OMNI-CHANNEL RETAIL:

FULFILLING DEMAND PROFITABLY

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TABLE OF CONTENTS

EXECUTIVE SUMMARY
OMNI-CHANNEL RETAIL: FULFILLING DEMAND PROFITABLY

How do you manage omni-channel retail[1] and make a profit? That's the trillion-dollar question retailers around the world are struggling to answer. The fact is many retailers lose money on e-commerce. Or, at best, break even.

A traditional bricks-and-mortar retailer typically operates at a profit margin of five percent or below. However, the cost of fulfillment and logistics for online orders can be up to four times higher per unit than traditional bricks-and-mortar models (see Figure 1). Final mile delivery is expensive, fulfillment costs for picking order quantities of one ("eaches") are higher than case picks; and high return volumes further erode margins.

Given that 78% of purchases during the Black Friday promotional period in 2018 were made online, and with 42% of those customers tracking the delivery of goods through apps, it's a challenge that retailers have to face.

So, what's the solution? The answer is complex, but a big part of the solution is designing a supply chain that can fulfill omni-channel demand profitably.

Easier said than done. According to the CFFA Retail Development Survey[2], retailers are unsatisfied with their current supply chain management set up and consider this issue their top challenge. In addition, a study of CEOs from across the retail and consumption industry states that the most significant internal challenge of omni-channel transformation is being unable to fulfil consumer demands across all the channels they have in place (55% of respondents). This is followed by concerns about keeping up with technology and innovation (43%) and being unable to integrate isolated online and offline channels (42%).[3]

Given this, what does the "right" omni-channel supply chain look like and how can it contribute to profitability? DHL Supply Chain explored these questions in a research study, and presented the findings at a DHL Fashion Masterclass in Germany. From this research, DHL Supply Chain, together with DHL Consulting, developed a strategic framework for helping to build a profitable omni-channel retail supply chain.

Here is a summary of the key learnings and strategic questions that need to be addressed as part of this new framework.

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[1] Omni-channel is defined as all retail channels working in concert, from merchandise planning, to assortment planning, purchasing, allocation and replenishment vs. multi-channel where each channel is managed separately, with its own demand forecasts and promotions.

[2] Transformation of the traditional retailer in the era of new retail. Deloitte China October 2017

[3] Deloitte Analysis: JDA retail and consumption industry CEO survey

KEY LEARNINGS

What is driving the need for transformation in omni-channel retail supply chains? Simple – the consumer. Shoppers are more demanding than ever, and they are now accustomed to getting what they want, when, where and how they want it. They are used to paying little or nothing for delivery. If a retailer fails on the service end of the sale, it risks losing the customer.

Additionally, fierce competition among traditional and online retailers only serves to raise the stakes.

These dynamics challenge existing retail operating models, which were originally designed and optimized for a bricks-and-mortar environment. Omni-channel retail requires a different supply chain, with key elements that are outlined below.

1. Omni-channel strategy first
A clear omni-channel strategy forms the basis for an effective and efficient omni-channel supply chain. This strategy, whether for a premium brand focused on the customer experience, or a discount brand focused on maximizing sales volume and price, drives the supply chain's configuration and operations.

2. Delivery options and speed
Delivery is a critical driver of customer satisfaction. Retailers must find the right mix and balance of delivery options, whether for home delivery, store collection and fulfillment or delivery to a pick-up point. Speed and cost are inextricably linked, with cost rising as speed increases. An effective delivery strategy optimizes for both service and cost.

3. Inventory and fulfillment approaches
Inventory strategy, in addition to delivery offerings, determines the supply chain network design. This guide discusses three types of inventory strategies:

- Fully integrated

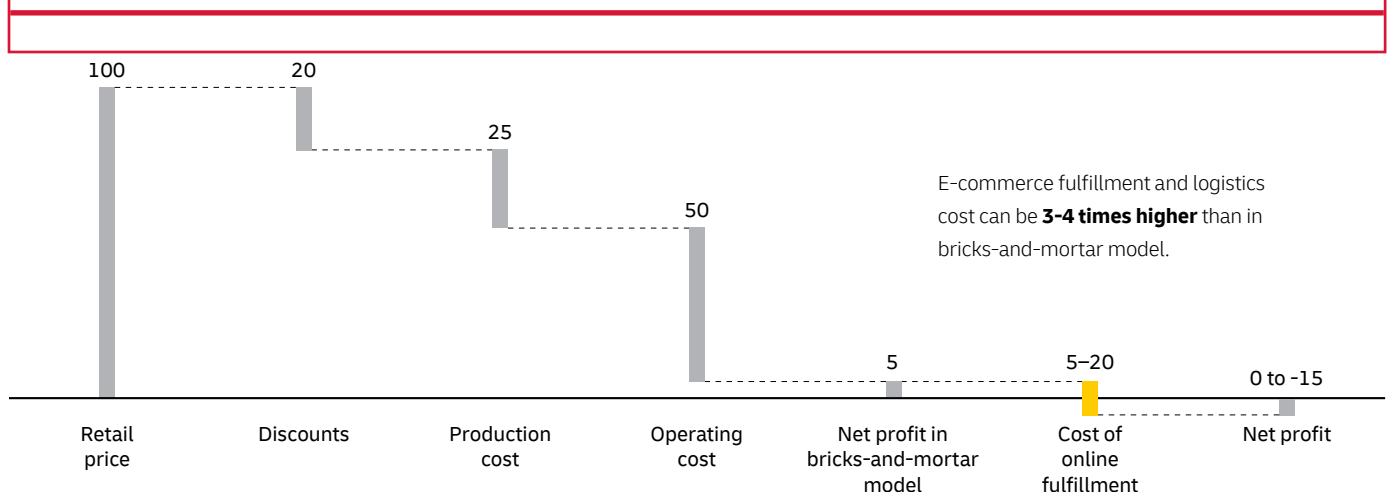- Partially integrated with cross-allocation

- Separate

It also discusses the technology required to obtain visibility in each model.

