

White Paper



The next generation multi-channel retailing and fulfillment paradigm

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Abstract

In a multi-brand, multi-channel business environment, retailers are challenged to deliver a seamless shopping experience. The challenges span item data management, merchandising, customer marketing, pricing & promotions, order capture and supply chain fulfillment.

Multi-Channel Retailing has gained board level visibility because of its strategic benefits, scope of impact and level of investment required. It has been well documented that on-line consumers typically shop across channels, spend more money per visit, are significantly more profitable and tend to be earlier adopters of technology than off-line shoppers. However, the perception of multi-channel windfall profits may be slowing according to a 2007 benchmark report by RSAG entitled "The State of Multi-Channel Fulfillment"

If this perception proves true, companies must provide superior customer service to all their customers, not only from the e-commerce side, but also from the DC to the door step. However, designing a multi-channel commerce (MCC) solution has its challenges that can impact the entire supply chain.

Achieving Customer Conversion

Allowing consumers to shop where they want, how they want and with whom they want is driving the next generation commerce and fulfillment channel strategies. Figure 1 is a notional operating model, which represents this footprint along with its core components.

First, take the idea of Points of Access (POA). We typically talk in terms of Commerce Channels, but not always differentiating between Commerce Channels (order capture) versus how these channels are accessed (POAs). There's a myriad of ways consumers interact with retail companies to access their commerce channels. As shown in the model, a one-to-many relationship exists between the Commerce Channel and POAs. For example, a company's catalog can be used to gain access to multiple channels like the call center or internet where the customer will place an order. In addition, just because a customer starts in one channel, often times they will cross commerce channels for their actual sales transactions. Once placed, this order will need to be processed accurately and routed to the fulfillment center that is best equipped to fulfill this order based on the requirements of the consumer.

Emerging Trends

Points of Access

The proliferation of POAs continues to drive consumer shopping behavior, expectations and the associated technology. When consumers adopted high speed DSL/ cable modems, this began to drive consumer expectations and accelerated technological change.

