usage and Population Statistics” chart, December 31, 2011, <http://www.internetworldstats.com/stats.htm>, retrieved April 6, 2012.

6 Total landed costs include the actual transaction, the shipping costs, applicable duties and taxes in foreign countries and any customs duties or other legal entry fees associated with delivering the purchase to the international buyer.



Explosive Growth Expected to Continue

Key Point

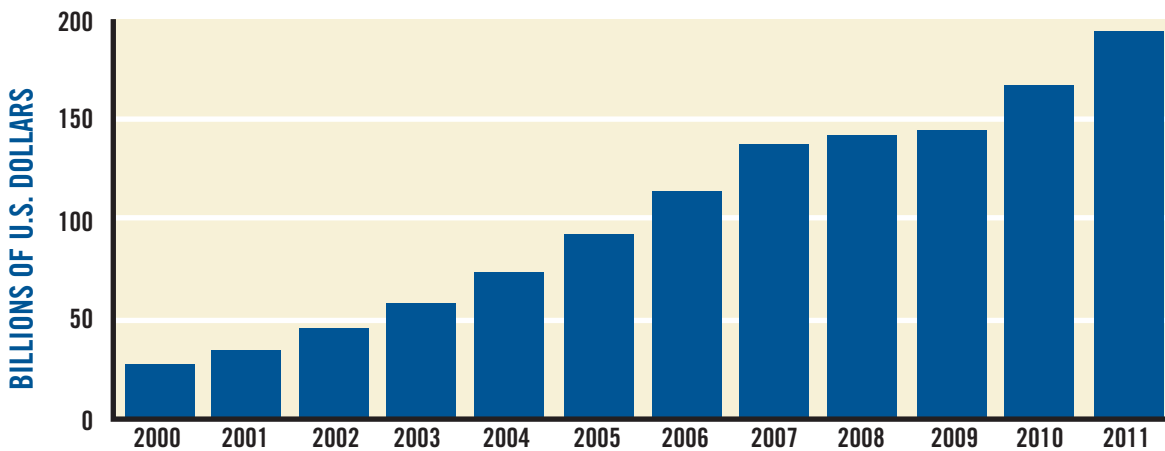
- Between 2000 and 2011, U.S. retail e-commerce sales grew by seven-fold and at its current growth rate will double its 2011 sales by 2016.

In 2011, U.S. retail e-commerce sales rose 16.1 percent to just under \$200 billion, according to the U.S. Department of Commerce and shown in Chart 1. Projections are plentiful regarding the strong future growth potential of this channel as more retailers beef up capital spending on their Internet-sales channel. Already, between 2000 and 2011, U.S. retail e-commerce sales grew by seven-fold and at its current growth rate will double its 2011 sales by 2016.

Moreover, leading retailers are gearing up mobile platforms as they evolve their retail-selling strategy. The m-commerce sector alone is estimated⁷ to have grown by 105 percent between 2010 and 2011. In that m-commerce space, Amazon.com has an estimated 37 percent market share. Already, the Web analytics provider Coremetrics⁸ estimated that 18.3 percent of all online sessions conducted on retailers' websites in 2011 were initiated from a mobile device. Additionally, Forrester Research forecasts mobile commerce sales will grow from \$3 billion in 2010 to \$31 billion in 2016.

These rapid changes in non-traditional storefront commerce and transactions call for changes across the retail industry and the supporting cast of logistics service providers and developers. **Retailers that successfully fulfill this challenge will help to ensure their survival; those missing the challenge will likely face severe problems. There is no middle ground in the new commerce transaction, distribution and retail industry.**

Chart 1
Retail E-Commerce Sales: A Seven-Fold Increase Since 2000



Source: U.S. Commerce Department

⁷ *Mobile Commerce Top 300 Guide*, posted on September 22, 2011 by internetretailer.com.

⁸ Leena Rao, "Christmas Day Online Spending Up 16.4 Percent; Mobile Sales Up 173 Percent," *TechCrunch*, December 27, 2011, <http://techcrunch.com/2011/12/27/christmas-day-online-spending-up-16-4-percent-mobile-sales-up-173-percent/>, retrieved April 6, 2012.

Transactions through the Demand and Supply Chains

The Demand Chain and the Supply Chain

It is helpful to conceptualize the buyer-supplier transaction as two parts of the same process. The first part is the “demand chain” and the second is the “supply chain.”

The catalyst for the **demand chain** is the buyer, who triggers a customer order and provides delivery information (the location where the item is needed) and financial transaction data (the payment). This demand information both precedes and continues through the **supply chain**, the global conveyor belt that moves goods from origins to destinations/consumers in bulk or as a single item. Effectively matching the demand and supply chains is the logistic challenge of moving goods between seller and buyer.