4. Supply chain network design
The omni-channel supply chain network is more complex than a traditional bricks-and-mortar network. Retailers have a number of design alternatives, depending on their inventory management strategy and service speed.

This guide assesses network options, which include running a dedicated e-commerce network, or creating a blended, integrated network for outbound orders and returns.

FIGURE 1: SPORTS SHOE RETAIL PRICE BREAKDOWN

E-commerce fulfillment and logistics cost can be **3-4 times higher** than in bricks-and-mortar model.

Retail price	Discounts	Production cost	Operating cost	Net profit in bricks-and-mortar model	Cost of online fulfillment	Net profit
100	20	25	50	5	5–20	0 to -15

Source: DHL Consulting

STRATEGIC FRAMEWORK FOR
OMNI-CHANNEL SUPPLY
CHAIN DESIGN

Development of a profitable omni-channel supply chain strategy requires reviewing the business from top to bottom – starting with the retailer's foundational market strategy, all the way to the omni-channel operating model and execution enablers. To help understand how all these attributes affect the design of the omni-channel supply chain, DHL Supply Chain developed the "Strategic framework for omni-channel supply chains" (see Figure 2). This framework answers questions in four key areas: strategy, supply chain design front-end, supply chain design back-end and enablers.

By reviewing the key discussion points for each of these areas, retailers can gain a better understanding of how to design the omni-channel supply chain to meet their needs as well as those of their customers.

STRATEGY

Industry sources estimate that as much as £14 billion every year is squandered on research that is not acted on and only 11% of decisions are backed with customer insight, so being clear about the strategic position and channel strategy will help define viable options for the supply chain model. There are two important questions that need to be addressed:[4]

**What is the value proposition to the market and is it consistent across channels?**

■ Premium brands focus on maximizing the customer experience and should be ready to pay additional logistics costs to ensure high 'On-time, In-full' (OTIF) delivery by cross-shipping products from stores the same day or by offering free premium delivery and returns. They are also less willing to give away control of the customer experience to delivery companies.

■ Discount retailers focus on maximizing sales volumes and offering the best price. They are more likely to leverage economies of scale by having a centralized e-fulfillment model with a high number of SKUs. They are also more sensitive to logistics costs incurred by online orders, and their customers are willing to tolerate a certain level of inconvenience in exchange for low prices.

How does e-commerce help achieve strategic objectives?

Defining the true purpose of the e-commerce channel in relation to the bricks-and-mortar channel is a prerequisite to designing the right multi-channel supply chain. Some common e-commerce objectives may include:

■ **Customer convenience.** This is the most common reason for retailers to start e-commerce sales.

■ **New market expansion.** Growing cross-border e-commerce allows companies to export products to new markets without having to establish any local presence.

■ **Additional product offering.** This offers the opportunity to increase the number of products that can realistically be displayed in a store.

FIGURE 2: STRATEGIC FRAMEWORK FOR OMNI-CHANNEL SUPPLY CHAINS
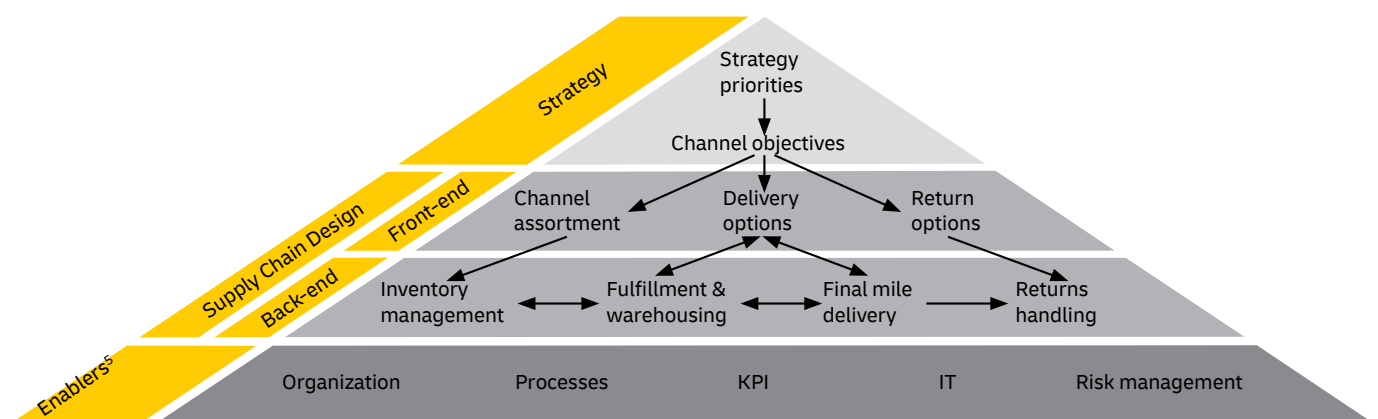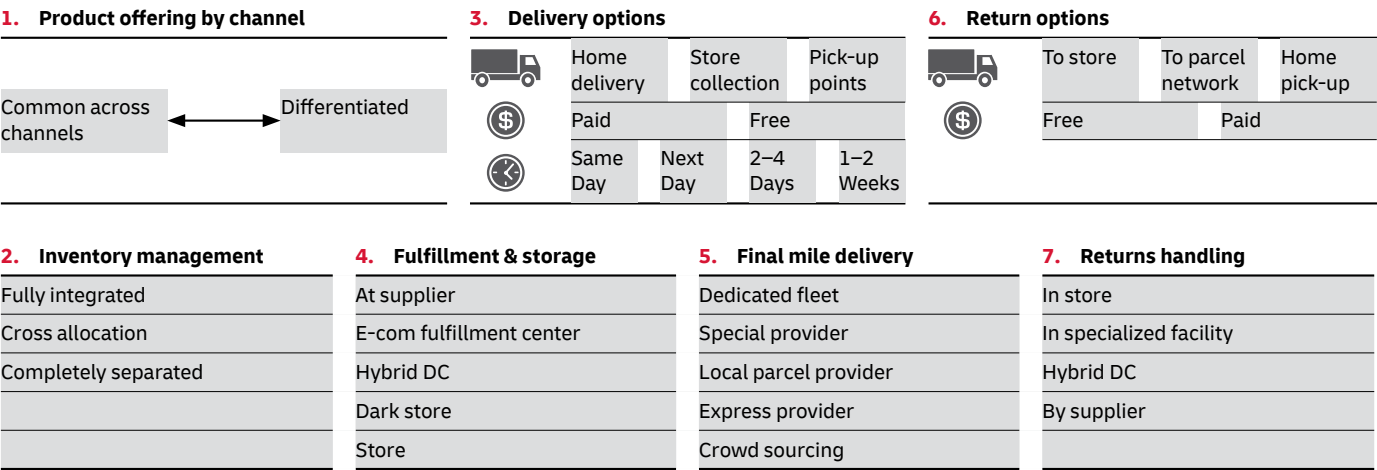
SUPPLY CHAIN DESIGN