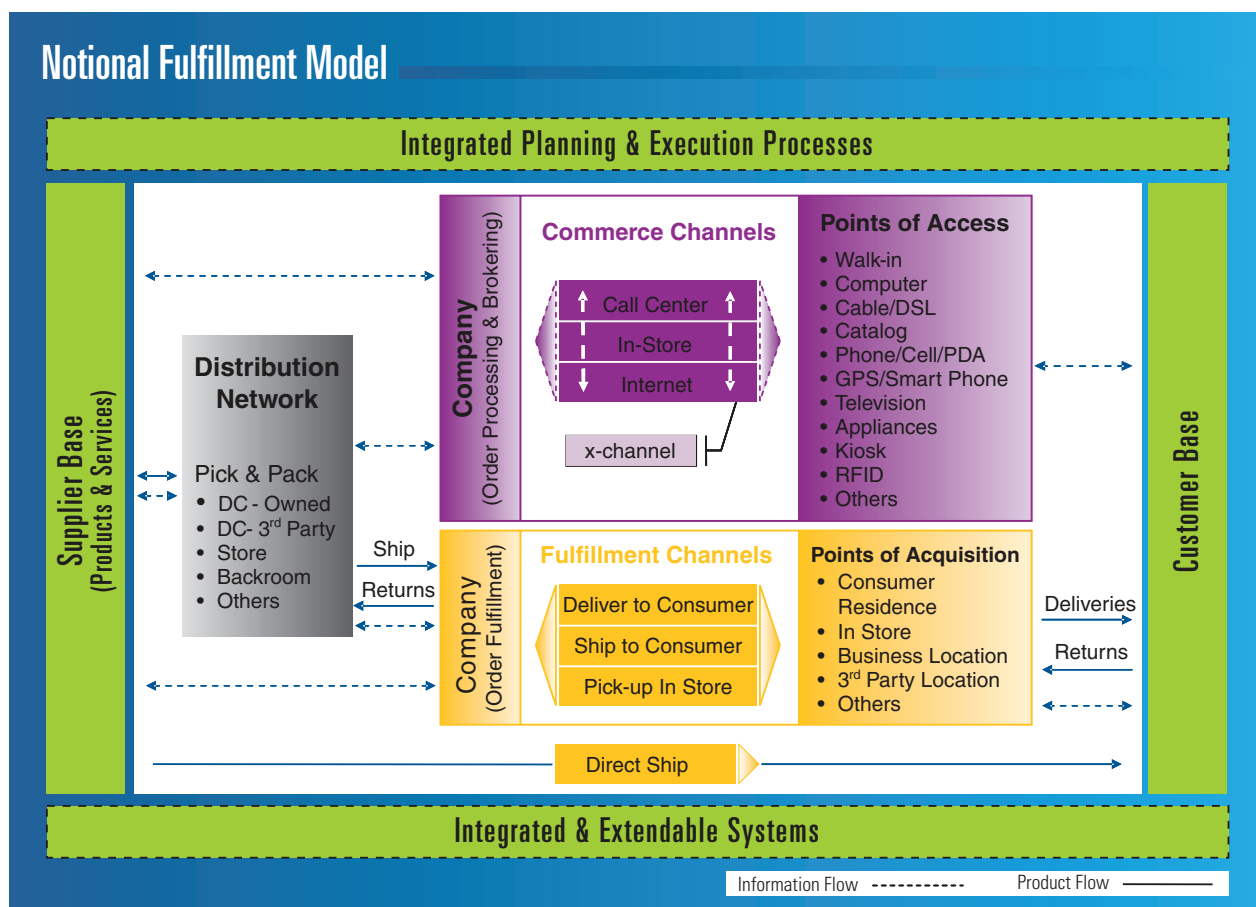


Figure 1

This trend will continue as other and more efficient points of access are created and adopted. For, example, cell phones integrated with PDAs, GPS devices and the like are increasingly used more for gaining access to channels for order status checking and product information. These devices may eventually become an active commerce channel for this country in the near future.

Looking further into the future, imagine smart appliances (i.e., refrigerator) equipped with internet connections and RFID technology allowing them to access the internet and re-order items based on household inventory polices. This could be another emerging POA that could mature into a commerce channel as well.

Commerce Channels

Consumers using multiple commerce channels are fast becoming the norm. While retailers have established multiple channels for their shoppers, the behavior of these shoppers has transcended these channels, crossing them on a regular basis to achieve their shopping needs. However, making the channels “sticky” is a challenge for many retailers. The risk always exists that the consumer will checkout of the process and go somewhere else. Thus, techniques and technologies are emerging which are used to minimize this.

The competition to win over consumers with a near reality TV type of approach has taken hold. The goal: keep the consumer engaged and connected to your site by offering an in-store like experience with all the information they need at their finger tips with capabilities such as:

- Social Networking, Inviting the Customer in
- Merging Community and Content (view, edit, contribute)
- Rich User Experience (visual chat/ product information, etc.)
- Enhanced product visualizations (i.e., 3D, dynamic)
- On-line voice customer support (VoIP)
- Personalized data feeds (Really Simple Syndication –RSS)
- Merging of data/feeds to create new services (mashups)
- Rich User Experience (visual chat/ product information, etc.)
- Enhanced Product Visualizations (i.e., 3D, dynamic)
- Configurable Orders
- Cross-/Up-selling

Welcome Web 2.0, which is built on the philosophy of driving social interaction, enhanced collaboration, peer-to-peer communication and user-driven content contribution/modification. According to Forrester, only 26% of Web shoppers are satisfied after completing a transaction compared to 70% for in-store shopping. Companies are trying concepts like Web 2.0 to flip these ratios. But, actually implementing the technologies and processes to achieve the desired social interactions is the critical success factor. According to Gartner, 80% of Global Companies will have tried Web 2.0 by the end of 2008, while only 20% will have successfully adopted the nontechnology attributes like metadata and content produced by users.