The demand chain section of this paper will review how order placement, order management, order control and order fulfillment processes are changing and being managed to satisfy the multiple channels for fulfillment. Elements in the demand chain include:

- The mode through which information about the product is made available to the buyer
 - Computer;
 - Tablet; or
 - Smartphone.
- The process through which the order is placed
 - Telephone;
 - Internet; or
 - Smartphone.
- The means which supports the transaction
 - Check;
 - Electronic funds transfer;
 - Credit/debit card;
 - Gift card;
 - Cash; and
 - Smartphone-enabled transfer.
- The process utilized by the seller to confirm that the order is “picked-packed and shipped”
 - Delivered by email, text or telephone.
- The method utilized by the seller to ship the product to the buyer
 - Overnight delivery by air, ground, U.S. Postal Service (USPS), courier or other delivery conveyance.



- The tracking information provided by the delivery services company of the transportation and delivery status of the shipment by
 - Email;
 - Text; or
 - Accessing the delivery company's item tracking system.
- The delivery confirmation communicated to the buyer
 - Left at specific location;
 - Signed for by specific individual; or
 - Delivered to fulfillment kiosk, mail kiosk or other secure delivery site.

These informational, financial and delivery details require reliable service, access to information and a delivery outcome that satisfies buyers sufficiently to bring them back for repeat transactions.

The supply chain section will review how changes in the logistics-system segments of order management, order tracking, order visibility, order security and order-costing elements are being managed. An analysis is provided of global sourcing, order preparation, order management, site selection, warehouse configuration(s) and replenishment strategies, offering insight into how the logistics chain is changing.

Demand Fulfillment

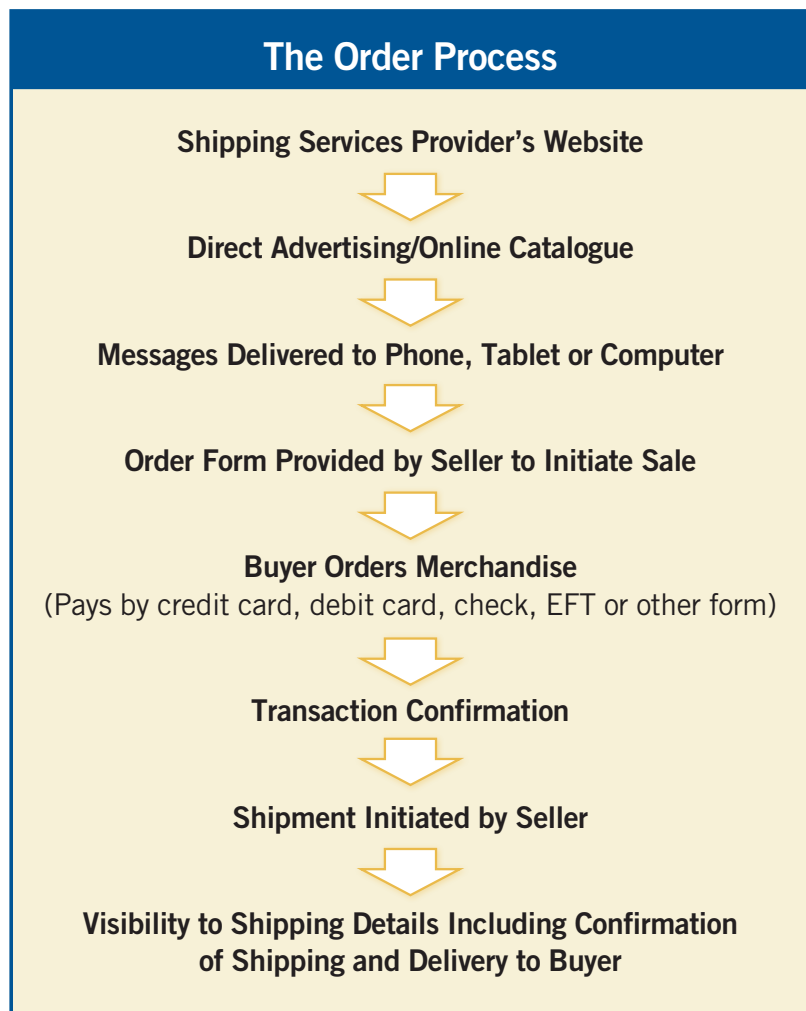
Increasingly, e/m/s-commerce systems convert potential brick-and-mortar storefront sales into digital sales, while customers shop inside or outside stores. Although it may appear a relatively straight-forward process as shown in the flowchart in Figure 1, the link between the customer's order and the retailer's order fulfillment is more varied than ever before. Shoppers are moving constantly between catalogs, retail stores and Internet sites—by web or mobile access. Consumers expect a seamless transaction, a consistent relationship and a predictable outcome to the order, the transaction and the fulfillment process.⁹

As a result of these multiple selling channels, supply-chain activities are critical to the success of the sales and operations, whether they occur between manufacturers, distributors, wholesalers, storefronts or fulfillment centers supporting Internet-based commerce. **It is vital for retailers to integrate their systems to address production planning, purchasing, materials management, distribution, packaging configuration, customer services, sales forecasting and logistics management.**

⁹ Keith Rogan, "Five E-Commerce Trends to Watch," *Ecommerce Times*, April 3, 2002, <http://www.crmbuyer.com/story/16967.html>, retrieved April 13, 2012.