Strategic omni-channel planning should take into account factors like overall company and channel strategy, customer requirements, operating model cost, complexity and required investment.

Analysis of design choices should be forward thinking and consider likely market developments over the next five years. They should also be evaluated as a whole, rather than

individually, as every aspect is closely linked. The key is simplicity, as it is very easy to get lost in the wide variety of design options available.

Below is a summary of the most important strategic supply chain choices faced by retailers for their e-commerce supply chain, affecting both the customer offering and operating model.

FIGURE 3: SUPPLY CHAIN CHOICES

1. Product offering by channel

Common across channels	←→	Differentiated

3. Delivery options

Home delivery	Store collection	Pick-up points	
Paid	Free		
Same Day	Next Day	2–4 Days	1–2 Weeks

6. Return options

To store	To parcel network	Home pick-up
Free	Paid	

2. Inventory management

Fully integrated
Cross allocation
Completely separated

4. Fulfillment & storage

At supplier
E-com fulfillment center
Hybrid DC
Dark store
Store

5. Final mile delivery

Dedicated fleet
Special provider
Local parcel provider
Express provider
Crowd sourcing

7. Returns handling

In store
In specialized facility
Hybrid DC
By supplier

Source: DHL Consulting

PRODUCT OFFERING BY CHANNEL

While there are numerous ways of designing the product offering by channel, the key is finding the right balance between convenience and cost for the assortment choices.

Common products across channels

If retailers want to offer greater convenience to their customers then the same product range should be offered across all channels. Many times this approach leverages cross-channel synergies by running hybrid distribution centers (DCs) that both replenish stores and fulfill online orders.

The endless aisle

This concept balances cost and convenience by extending inventory beyond what is physically available in the store. It efficiently utilizes space by offering mid- and fast-moving products in-store and making slow-moving inventory available only online. However, to make the full range of products available to customers visiting a store, retailers are implementing kiosks that replicate the online shopping experience.

Companies can use this strategy to help promote certain products in-store (e.g. seasonal goods), or to allow customers to order customized products online which are not available in store (such as laptops that are assembled to order). Macy's and JCPenney both apply the endless aisle approach successfully[6] as does Canadian bookstore Indigo. It provides shoppers with terminals to search titles, availability and enables them to order for home delivery.[7] To help minimize inventory costs, the slow-moving inventory is typically kept at a centralized DC.

The differentiated offering

This approach is suitable for companies intending to execute different strategies by channel. Common examples are multi-brand retailers selling different brands online versus in-store (potentially with some brands available in both channels) and those that target different customers by channel with a segmentation approach, such as low-versus high-value goods.

Retailers may decide to outsource one, or both, of the channel operations (selling only through department stores, market place approach, or fulfillment by a third party) based on their business strategy and in-house core competencies.

[6] Macy's Strategy for Omnichannel Success, Netonomy.net, November 2014
[7] www.retailcustomerexperience.com/blogs/why-the-endless-aisle-works-for-the-customer-and-the-retailer/

INVENTORY MANAGEMENT

With 70% of shoppers saying they would shop elsewhere for an item if it was unavailable, rather than waiting for back-ordered inventory, it's no wonder that 43% of retailers ranked inventory management as their number one day-to-day challenge. However inventory balance becomes a barrier for retailers in terms of omni-channel profitability and sustainability with 43% of small businesses using a manual process to track their inventory or not tracking it at all.[8]

For a retailer managing both bricks-and-mortar and e-commerce channels, the most critical decision regarding inventory management is whether to separate or integrate inventories for different channels. If the integrated approach is chosen, the level of integration depends on the retailer's organizational structure, their attitude toward IT investment and the scale/maturity of their e-commerce channel. There are three typical industry practices regarding inventory management (see Figure 4).:

FIGURE 4: INVENTORY MANAGEMENT PRACTICES

	Separate	Cross-allocation	Fully integrated
	Bricks-and-mortar and e-commerce stock are managed separately	In general, stock managed separately; but cross-allocation can happen periodically (e.g., on monthly/weekly basis) depending on demand	Bricks-and-mortar and e-commerce stock are merged and can be dynamically reallocated (on a minute-by-minute basis)
+	No expensive IT investment required	Ability to achieve some omni-channel advantages in discrete manner	Provides true omni-channel customer experience and enables back-end optimization
-	Limits front-end and back-end optimization opportunities	Manual cross-allocation effort	High up-front investment required

Fully integrated: the integrated inventory management approach embraces a true omni-channel customer experience and enables back-end integration. Here the retailer is dealing with just one integrated stock inventory which can be dynamically allocated in the most cost-efficient way across channels in real-time. "Our goal remains to help our customers shop whenever, wherever and however they prefer, and to use the entire inventory of the company to satisfy demand," said Terry Lundgren, Macy's CEO[9]. Macy's store associates are empowered with real-time inventory data and can locate items in other stores, shipping the item from that point, directly to the customer.

As a result, orders ship faster and store inventory turnover has greatly improved[10]. Unsurprisingly, this end-to-end cross-store and cross-channel inventory visibility requires a significant amount of investment. In 2014, Macy's invested one billion USD in capex to support its omni-channel effort[11].

Inventory integration, which requires a large up-front investment, must include high inventory visibility in each channel, as well as the ability to transfer inventories efficiently. According to Gartner's Multichannel Fulfillment and Returns Survey in 2015, 81% of respondents had inventory visibility, but only 16% had optimized inventory transfer[12]. In order to improve inventory visibility across channels, retailers have to take two steps. First, they must improve warehouse visibility for both online

Macy's went the extra mile to bring its omni-channel benefits to the next level by introducing its "Pick to the Last Unit" (P2LU) program, supported by an RFID solution. This makes the last unit of an item in any store available, and RFID locates it. According to Tyco, retailers don't typically expose the last item of a SKU to online purchasing because they don't have enough confidence in their inventory accuracy or ability to find the item to make every unit available for customer orders. "About 15 to 20 percent of inventory is accounted for by the last unit in the store," noted Peter Longo, President of Logistics and Operations at Macy's. "It's a massive amount of budget, either marked down or not sold, and it is curable through RFID."[13]

8   Deloitte Analysis: JDA retail and consumption industry CEO survey
9   Macy's Strategy for Omnichannel Success, Netonomy.net, November 2014
10   Macy's finds omnichannel success with RFID, FierceRetail, January 2016
11   Ibid.
12   Gartner Multichannel Fulfillment and Returns Survey, 2015
13   http://www.chainstoreage.com/article/macys-picks-rfid-support-omnichannel-shopping

and store channels, ideally via one WMS system. Secondly, they must establish stock visibility at store level, which is harder to achieve and frequently leads to bricks-and-mortar retailers having to upgrade their legacy IT systems. To help establish and improve store-level visibility, retailers can utilize RFID tags, which can ultimately lead to item-level visibility. This drives improvements in inventory accuracy and labor efficiency.

Item-level RFID tags can also improve the customer experience and ultimately lift sales by reducing stock-outs. This technology is typically used by fashion retailers and combined with other technologies.

Cross-allocation:
A partially integrated approach, where two separate inventory pools are maintained and managed manually for different channels. As inventories are shifted across channels, alignment between the two channel teams is required. This approach achieves some discrete integration advantages without investment in IT or infrastructure. However, the coordination effort is high, the reaction to demand fluctuation can be slow and it typically comes with some internal complexity.

Separate:
Bricks-and-mortar and e-commerce inventories are managed separately. The retailer manages the channels as two separate entities and does not have to invest in IT integration for order management and inventory visibility. If a retailer segments product offerings by channel and utilizes the channels to target different customers, there is no need to integrate inventories. The separate inventory approach enables the optimization of each channel by allowing more focus on the best fit for different channel propositions. However, if there is a high overlap of product range between channels, separate inventories limit the potential for front- and back-end optimization.

Chinese fashion retailer GXG positioned their Tmall shop as a discount volume driver and their bricks-and-mortar channel as a mid-range player. The supply chains of the two channels are managed by different teams running separate processes and warehouses.

At the end of each season or the start of seasonal sales, slow-moving items from the bricks-and-mortar channel are shifted to the online channel warehouses. The bricks-and-mortar channel acts as the supplier of the online channel through a joint manual effort. Demand is calculated and compared across the two teams and the stock is moved on a daily basis during big sales, utilizing local express service providers.

DELIVERY OPTIONS

Delivery cost and service, which have a significant impact on customer experience and satisfaction, are directly impacted by the delivery methods, service levels and fee structures offered.

There are three main delivery methods and each one has its own benefits and limitations.

- **Home delivery** is the traditional way of delivering online purchases. Although it can be convenient for the consumer, it is the most expensive form of delivery due to the limitation of consolidation by destination. Home delivery is also good for bulky goods as the delivery can often be combined with installation services. One major drawback of this delivery method is that missed deliveries can cause an inconvenience to the customer and create additional costs for the retailer.

- **Store collection** (click & collect or reserve & collect) provides customers with a lower-cost delivery option and allows for greater flexibility as customers can pick up their purchases during store hours, rather than having to be at home or face the risk of a missed delivery. It also not only allows the customer to 'touch and feel' the goods before purchasing, but it also provides an upsell opportunity for the retailer, as well as the ability to handle complaints/returns immediately. Research has found that, of the 18% of online purchases delivered by click and collect methods, 77% were collected straight from the store, highlighting the importance of an integrated approach.[14] For store collection to be feasible it requires a wide network of established locations along with an IT investment for enablement.