Infosys has developed a Retail Web 2.0 Index to assist companies in determining where they stand relative to their closest competition on key parameters like content, collaboration and commerce. This helps companies identify gaps and prioritize investments for the development and implementation of an effective Web 2.0 strategy which can be reduced to practice. Figure 2 Illustrates one of the typical outputs from this index.

Application Technologies which focus on enabling Web 2.0 principles (i.e., visual chat, rich content visualization, collaboration platforms, content management, etc.) will help companies to capture orders and drive greater revenues by providing the consumer with a differentiated and enhanced shopping experience.

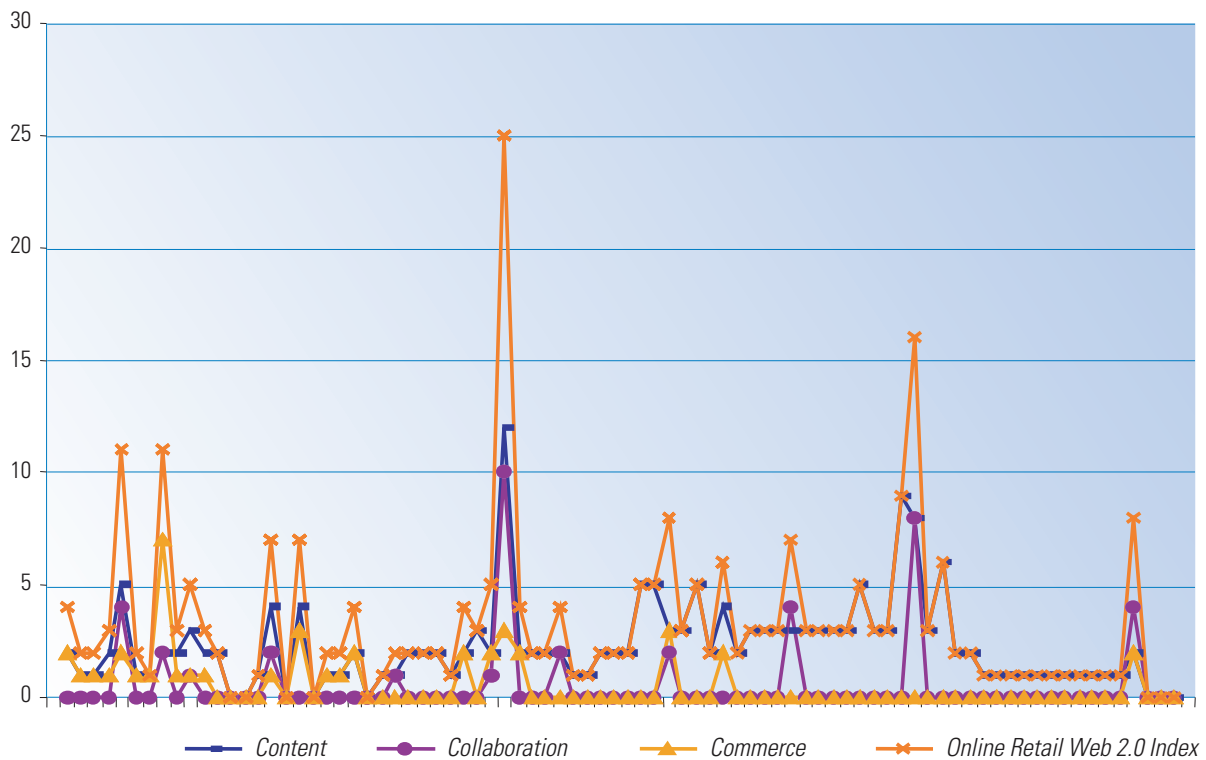


Figure 2

Technology advances are closing the gap between offline vs. on-line shopping experiences. The one who has the most seamless store-like experience enhanced with all the trimmings wins. It is expected that as technologies such as Web 2.0 become more broadly adopted, this gap will decrease.