Given that retailers have more expertise in merchandising than in logistics, one solution is to use supply-chain service companies.¹⁰ These companies provide a package-delivery network to fulfill the retailer's "order promise" delivery timeframe while maintaining control over shipping costs.

Figure 1



¹⁰ Care must be exercised in the selection of the logistics service provider. A study by CargoWise suggests that, "The global logistics industry is set for a period of consolidation which will see small to medium sized logistics service providers (LSPs) under pressure from larger players offering a wider range of value-added services. In order to remain competitive in this environment, smaller LSPs must be able to offer customers the highest degree of value while sustaining their own viability as a business". See, "More for Less"—Negotiating the New Economics for Logistics Service Providers," *Logistics IT Challenges and Opportunities in 2012*, CargoWise, 2012, <http://edge.halldata.com/UBM/JW/PDF860.pdf>, retrieved April 6, 2012.



The supply chain supports the fulfillment strategies and expected growth in e/m/s-commerce so that the demands of store-front sales and e/m/s-commerce fulfillment are accommodated. To make this more cost-efficient, more packaging uniformity may be required, as well as reconfiguring warehouse layouts.

As an example, to supplement traditional storefront sales of dolls packaged for shelf merchandising with Amazon sales, a doll producer must repackage individual dolls so that they can be shipped from Amazon to the consumer site by mail or UPS/FedEx. The manufacturer must package and present the dolls at a designated Amazon site, already prepared for order fulfillment by Amazon. *The individually packaged dolls must be ready to be shipped to one of Amazon's 52 U.S. fulfillment centers or 28 overseas locations for eventual delivery to a consumer.* **The decision to accommodate Amazon's requirement ideally must be made at the manufacturing center. If it is made later in the supply chain, the retailer may need to reconfigure packaging if a third party, such as Amazon.com, is to distribute the product.**¹¹

Additionally, many warehouses used to support traditional store replenishment by a distributor of retail goods are being reconfigured in order to support multiple volumes, stock items and surges in demand for order processing and picking based on e/m/s-commerce demands. In June 2011, Academy Sports and Outdoors launched a multi-channel retail storefront with an e-commerce platform that allows buyers unable to access the 131 storefront sites, the ability to conduct transactions from outside Academy's store network and gain access to more than 100,000 items "with just a couple of clicks."¹² The Academy distribution center, which opened in 2007 in Twiggs County, Ga., provided initial support to the Academy Stores' regional storefronts.¹³ Academy moved from pure retail support in its logistics center to a blended multi-channel strategy utilizing the distribution center to support regional storefronts and a national Internet storefront.

Although the Academy multi-channel warehouse strategy is efficient, an unexpected outcome of combining Internet-order fulfillment with its retail-store fulfillment center was a significant disparity between order volumes at traditional storefronts and at Academy's Internet storefront. An unexpected surge in demand for its products from Internet commerce — far above normal store-front sales — had two consequences. It increased income and revenue, but initially strained the order-procurement process. However, order and procure-

11 Amazon.com discussion, Council of Supply Chain Management Professionals Annual Conference, Philadelphia, October 5-7, 2011.

12 "Academy Sports + Outdoors Becomes a Multi-Channel Retailer with the Launch of its eCommerce Website," *PRNewswire*, June 6, 2011, <http://www.prnewswire.com/news-releases/photos/academy-sports--outdoors-becomes-a-multi-channel-retailer-with-the-launch-of-its-e-commerce-website-123337843.html>, retrieved April 6, 2012.

13 "Sports Retailer to Locate Distribution Center in Twiggs County," Press Release from Office of Communications for Governor Sonny Perdue, State of Georgia, April 12, 2007, http://gov.georgia.gov/00/press/detail/0,2668,78006749_79685625_83469126,00.html, retrieved April 6, 2012.

ment programs were adjusted to accommodate both in-store and online demand patterns, once Internet demand trends were better known and forecasted.

According to Rick Herlacher¹⁴ of the global intralogistics and materials handling solutions company Dematic, warehouse configurations today must take into account the:

- Daily-unit volumes;
- Number of units per order;
- Number of lines/product-types per order;
- Size of the product (cubic measure); and
- Turnover of each warehouse item.