[14] KPMG Annual Retail Survey 2019

■ **Delivery to pick-up points** (automatic parcel lockers, service stations or convenience stores) can provide additional flexibility as customers can pick-up products outside of normal store hours. It is important to note however, that this is limited to third party service providers and is only available in some countries/districts. There is also a growing cross-seller collaboration model where one retailer will offer another retailer a collection point in their stores.

Speed and cost of delivery

At the early stages of online retailing, service levels were commonly one to two weeks. Today, companies like Amazon and JD.com are fuelling a trend towards next-day coverage and same-day deliveries in metropolitan areas. Fast service times like these can be a key strategic differentiator.

It remains to be seen whether retailers can catch-up in providing fast service levels and redesign their supply chains to do so efficiently. However, fast delivery times are not always required by the customer. Retailers need to find the right balance between agility and cost, accompanied by the appropriate delivery fee structure.

Generally, customers expect a certain service level for free (particularly for orders above a certain purchase threshold) or for a low fee. This is usually accompanied by a subset of customers who are willing to pay for faster service levels. However, these expectations differ by sector and by country, where certain industry norms are formed.
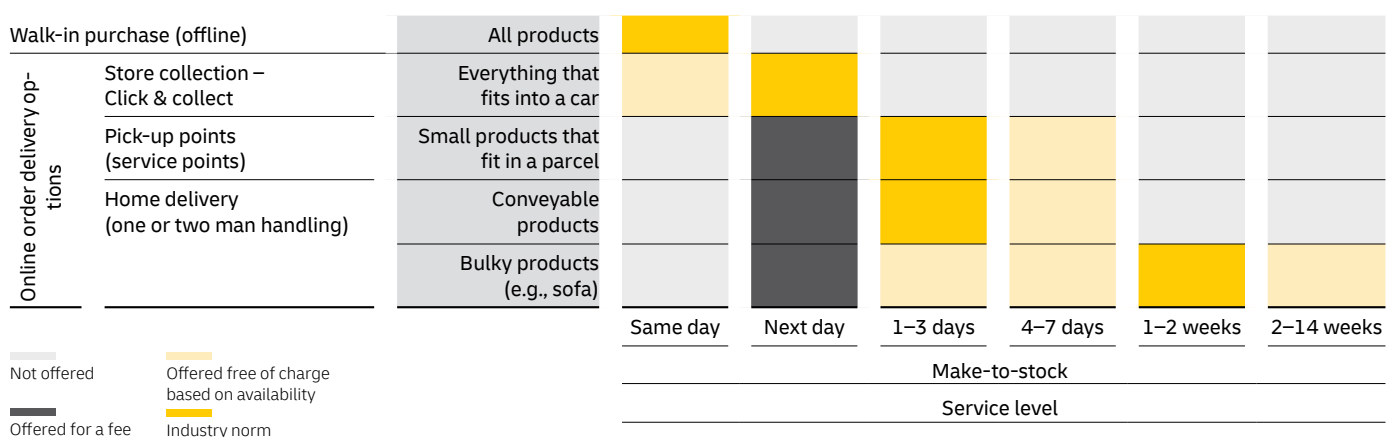
Delivery charges can also be used as a revenue stream, to incentivize the customer, or even help drive brand loyalty and improve sales when they are in the form of membership fees (e.g. Amazon Prime). Although it would be unlikely for a retailer to offset the entire e-fulfillment cost with a delivery charge (e.g. in the case of home delivery), the additional revenue can have a significant impact on the margin of the online business.

To determine the best delivery solution, a menu of choices needs to be created for the e-commerce channel (see Figure 5). The chosen offering should consider customer expectations and industry norms in the specific retail sector and must be aligned with the retailer's online channel strategic positioning.

Outlook on delivery options

Click & collect is becoming more commonplace in retail with 23% of online orders being picked up via parcel shops and lockers.[15] New delivery methods/services are also being tested. These include deliveries to the consumer's car which have been piloted by DHL, Audi and Amazon in Munich, and parcel boxes for buildings, in countries such as the U.S. and Germany. As the online channel continues to expand, so will the number of delivery options, including in-transit re-routing, which could become a future differentiator.

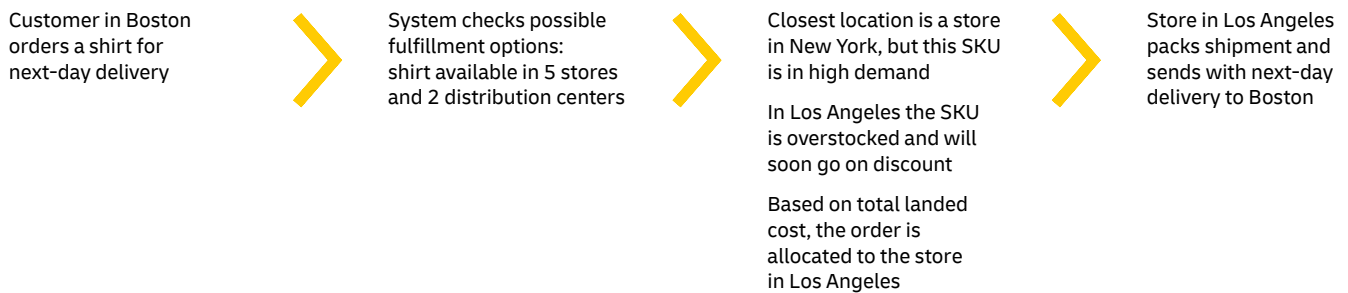## FIGURE 5: E-COMMERCE DELIVERY SOLUTIONS (ILLUSTRATIVE EXAMPLE)

		Same day	Next day	1–3 days	4–7 days	1–2 weeks	2–14 weeks
Walk-in purchase (offline)	All products						
Store collection – Click & collect	Everything that fits into a car						
Pick-up points (service points)	Small products that fit in a parcel						
Home delivery (one or two man handling)	Conveyable products						
	Bulky products (e.g., sofa)						

Make-to-stock

Service level

Not offered

Offered free of charge based on availability

Offered for a fee

Industry norm

FULFILLMENT APPROACH

Omni-channel players have multiple fulfillment options. In the most efficient set-up, order fulfillment is completely dynamic and flexible in order to leverage the entire stock throughout the supply chain. Orders are allocated in real-time, based on a number of parameters including: shipping cost, picking cost, inventory levels, demand forecast and unit value.