The Bottom Line

No matter how consumers want to access channels to search, track and place orders, companies will need to have the process, organizational and technology infrastructure in place to support them. The implications of this are broad. Call centers need to have processes in place for managing an increasing number of access points. Marketing's role must change from driving traffic and understanding behavior on not only commerce channels, but also for an increasing number of POA's. Finally, as consumer demand continues to morph, the technology platform that companies have in place will need to adapt to these changes in both POA's and commerce channels.

Measuring Conversion

The goal of any market research is to understand what the consumer wants by analyzing buying behavior and what influences their purchasing decision. Web analytics packages have come a long way in measuring everything you could think of. But, what really should be the focus? Typically the focus is on conversion rates, which is an end-of-process measure. This type of measure, although good, only measures what happened, not why or how. In-process measures get closer to the why by better understanding the events which led up to the order conversion or abandonment. Some examples of these are highlighted below:

- Originating Traffic Source
- Total Visit Time: From entry to exit
- Navigation Efficiency: From entry to product selection
- Action(s) Prior to Cart Abandonment:
- Action(s) Prior to Site Abandonment
- Cart Abandonment Exit Survey Results

Companies should consider the potential worth of using online exit surveys which automatically pop up after a cart abandonment event occurs to better understand why a consumer left. This idea is no different than a store associate asking you at the register or before you walk out the door if you have found everything you were looking for.

Web analytic application technologies should have the flexibility to effectively identify, capture and report on in-process measures. They just need to be used with this focus in mind. This same concept can be applied to analyzing the fulfillment channels to not only understand what channels customers are using but also, why they use multiple channels and moving between them. This would also be a step in the right direction for more accurately measuring the benefits and dynamics of multi and cross-channel shoppers.

Life After Customer Conversion- Fulfilling the Order

Once the order has been successfully captured, the Company has the responsibility to deliver, but deliver they must or the right to serve in the future may be lost. As you can see in Figure 1, several fulfillment channels have gained popularity as retailers attempt to make it easier for customers to get the products in a way that is most convenient for them. But, companies that fail to deliver this added ease of fulfillment to their customers run the risk of disengaging and losing those customers to the competition as they progress through their shopping experience.

Fulfillment Emerging Trends

Fulfillment channels have expanded as a result of consumers wanting to receive, pick up and return items wherever and whenever they want. Variety and flexibility regarding fulfillment channels has become an imperative for retail shoppers.

The distribution center has typically been the primary fulfillment channel for web orders. However, fulfillment through direct-ship vendors, from stores and pickup in stores has been growing in popularity. These channels address the consumer's need for immediacy in getting what they ordered sooner. And in the case of in-store pickup, it saves the customer shipping charges while also providing more immediate purchase gratification.

Shipments coming directly from vendors potentially minimize delivery times since the shipment does not have to first come into the company's distribution channel for additional handling. Instead, the shipment is drop-shipped to the customer. This saves time for the consumer and potential cost for the company. Regarding the store channel, if the consumer can order on-line and then pick it up in the store, this can be one of the fastest and most convenient ways to fulfill an online order assuming the inventory is available when the customer arrives (more on this later).

Multiple fulfillment channels have driven companies to logically and/or physically segment inventories to maximize availability to the fulfillment network. Even store shelves and back rooms have become forward inventory picking and fulfillment sources.

Challenges

Given these benefits, as cross-channel fulfillment continues to pick up in pace as a strategy for building and retaining customers, it brings with it some challenges within the core fulfillment processes of 1) Order Processing, 2) Order Picking, 3) Delivery, 4) Returns and 5) Infrastructure.

Consumers want a seamless multi-channel commerce experience across channels. This creates added pressure for companies to integrate more effectively. Table 1 shows some examples of the challenges faced by companies across these processes, which have helped provide a catalyst for change.