Key Point

- The location of merchandise in the warehouse is most-effectively based on the velocity of demand for order processing and picking, order preparation and management and interaction with order shipping system(s) — all scaled to support the current and expected volumes of Internet activity anticipated by the distribution center.

Knowing these parameters, warehouses can be configured to support manual-order storage and retrieval, high-rate storage and retrieval systems and voice or radio frequency applications for order storage and retrieval. **The location of merchandise in the warehouse is most-effectively based on the velocity of demand for order processing and picking, order preparation and management and interaction with order shipping system(s)—all scaled to support the current and expected volumes of Internet activity anticipated by the distribution center.** Storefront replenishment should operate in a parallel order system, which is based on re-stocking orders or supporting seasonal or advertising-driven activity at the multiple storefronts supported by the distribution center.

One successful effort to impact positive activity at traditional storefronts is to drive the e/m/s-commerce order fulfillment toward the traditional storefront. During the checkout process for the e/m/s-commerce transaction, the buyer is given two choices: either pick up the goods at a local store of choice or have them shipped directly to a specified address. In an effort to induce additional store traffic, some e/m/s-commerce retailers provide a “coupon” that can be used for discounts on other merchandise purchased in-store during the redemption effort for the e/m/s-commerce goods. **In this context, the access to Internet browsing habits or preferences, prior comparative shopping efforts by the buyer and other targeted advertising can be applied if the retailer has access and can harvest data from the user’s computer or mobile device.** The significance of this information, specifically for a user whose social network host service provider includes Facebook, Apple, Google or Amazon, is that advertising and marketing data reside in the user’s devices, which are often not available to the

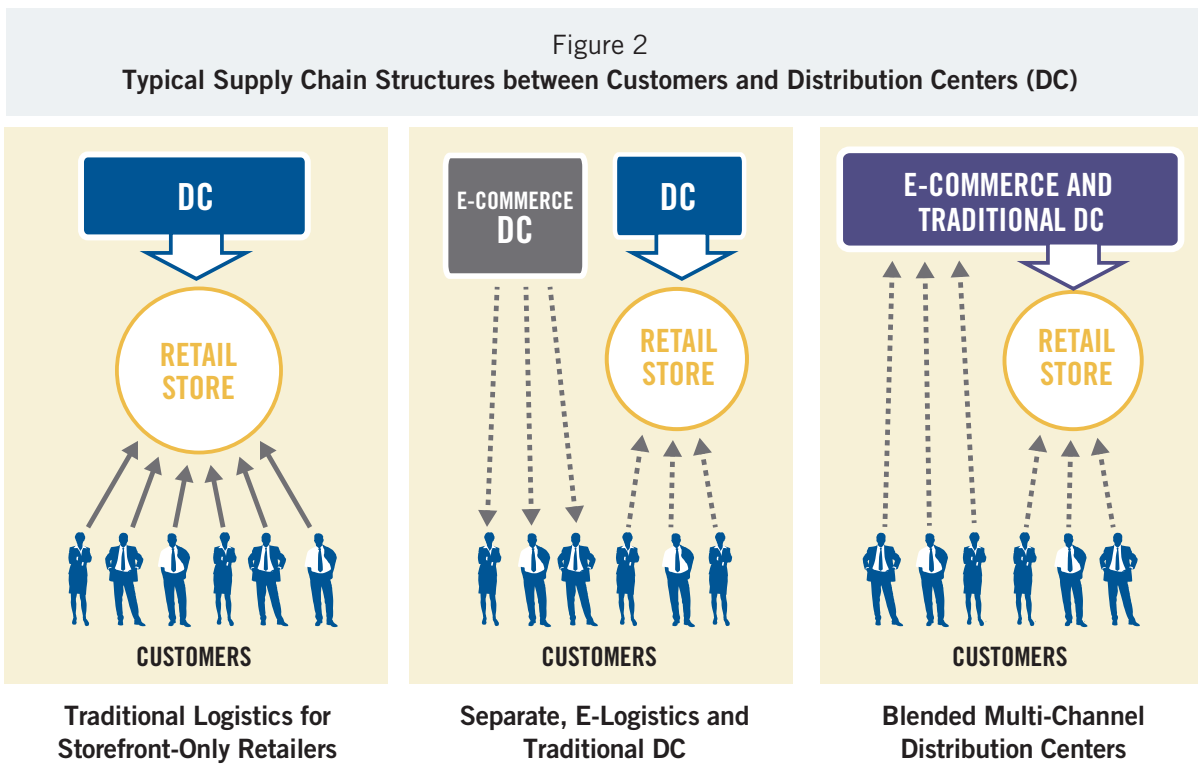
¹⁴ Based on “The Comedy and Drama of E-Fulfillment,” session at 2011 Material Handling and Logistics Conference, September 19, 2011, Park City, Utah.