Figure 6 below shows how it can work, using the example of a shirt ordered in Boston for next-day delivery.

FIGURE 6: FLEXIBLE FULFILLMENT MODEL

Customer in Boston orders a shirt for next-day delivery

> System checks possible fulfillment options: shirt available in 5 stores and 2 distribution centers

> Closest location is a store in New York, but this SKU is in high demand

In Los Angeles the SKU is overstocked and will soon go on discount

Based on total landed cost, the order is allocated to the store in Los Angeles

> Store in Los Angeles packs shipment and sends with next-day delivery to Boston

Unlike bricks-and-mortar retail where customers need to visit a store, e-commerce orders can be fulfilled at each inventory holding location throughout the supply chain. The main trade-offs are to have dedicated or integrated e-fulfillment, which can then be centralized or localized.

Dedicated vs. Integrated

Dedicated e-fulfillment is more suitable for a separate inventory management approach. It allows for focused operations on one channel, process efficiencies and greater automation opportunities.

Integrated fulfillment works better when inventory is integrated across channels as it allows retailers to leverage economies of scale. It can be performed at the supplier, or at a hybrid DC that serves both the online channel and in-store. The key question is how to achieve cross-channel optimization.

Centralized vs. Localized

Centralized fulfillment allows for inventory pooling and offers the potential for fewer inventory holding points and lower inventory costs. It also allows for higher efficiency due to the consolidation of large volumes. However, this approach creates either longer lead times or higher transport costs for the final mile. Before deciding between local and centralized fulfillment models, retailers should evaluate the responsiveness of their entire supply chain based on the efficiency of their IT systems and internal processes.
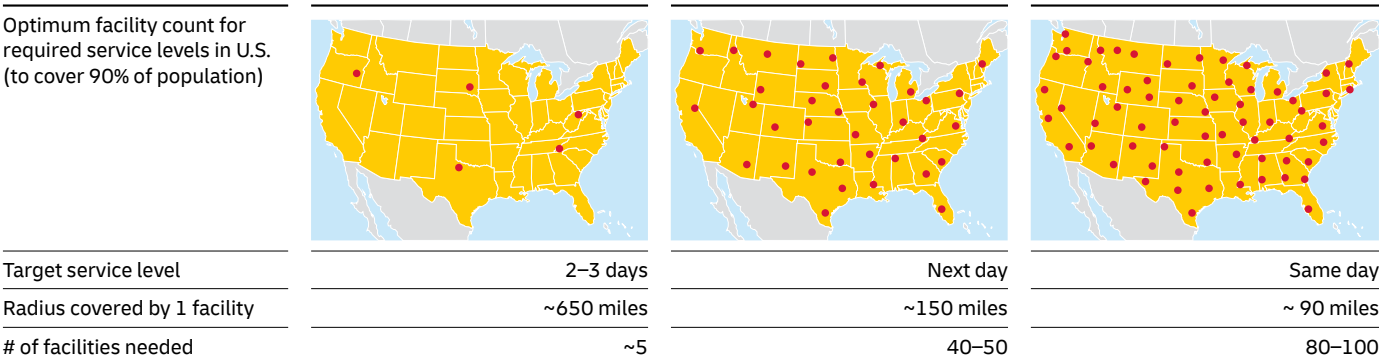
Localized fulfillment makes it easier to achieve high service levels simply because the goods are located closer to the end customer. More fashion retailers and department stores are using local fulfillment in order to leverage their bricks-and-mortar network and to compete against fast-growing e-tailers. Not only does this solution position order fulfillment closer

to the customer, but it also supports front-end integration, offering the customer a true omni-channel shopping experience.

Localized fulfillment is receiving a boost as competition amongst retailers is leaning towards a focus on same-day delivery. This solution requires a much broader infrastructure footprint. For example, in the U.S. a 2-3 day delivery lead time requires approximately five facilities across the country, a next-day service level requires an additional 40 to 50 facilities and for same-day service the number is closer to 100 (see Figure 7).

FIGURE 7: SUPPLY CHAIN RESPONSIVENESS

Optimum facility count for required service levels in U.S. (to cover 90% of population)			
Target service level	2–3 days	Next day	Same day
Radius covered by 1 facility	~650 miles	~150 miles	~ 90 miles
# of facilities needed	~5	40–50	80–100

Based on Ground Transportation Only

Five e-fulfillment options to consider

Taking both dimensions into consideration, there are five e-fulfillment options.

At supplier: also referred to as "drop shipment", the supplier fulfills online orders directly. Benefits could include lower end-to-end costs and less chance of damage/loss due to fewer transitions. However, the retailer loses control of the costs and the customer experience, and coordination with suppliers can become complicated. The retailer must also compromise on service level and customer promise. This approach is often used for made-to-order products, such as customized clothes, shoes or furniture.

E-commerce fulfillment center: online orders are fulfilled at a centralized, dedicated facility. The facility is located at an optimized location for online orders, which is quite different from a bricks-and-mortar distribution center for store replenishment. Typically this approach achieves a service level of 2–4 days (see Figure 8). Key factors driving the optimal locations for e-fulfillment centers are targeted service levels and connectivity to a parcel hub operated by a service provider.