Multi and Cross-Channel Challenges

C H A L L E N G E S

Order Processing

<i>Order Rerouting</i>	Rerouting orders to other stores/locations based on inventory availability, capacity, etc.
<i>Pricing Inconsistencies</i>	Web pricing vs. store pricing that is unknowingly different
<i>Pricing Visibility & Access</i>	Having a single repository for pricing and visibility to what price a customer was actually charged that is visible and/or easily accessible
<i>Order Visibility/Tracking</i>	Not having visibility to orders taken in other channels without having to access another system or go through some other manually intensive manner, impacts company's ability to effectively service their customers
<i>Order Status</i>	Defining the appropriate type and frequency of status updates provided to customers to effectively meet and manage their expectations
<i>Payment Processing Timing</i>	Full Payment vs. Pre-authorizations – When full payment is not charged until after picking and the amount is then declined, the impact on store fulfillment operations (e.g., restocking/handling orders) can be significant
<i>Common Item Numbers</i>	Not having common item numbers across locations and channels, potentially causing order & inventory management inaccuracies
<i>Stock Outs</i>	Managing stock-outs to both minimize stock outs and rapidly respond when they occur
<i>Order Shipment</i>	Accommodating a customer who wants their order to be shipped to different channels/address locations is difficult if the system does not allow multiple shipment methods per order header

Order Picking

<i>Store Level Inventory Tracking</i>	Can't assume exact inventory at a location since the same item resides in multiple locations. Thus, cycle counting and inventory management is more challenging. Systems need to be able to pick without necessarily controlling location inventory.
<i>Pick Modification</i>	Managing modifications during picking (line level canceling, line item temporary holds, location updates, etc.) drives less productive/accurate picks.
<i>Cycle Counting</i>	Accounting for the same item in multiple locations (i.e., aisles, end cap, register, etc.)
<i>Multiple Item Locations</i>	Not being able to distinguish between inventory in multiple locations within a store (shelves, backroom, web order inventory, etc.) impacts inventory usage efficiency and visibility
<i>Location Control</i>	Managing in an environment where there's little detailed location control. Thus, must be able to do put-away in a more flexible/less granular manner vs. using complex put-away rules required by WMS. More difficult for WMS since inventory quantities at specific locations are not accurately known
<i>Store Mapping Updates</i>	Effectively updating store mappings based on plan-o-gram applications. Manual approach takes a long time and is more difficult to accurately maintain. Thus, picking accuracy can be affected
<i>Handheld Device</i>	Operating Store RF pad in a disconnected mode
<i>Store Picking</i>	Handling tray full exceptions during pick process
<i>Substitutions</i>	Executing substitutions during the picking process

C H A L L E N G E S

Order Delivery

<i>Labor Management</i>	Both driver and picker labor management capabilities to effectively plan and schedule based on demand
<i>User Interface</i>	Managing the pick and customer pick-up process in the same UI
<i>Customer Labeling</i>	Masking Direct Ship Vendors (DSV) orders to appear as though they came from retailer (i.e., address labeling, packaging, etc.)
<i>Inventory Storage</i>	Finding available space for storing and/or staging inventory for various customers (i.e., B2C, B2B, store, etc.)
<i>DSV Shipment Visibility</i>	Visibility to DSV status and proactively managing delivery performance issues
<i>Integrated TMS Solution</i>	Integrated/Bundled Transportation Management System solution which includes both software and devices (RF, handled, driver, etc.)

Returns Processing

<i>Customer Location Returns</i>	Processing returns at customer location when delivery drivers cannot make the delivery due to damage, missing, customer rejections, etc.
<i>Alternate Channel Returns</i>	Having the ability to process returns from other channels

Infrastructure

<i>Centralization/Decentralization</i>	Determining the best architecture configuration for store operation applications based on performance, scalability, hardware requirements, etc.
<i>Bandwidth</i>	Having sufficient bandwidth to handle the processing of store operation transactions, especially during peak times
<i>Integration</i>	Interfacing core fulfillment applications (i.e., order/inventory/warehouse management) and integrating them into existing legacy systems

CHALLENGES

Table 1

Developing a Robust Cross-Channel Fulfillment Solution

To address the challenges related to developing a robust cross-channel fulfillment solution, companies need to deploy technologies and supporting processes. To this end, a good place to start is by identifying requirements that will support the e-commerce front-end in the following areas:

Fulfillment Requirement Areas

As illustrated in Figure 3, these areas are tightly integrated in supporting the front-end e-commerce engine, especially in regards to inventory management. Although all are important, we have seen companies place a priority on the integration of order management, inventory management and store warehouse management solutions. These solutions play a critical role in enabling cross-channel fulfillment while providing a good foundation for future initiatives. Because these integrated solutions are implemented within a company's existing legacy ecosystem, interfaces play a significant role on many projects.