retailer or the retailer’s host website. Technology journalist Farhad Manjoo observes, “The future will be defined by access to Internet and mobile device history and interest. Advertising and coupons will be equally focused on meeting the browser’s interest and matching that interest with a transaction — retail, entertainment, music, gaming, publishing and cloud hosting.”¹⁵

The Supply-Chain Structure

The traditional supply chain that was utilized by the retail industry for many years consisted of a single or multiple distribution center network that supported regional-store replenishment. Some retailers chose to utilize one distribution center to support storefront replenishment while others utilized multiple distribution centers to support storefront replenishment (see Figure 2). Through the storefront, the retailer satisfied the consumer’s demands, promoted products with advertising and conducted transactions. **Inventory replenishment systems must now support both direct-to-consumer and traditional direct-to-retail transactions.**



An interview with a third-party logistics provider offered additional insight into the management of their fulfillment center based in Columbus, Ohio. This example features a facility supporting 500 direct stores and 1,800 stores for another product line. This order-fulfillment center supports next-day delivery of replenishment goods to stores within a 500-mile radius of Columbus by using both contract delivery (FedEx/UPS) and loaded trucks that haul products from the distribution center to distant FedEx or UPS centers. This allows products to be processed as “local” deliveries within these carriers’ local delivery networks. Truck deliveries are made to Midwest and West Coast hubs, or direct to several stores (with each store receiving a partial load of goods), with team drivers reaching West Coast destinations in under four days. Deliveries to locations within one or two days of service are made using a single driver.

This Ohio fulfillment center also utilizes “outsourced transportation providers” to provide delivery to stores in specific geographic areas. By line-hauling regional-store volumes to a pool agent’s terminal and transferring the last-mile delivery responsibility to a transportation agent, the retailer’s network is greatly enhanced across the country and store fulfillment is accomplished within days after the orders are processed at the Columbus fulfillment center.

Line-haul trucks are loaded every day to specific and pre-planned lanes with destinations that include local, regional and “zone-skipped.” Zoned-skipped refers to loading truckloads of goods and hauling them to other UPS/FedEx centers. By moving the cargo to that center, it can be delivered by the carrier as local deliveries rather than being delivered and priced from the origin distribution center. With a central location in Columbus, this fulfillment center operates next-day support of store fulfillment to 68-70 percent of the United States (no Canadian market reported from this facility), which is difficult to achieve from anywhere else.

In order to support the emerging e-commerce and m-commerce demands, retailers today must deploy a new approach to supply chains that support moving goods from distribution centers directly to consumer sites. While some retailers will choose to completely outsource their e/m/s-commerce fulfillment to third-party specialists, such as Amazon.com, others will reconfigure parts of their current distribution system networks in order to support a multi-channel or blended fulfillment strategy.

There is a half-way point too. “An emerging e-commerce strategy is for retailers to sell a subset of products on the already popular and successful e-commerce site Amazon.com and then depend on repeat shoppers going to the retailer’s own website. This enables retail vis-

Key Point

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Key Point

- The decision to outsource the entire e/m/s-commerce distribution platform or to retain part or all of both channels of fulfillment is largely a function of the proximity to ground or air hubs for UPS, FedEx or the postal service. Close proximity to a transportation hub allows for longer daily order fulfillment cycles and is likely to reduce shipping costs.

ibility, but limits how much Amazon can take out of each transaction for each product sold.”¹⁶

The decision to outsource the entire e/m/s-commerce distribution platform or to retain part or all of both channels of fulfillment is largely a function of the proximity to ground or air hubs for UPS, FedEx or the postal service. Close proximity to a transportation hub allows for longer daily order fulfillment cycles and is likely to reduce shipping costs.

Proximity to sea-hubs¹⁷ or large inland ports also may improve supply chain reliability for imported goods,¹⁸ which allows an importer/retailer quicker and more efficient transfer of goods from ships to trains or trucks to reach distribution centers. Many retailers now utilize sites located in Foreign Trade Zones in order to manage import fees, duties and taxes. The issue of taxes, including sales tax, is a critical factor in the site selection process for e/m/s-commerce distribution center locations. Lastly, workforce availability and flexibility are also key issues in the e/m/s-commerce distribution center, as seasonal or “surge” labor forces are often required during peak fulfillment seasons.

16 Paul Demery, “The Risky Rumba with Amazon,” *Internet Retailer*, December 31, 2011, <http://www.internetretailer.com/2011/12/31/risky-rumba-amazon>, retrieved April 6, 2012.