Hybrid distribution center (DC): this is an integrated and centralized approach that allows for synergies across channels and maximizes economies of scale. Picking can be performed at item level and the typical delivery lead time for a regional DC is 2 – 4 days.

Dark store: where a warehouse is used as an order fulfillment platform for online sales, typically used for suburban grocery orders. This is another localized model that consists of high-velocity facilities dedicated for e-fulfillment, that are situated near city limits, in order to offer very high service levels such as next-day and same-day. This solution offers lower operating costs compared to the store fulfillment model. However, it requires additional infrastructure and inventory duplications.

Store fulfillment: where a bricks-and-mortar retailer leverages store inventory and personnel to fulfill online orders. This approach can provide fast service levels, including same-day and next-day, depending on the extent of the store network. It also allows for inventory synergies across channels and the opportunity for upselling. However, retailers need to be mindful of the high picking costs of using store personnel, as well as the advanced inventory management systems required to allow for true omni-channel synergies and a positive customer experience. On the positive side, store fulfillment helps overcome unpredictable and unbalanced demand across stores and therefore reduces markdowns or stock-outs.
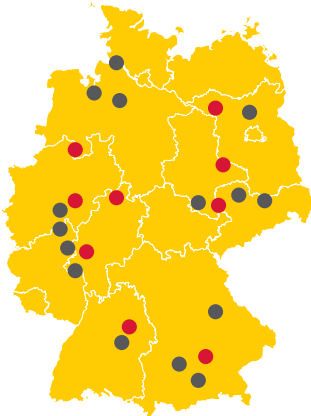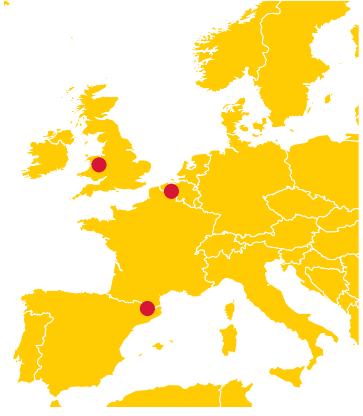
When considering store fulfillment, the retailer needs to think about available space, processes to enable efficient picking and packing, training for store personnel and balanced incentives to handle store sales and online order fulfillment.

FIGURE 8: KEY CONSIDERATIONS FOR OPTIMAL E-FULFILLMENT LOCATION[16]

Prevalent service levels	Same-day, next-day	Mix of next-day and 2-day	3-5 day
Key drivers for e-fulfillment location(s)	Same-day hubs in metro areas to ensure feasibility of quick delivery e-Fulfillment Center (eFC) locations that have good connectivity • Hubs of local parcel providers to achieve late cut-off times for next-day delivery • Same-day hubs to efficiently replenish them	Good connectivity to hubs of local parcel providers for next day delivery • Typically one national e-Fulfillment Center (eFC) sufficient to enable nation-wide next-day deliveries (excl. very large countries) • Consolidating volume at a single facility can enable retailers to get good discounts from parcel provider	• Labor and real estate cost • Taxes and customs • Connectivity to demand center of gravity by cross-border parcel injection points to make efficient parcel deliveries to multiple countries
Company examples	Amazon Germany	Amazon Italy	Zara Europe

● Multiple local e-Fulfillment Centers located near local parcel hubs

● Same-day facilities located in main metro areas – replenished by e-Fulfillment Centers

● Single e-Fulfillment Center located near Milan close to national parcel hub

● 3 European e-Fulfillment Centers making cross-border parcel injections for 3-day deliveries

[16] http://www.mwpvl.com/html/amazon_com.html

FINAL MILE DELIVERY

Customer delivery offerings need to be considered carefully since an efficient 'final mile' affects online channel profitability and impacts customer satisfaction. Retailers need to answer two challenges. The first is to get the right logistics service provider portfolio, and the second – which is strongly interlinked – is to optimize the fulfillment approach.

Logistics service provider for final mile delivery
There are many logistics service providers (LSPs) that offer final mile delivery services and it can therefore be challenging to find the right one. Most of them provide one or several of the following services:

- **International express:** A handful of international express shippers provide the widest global reach with high reliability and low complexity, but this comes at a cost as it is the most expensive form of delivery.

- **Domestic/regional (e.g., pan-Europe) parcel delivery:** Domestic parcel deliveries are significantly cheaper but provide a lower level of reliability and vary by provider and by country. For large retailers, it can be complex trying to deal with many local parcel providers.

- **Special services (e.g., installation services, in-room delivery):** The market for special services such as in-room delivery and installation is fragmented or weak in many countries. Often, retailers are forced to use their own dedicated fleet because a provider does not exist in the country that will meet quality standards. Running a dedicated fleet can provide the most control, enabling retailers to ensure high quality and a strong brand image. However, this requires a large scale to achieve efficiency.

- **Crowd-sourced delivery:** Crowd-sourcing, which is still in its infancy stage and not yet an established solution, is suitable for same-day deliveries in metropolitan areas. It is an option when looking for the cheapest and/or the only way to provide same-day delivery in these areas. However, with limited consolidation and short reach, it has limited applicability. It's also important to note that crowd-sourcing can be highly complex, and retailers using it have to accept a low degree of control. Crowd-sourcing is really only an option for products purchased from a store and being delivered in the same metropolitan area.

Optimization levers for reducing final mile cost
Retailers need to design the right fulfillment network based on their overall delivery offering, demand and LSP capabilities. They must carefully consider potential final mile providers and the associated delivery costs by type of service and fulfillment choice when designing their fulfillment network in order to find the right balance between transportation and storage/inventory costs.