As a result of the challenges companies are facing and the areas they are focusing on, some of the core business requirements which appear to be bubbling-up to enable cross-channel fulfillment are listed in Table 2.

These are just some of the key requirement areas which have been identified by some of our major retail clients. It's important to keep in mind that when evaluating technologies, this should always be done with an industry focus.

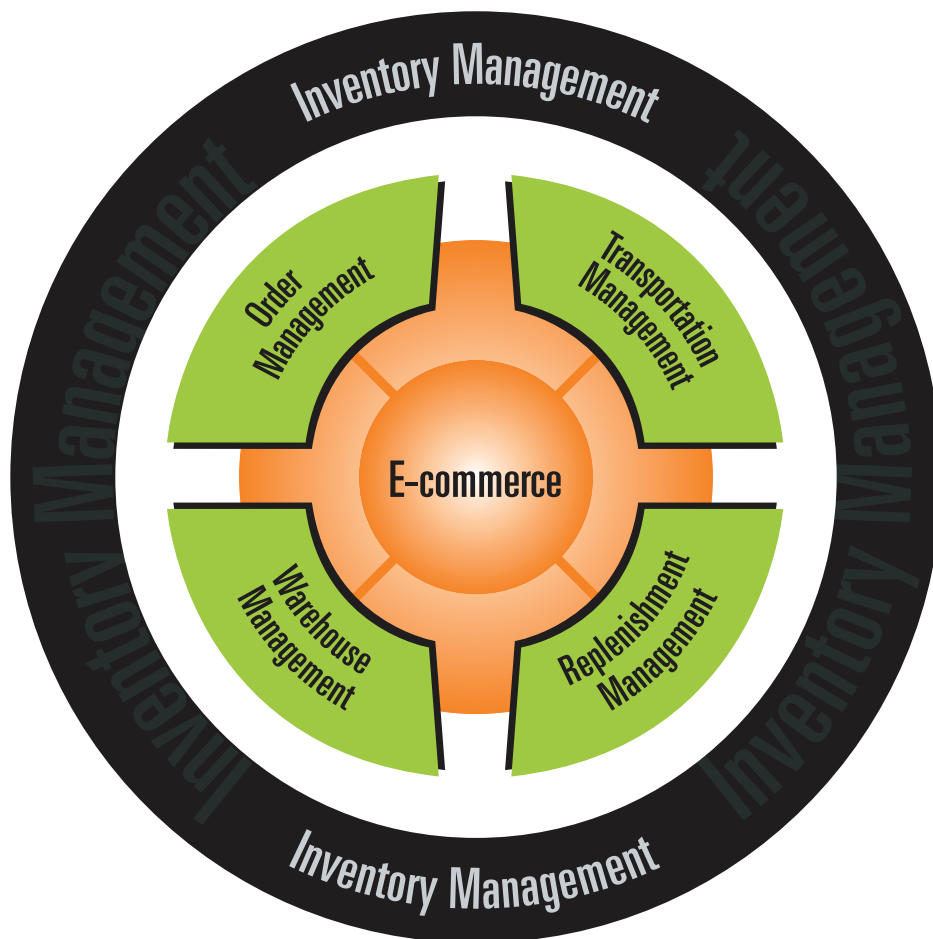


Figure 3

Multi and Cross-Channel Fulfillment Core Business Requirements

THE FULFILLMENT SYSTEM SHALL HAVE THE ABILITY TO :

Order Management

Support current and emerging Points-of Access used by the customer to search, check status or place orders in the company systems.