17 The widening of the Panama Canal—which should be completed by 2014—is expected to be a major catalyst for more trade flows through the canal, because of lower transportation costs getting merchandise shipped from Asia to the Gulf of Mexico and east-coast seaports of the United States. Instead of having to unload those goods at the west coast ports and using intermodal delivery by ground or rail to ship it to the East, the widened Panama Canal will serve as a new option for retailers, wholesalers and manufacturers that manufacture or source from Asia. For example, see: “The Widening of the Panama Canal Opens New Doors for the Region,” Knowledge@Wharton, July 29, 2009, <http://www.wharton.universia.net/index.cfm?fa=viewArticle&id=1758&language=english>, retrieved April 5, 2012.

18 See Richard Thompson, “E-tailers and the Secret to a Good Location Decision,” *Area Development Online*, November 2011, <http://www.areadevelopment.com/HighTechNanoElectronics/November2011/e-commerce-location-decision-guide-00062622.shtml>, retrieved April 6, 2012.

Capturing Consumer Needs

The Lure of Free Shipping and Easy Returns

Today's Internet commerce requires a clear understanding of buyer motivations. One key decision factor in the customer transaction is shipping costs. Shipping cost-related strategies can have game-changing and volume-changing outcomes for retailers. According to Lauren Freedman, president of the E-Tailing Group, "Retailers know that consumers pull the trigger when there is free shipping." According to comScore, free shipping can increase order completion rates, increase order size and decrease check-out abandonment. One study found that three-fourths of consumers abandon retailers at checkout if shipping is not free.¹⁹

FedEx has suggested some options for retailers to consider in determining customer shipping charges. The company suggested:

- Test if triggers and barriers exist for the retailer's customers and what promotional-shipping events result in increased traffic and web volume;²⁰
- Use flat rate shipping at certain order/dollar thresholds;
- Establish membership in the retailer's shipping clubs for an annual fee;
- Offer unlimited two-day shipping for members;
- Provide optional upgrades for faster services;
- Consider free shipping for minimum purchases; and
- Offer free shipping on eligible products and certain limited times.

FedEx further suggests a broad array of shipping incentives to drive online sales and order size as well as decrease shopping-cart abandonment, including: Saturday delivery; time- or day-definite or appointment delivery; proximity delivery to certain zones near the fulfillment center; and delivery to specified "locker" locations to be picked up there.

The final frontier is to make sure that customers know that returns will be easy. At the extreme is a service offered by an online luxury shopping site in China where high-end shoppers, who spend \$4,000 or more in a single purchase, will have the ultimate returns service.



19 Federal Express, "Strategies to Help Retailers Win the Web's Free-Shipping War," *FedEx Online Retail Solution White Paper*, May 2011, http://images.fedex.com/us/ecommerce/pdf/155-232-10_ACESWhitePaper.pdf, retrieved April 13, 2012.

20 Market research to determine those thresholds where shipping-charges impacts the order volume should evaluate such metrics as: (1) total revenue; (2) operating margin; (3) number of orders; (4) number of customers who viewed the free shipping initiative; (5) average shipping cost per order; (6) average value of shipped orders; and (7) average conversion rate for a free-shipping promotion.

FedEx delivery agents will wait on doorsteps while Chinese consumers inspect the products, try them on and decide if they will be kept or sent back. If the goods are to be sent back, they are handed to the delivery agent and the return process starts immediately. This not only impresses the consumer with excellence in service, it defrays the costs and challenges of having the delivery agent make a return trip should the consumer choose, at some later date, to return the goods.²¹

The Last Mile

Home delivery, the “last mile” of the supply chain, often provides the retailer or the company’s logistics-service provider with the largest challenge in meeting or exceeding the customer’s expectation. The problems dealing with this last mile vary widely based on the size, weight and configuration of the products and the location of the delivery. At one end of the spectrum, according to Allison Enright of *internetretailer.com*, Amazon is testing a package pick-up option at local retail centers in secure lockers. At checkout, consumers in certain test markets can select a pick-up point in a retail mall or center where online orders can be picked up at the consumer’s convenience. Consumers who select the locker option receive an email from Amazon with a code that unlocks the locker once the package is delivered. The consumer merely enters the code on the locker door to retrieve the package.

Other retailers take a different approach to the delivery of goods, choosing to “bundle” delivery of a specific product with a companion service or sale. At Gallery Furniture (*galleryfurniture.com*) in Houston, Texas, the store offers buyers who select certain stadium seating and entertainment centers the option of having contractors arrive to install the electronics, sound system, stadium seating risers and remove unwanted furniture. This bundled service not only brings customers to this retailer, but it increases the overall transaction and expands the store’s influence during the buying experience. This “last minute” customization service is performed by in-house technicians who configure sound and seating systems to the individual customer’s requirements.