Route orders quickly and accurately to the intended channel which can fulfill it consistent with the customer's and company's requirements.

Track intra- and inter-channel order status regardless of the channel through which the order was placed and communicate it in a meaningful way to customer.

Allow customers to take delivery or return a product through the channel they desire independent of where they placed their order.

Take payment for customer orders in one channel that are placed in other channels.

Capture and share customer and product knowledge across channels.

Inventory Management

Provide intra- and inter-channel inventor visibility with the ability to monitor, allocate and reserve based on customer demand.

Optimize inventory levels across all channels while having the ability to fulfill orders from any channel inventory.

Guarantee availability of in-store items for pick-up that were ordered on-line/direct.

Manage the increasing and changing number of SKUs across channels.

Store Operations/Picking

Effectively manage the picking, packing and shipping activities in a store environment that is uniquely different than that of a warehouse.

Ability to quickly update and maintain store item mapping data for access for supporting store operation systems

Transportation Management

Plan and schedule store and driver fulfillment labor based on anticipated order demand to manage efficiencies and improve delivery performance

Provide an integrated solution to optimize transportation routing and scheduling which delivers status and alert notifications

Integration/Architecture

Easily integrate into the legacy ecosystem while having the infrastructure to expand and adapt to changing consumer demands.

Integrate into the e-commerce platform

Tightly integrate and share data between order management and inventory management applications across all channels.

To interface with external systems (supplier, 3rd party DC's, etc) and seamlessly share relevant inventory and customer data.

Table 2

Release Strategies

Given the number and scope of these solutions, management should develop a clear release strategy for the organization to ensure a successful rollout which does not exceed the organizational and technological capacity for change. In addition, a thorough analysis should be done to ensure all related inter-dependent requirements are included in any given release strategy. For example, if the ecommerce engine is going to be driven off a rules-based delivery engine, make sure any backend requirements have been captured which are required to support this functionality.

Managing the Cross-Channel Fulfillment Process

Organizational/Operational Considerations

If cross-channel shopping is the direction for the next generation shopper, what are the organizational operational and technological implications of this? If there are separate IT and .com technology/operating organizations, these must come together to facilitate an effective design and implementation. Likewise with marketing, this model provides the capability to effectively do multi-branding across channels/locations. However, the organization must be aligned to execute against such a strategy.

In addition, a performance management plan which creates incentives when it comes to driving customers across channels from either a sales or fulfillment perspective must be in place and aligned to the objectives of the enterprise.

Technology Considerations

Choosing an integrated and modular suite of applications—especially for order management and inventory management—should be a key selection criterion for companies. As described in Figure 3, the core enabling applications a vendor should have to effectively support multi and cross channel fulfillment are:

- Inventory Management
- Order Management (Distributive)
- Warehouse Management
- Replenishment Management
- Transportation Management
- Supply Chain Management

Again, keep an industry focus when making selection decisions. For example, there are a number of WMS solutions on the market which may claim to have the ability to support a store's operations. However, remembering the challenges discussed, retail store environments are typically less controllable given 1) the floor inventory is dynamic (e.g., consumer pulling off shelf inventory), 2) items can be in multiple locations and 3) directed put-away to multiple locations is less automated. Thus, asking a more typically structured WMS solution designed for picking in a manufacturing or distribution center environment to operate in a less structured retail environment could create additional challenges.

Sterling's Cross-Channel Enabling Suite

A good example of this attention to retail-specific needs comes from the cross-channel Selling and Fulfillment Suite from Sterling Commerce. This integrated suite of cross-channel applications and integration infrastructure enables seamless cross-channel retail execution and inventory visibility from order offer and capture to order fulfillment and returns. The suite is briefly described in Figure 4.

In order to best accommodate the unique needs of retailers, the entire Selling and Fulfillment Suite is highly configurable; designed to work with existing legacy, best-of-breed, and ERP technology; and purpose built to efficiently handle the complexity and high-volume throughput requirements of today's multi-channel retailer. Integrated solution suites like these provide the seamless end-to-end capabilities needed for efficient and effective cross-channel retail execution.

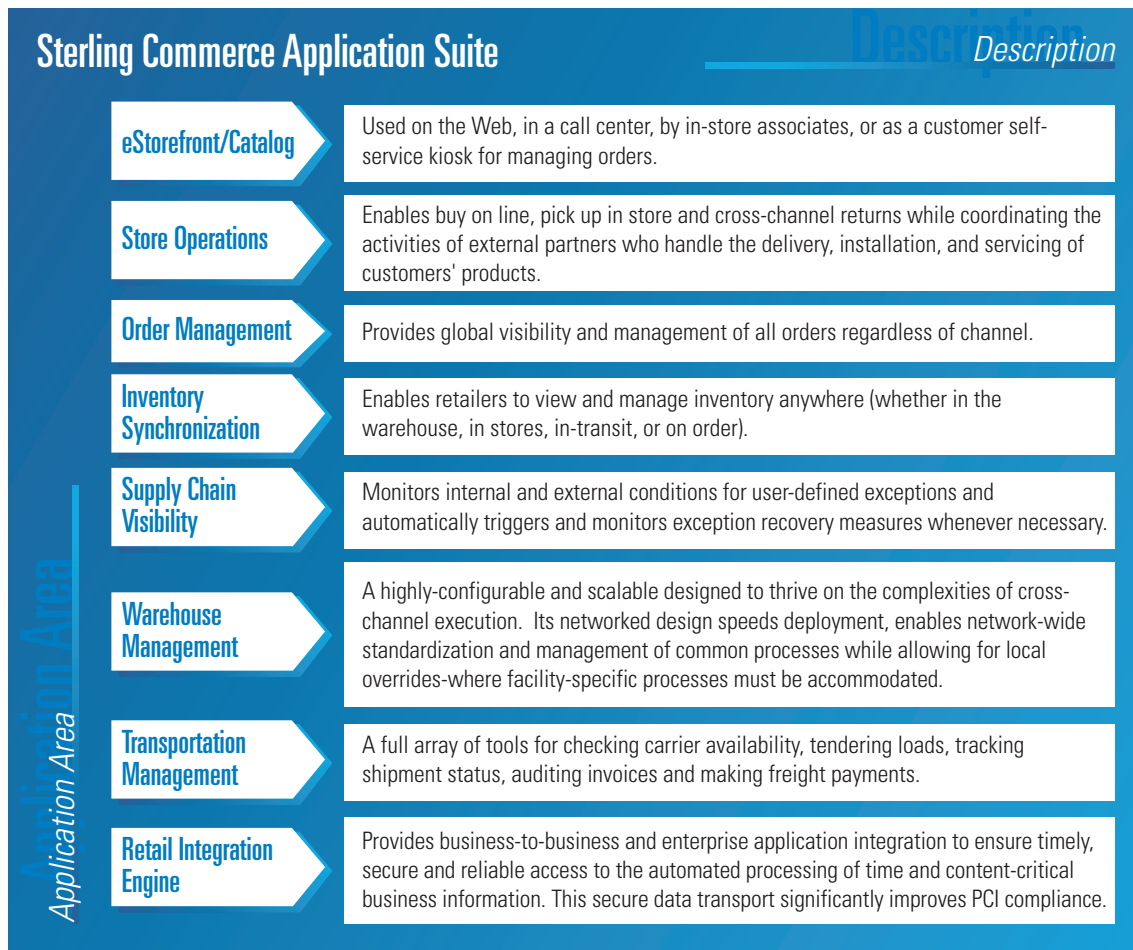


Figure 4

Closing Note

Companies must continue to elevate their customer service levels for all of their customers, not just the perceived highest-value ones. But, this heightened customer service involves more than just improving the cross-channel shopping experience. It also includes all facets of fulfilling the order. For companies that succeed at selling and fulfillment excellence by implementing an effective multi-channel commerce solution, the benefits are not just in terms of an improved customer experience, they also include accelerated supply chain performance and increased operational efficiency...a key battleground for the future.

About the Author

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