Controlling Transportation Costs

Strategic Packaging

Shippers who understand how carriers charge for packages and strategically package their shipments can gain significant savings. Both domestic and international carriers use dimensional weight, as in the amount of space the package occupies, rather than the actual weight to calculate shipping rates. If the dimensional weight is larger than the actual weight of the package, the shipper is charged for the dimensional weight instead of the actual weight.²²

For domestic shipments, the difference between dimensional weight and actual weight is not as significant as for international shipping. For international shipments, the dimensional weight is often much larger than the actual weight. One solution for shippers is to re-engineer packaging so that dimensional weights are not as significant a part of the overall shipping/cost equation.

Key Point

- The location of distribution centers throughout the United States can be a critical factor for ground transportation. New truck-driver restrictions by the federal government are likely to make the need for closer distribution centers more important or multi-driver systems necessary.

Less Time on the Road

The location of distribution centers throughout the United States can be a critical factor for ground transportation. New truck-driver restrictions by the federal government are likely to make the need for closer distribution centers more important or multi-driver systems necessary. Under the U.S. Department of Transportation's recently promulgated regulations for hours-of-services (HOS) of drivers, which became effective February 27, 2012, with a compliance date of July 1, 2013, these guidelines require an 11-hour daily limit for driving and cap weekly total hours at 60/70 hours rather than 82 hours previously.²³ This means that in some cases, deliveries made "today" under current guidelines may not be possible under the new rules.

A *Wall Street Journal* reporter shared the following anecdotes²⁴ on how these new regulations would affect the industry:

- Keith Tuttle operates a company that trucks empty aluminum cans from northwest Ohio to a beer and soda maker in New Jersey (550 miles, 11 hours of driving with a full load in return). Under the

22 Domestic shipments calculate dimensional weights by "length x width x height" of the carton, divided by 166. International shipments calculate dimensional weights by "length x width x height" divided by 139. See Paul Demery, "How 16 E-retailers Slashed International Shipping Costs," *Internet Retailer*, December 12, 2011, <https://www.internetretailer.com/2011/12/12/how-16-e-retailers-slashed-international-shipping-costs>, retrieved April 13, 2012.

23 For the full regulations and provisions, see, the U.S. Department of Transportation's Summary of Hours-of Service (HOS) Regulations, <http://www.fmcsa.dot.gov/rules-regulations/topics/hos/index.htm>, retrieved March 19, 2010.

24 Angus Loten, "Truck Firms Gird for New Limits," *The Wall Street Journal*, July 7, 2011, <http://online.wsj.com/article/SB10001424052702303365804576430133356447762.html>, retrieved April 6, 2012.



new proposed rules, Tuttle's trucks would only get to Harrisburg, Pa., 60 miles short of their intended destination and would be required to take a break for a day

- Under the new limits UPS would be forced to reconfigure its nationwide delivery networks, relocating freight facilities, jobs and hiring additional drivers.²⁵

There are several legal challenges to these new HOS regulations, so the issue is not completely settled.²⁶

25 *Ibid.*

26 The Federal Motor Carrier Safety Administration (FMCSA) is facing numerous legal challenges and strong push-back on certain aspects of the proposed changes to the Hours of Service and other regulations. These legal challenges and other strong opposition have been generated by parties including the Teamsters, U.S. Chamber of Commerce, Owner-Operator Independent Drivers Association and The American Trucking Association. See William B. Cassidy, "Who's Not Suing the FMCSA?," *Journal of Commerce*, September 12, 2011.

The Need for a Global Strategy

Going global with an Internet or e/m/s-commerce platform is daunting, but the opportunities are staggering too. E/m/s-commerce retailers in the United States must now look globally for their incremental growth, and **with this expansion into fast-growing consumer markets — such as in the Asia-Pacific region²⁷ — comes a wide array of logistical considerations and technological issues.**

There are complexities to implement a global retail strategy²⁸ for e/m/s-commerce, which include:

- Pricing;
- Payment terms and transaction costs/exchange rates and fees associated with supporting the transaction;
- The responsible party for transportation costs and insurance risks under International Commerce (INCO) Terms;
- Transportation fees and management fees paid by brokers, forwarders and intermediaries for export packing, consolidation, terminal fees, landing and bunker (fuel) fees and inland-last mile delivery fees;
- Tariffs and taxes for imported goods into the country of origin based on a complex management of the harmonized tariff classification of goods traded between countries; and
- Administration and overhead for international platforms for customer services, translation fees, procurement fees, compliance fees and security fees for filing under various international supply chain security initiatives.

Also, the greater the number of global sources used as origin manufacturing centers, the more complex the fulfillment network gets. As the number of countries “sold to” increases, so too does the number of custody transfers between the local/global order origin point and local/global fulfillment destination. Increasingly complex international initiatives directly correlate to more transportation and logistics service intermediaries required and more ports, inland ports, airports and final-mile delivery options to be managed. Total landed costs as a part of the transaction process are critical for the success of a global e/m/s-commerce initiative, but the process of arriving at a real-time, total landed cost will require immediate access to libraries of trade laws, tariffs, taxes, transportation costs and transaction costs across the supply chain, all calculated before the sales transaction is confirmed.

27 Paul Demery, “Looking East: China’s Online Sales Will Triple in Five Years, Study Says,” *Internet Retailer*, October 29, 2010, <https://www.internetretailer.com/2010/10/29/looking-east-chinas-online-sales-will-triple-five-years>, retrieved April 13, 2012.

28 Richard R. Young, “Landed Cost: A Key Determinant for Global Sourcing,” *Distribution Business Management*, Volume 12, 2011, pp. 51-52, <http://magazinevolume.com/8944DA/#/51/>, retrieved April 13, 2012.



Global transportation service providers can provide valuable assistance to the retailer, leveraging their international technology platforms, local in-country knowledge and international shipping capability.

Social Commerce: Opportunities for Electronic Storefronts?

In December 2004, Facebook had just one million subscribers. Seven years later, in September 2011, Facebook had more than 800 million subscribers. In the United States, 129 million people use social media each month. This phenomenal growth has naturally led to retailers exploring how its Facebook friends could be its customers too.

Utilization of social media by young adults ages 18-24, the next generation of consumers, has little room for expansion as 98 percent of this age group uses social media at least once a month. Experian reports that 58 percent of all online adults visit Facebook monthly and the average visit to Facebook lasts nearly five times longer than time spent at Google, Twitter or other social networking sites. The social network is expanding further with the average Facebook user having 130 friends. Social networks support searches for information on brands, companies and services. Downstreaming traffic from Facebook allows links to shopping destinations, as well as coupons, letting Facebook users share deals directly with their Facebook friends.

But alas, not every retailer has found its experience with Facebook selling successful. Witness J.C. Penney's fanfare when it announced in December 2010 that it was the first major retailer to have a "fully integrated Facebook e-commerce application." But since then, J.C. Penney, Nordstrom, Gap and Gamestop are among the retailers that have opened and closed Facebook storefronts. Whether or not this specific technology is the answer to future selling does not matter. It just demonstrates the speed of change in opening and closing virtual storefronts and how systems need to be flexible.

Final Observations

Four American companies — Facebook, Apple, Google and Amazon — have led in the definition of the 21st century's information technology and entertainment industry. However, during the next decade they will increasingly compete in the market for mobile phones, tablets, applications, social networking, advertising and transaction management. **These companies do not recognize any borders and are marching into retailing, advertising, movies, television, commercials and finance.**²⁹ *And this too is the future for all companies.*

New post-PC devices, such as smartphones and tablets, encourage and facilitate consumption. The strategy of the successful company will be to convert the wealth of consumer shopping data culled from these technologies into more targeted sales. For the retailer, the ability to retain as many pieces of the retail transaction as possible, rather than allowing a third party to “slice” off portions of the transaction, is the ultimate prize. By maintaining control over the transaction, the retailer can retain the highest percent of the revenue generated from each sale. This perspective provides a view into the competition facing the traditional retailer from the e/m/s-commerce service providers today.

The traditional storefront, the new storefront and the transaction processing systems provide both a challenge and an opportunity for meeting the customer on their terms, in their timeframe and maybe even in their pajamas.

But all of this will require businesses to re-evaluate their locations, their space needs and their logistics. About 10 years ago, Wal-Mart executives said they were *not a retailer*, but a supply-chain manager. It seems those words were more prophetic than they may have realized for the 21st century retailer.

Summary and Future Considerations

- The storefront of tomorrow must **seamlessly integrate its physical and virtual channels** with emerging electronic, mobile and social-media technologies.
- Retailers must **balance the complexity of the product search, selection, financial transaction and delivery processes with the simplicity desired by the consumer.**
- Retailers must **offer a suite of delivery and return options** for the consumer.
- Retailers must **actively manage their transportation costs** taking into account the benefits of strategic packaging and locating distribution centers closer to the end user.
- Retailers must **implement new cost-effective ways to deliver merchandise**, which may include reconfiguration of retail properties and/or distribution centers or outsourcing the logistics to third-party vendors.
- Finally, retailers must **embrace a borderless strategy** to enhance their opportunities and stay ahead of the competition.

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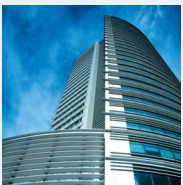
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