A few key characteristics specific to parcel networks can be leveraged to reduce final mile costs:

- Concentrating fulfillment volumes at a single facility can enable retailers to get significant discounts on list prices. This will be a key lever to watch in the coming years as the regional parcel providers increase cross-border capabilities.

- Increasing order sizes by incentivizing customers to purchase several items per order (e.g., free delivery for orders above a threshold) can reduce costs significantly, since the number of parcels is a major cost driver.

- Tighter packaging can reduce volumetric weight, which is often used for pricing and hence cost per parcel.

- The rise of click & collect can be leveraged to reduce overall final mile costs in the supply chain if synchronized with the store replenishment network. Items for store collection can be transported in the trucks that replenish the stores regularly, as opposed to sending parcels to the store for online orders.

RETURN OPTIONS AND HANDLING

Unlike the traditional bricks-and-mortar channel, consumers cannot see or feel the product before their online purchase. This makes free and easy returns a key decision-making criteria when online shopping, especially for fashion products. If the returns policy and process are not clear or are in convenient, 80% of customers won't make a purchase.[17]

Because customers can only see if clothes fit after they are received, the return rate of fashion items is often considerably higher than the bricks-and-mortar channel. As Sophie Glover, Head of Technical Services at ASOS, commented, "some customers treat our free shipping service as part of their changing room experience, except it's at home in their bedroom".[18]

From that perspective it becomes understandable why 30% of shoppers deliberately over-purchase. With consumers also expecting free shipping and free returns it's no wonder that the returns policy can be a challenge for retailers.[19]

According to a Financial Times article in January 2016, about 70% of items ordered online in Germany are returned, compared with 25% in the UK for women's fashion.[20] Additionally, the average returned purchase in the UK passes through seven pairs of hands before it is listed for resale. This means a return can cost double or even triple the amount it did to deliver it originally.

There are several options for consumers to return products (see Figure 9). Consumers can:

- **Return to store:** bricks-and-mortar retailers can leverage their store network as drop-off locations for returned products to save transport costs.

- **Return to pick-up points:** consumers send their returned products to parcel pick-up locations including parcel shops, neighborhood collection points or automated parcel lockers.

- **Home collection:** consumers can have returned products collected by a parcel service provider or retailer directly at home. This approach offers great convenience for bulky items.

There are several disadvantages to the last two options, including high transport costs and the reliance on third party service providers.

FIGURE 9: RETURN OPTIONS

	Collection from home	Return to parcel pick-up points	Return to store
Transportation costs	High	Medium	Low
Pros	Convenience for consumers especially for bulky items	Standard service and easy to manage	Potential protection of existing and additional revenue
Cons	High transportation costs Need to rely on high number of local 3rd party service providers for bulky products		High in-store management/coordination effort

[17] DHL research
[18] https://econsultancy.com/blog/65026-how-fashion-ecommerce-retailers-can-reduce-online-returns/
[19] DHL research
[20] UK retailers count the cost of returns, FT.com – http://www.ft.com/cms/s/0/52d26de8-c0e6-11e5-846f-79b0e3d20eaf.html#axzz4EUIre7J0

Handling of returns

- **Return to store:** returned products are checked immediately and re-packaged in store. For example, Apple store employees decide whether to refurbish, repair or dispose of returned items. They apply effective gate-keeping to reduce the amount of returns and sell refurbished products on site, thus integrating returns back into stock to decrease devaluation. In this way, Apple is also able to save transport and inventory holding costs. Its full IT-integration allows item identification and transaction visibility without any paper documents.

- **In a dedicated return handling facility:** returned products are consolidated and assessed within a dedicated space at specialized facilities. Because the

process is taking place at one location there is the potential to introduce more efficient or automated processes for quality inspection, refurbishing and packaging. This approach fits well for retailers with a high number SKUs (fashion retailers) and for a certain number of premium or specialized products that can only be returned to a centralized facility due to special packaging and quality control requirements.

- **By supplier:** returned products are sent back to the supplier and handled by them. This approach is typical for products that were delivered directly from the supplier (i.e. a drop shipment approach) in the first place. Returns for large white goods and made-to-order furniture often utilize this solution.

OMNI-CHANNEL
DECISIONS

OMNI-CHANNEL SUPPLY CHAIN MATURITY

Multi-channel retailers typically fall into one of several levels of capability maturity ranging from Level 1 (e-commerce beginner) to Level 4 (omni-channel champion).

FIGURE 10: OMNI-CHANNEL CAPABILITY MATURITY LEVELS

		Level 1	Level 2	Level 3	Level 4
Front-end: customer promise	Assortment	Mostly bricks-and-mortar assortment Limited online assortment	Established bricks-and-mortar and online assortment No front-end visibility across channels	Established bricks-and-mortar and online assortment Some front-end cross-channel visibility (e.g. store SKU visible online; store personnel can place online order)	Optimized range assortment for each channel Fully integrated front-end assortment visibility across channels
	Delivery options	Home delivery 1–2 weeks delivery time for a fee	Home delivery Several service levels (1–2 weeks free of charge / 2–3 days expedited for a fee)	Several delivery options (incl. click & collect) Differentiated service levels & fee structure (incl. next-day)	Flexible delivery options (incl. click & collect) Differentiated service levels & fee structure (incl. next-day and same-day)
	Return options	Inconvenient or unclear returns policy	Clarified returns policy Returns via parcel network	Several return options (incl. return-to-store)	Several return options (incl. return-to-store) Hassle-free returns (e.g. pre-printed return labels)
Back-end: multi-channel supply chain capabilities	Inventory management	Separate stock "Spreadsheet" online inventory management	Separate stock managed by separate IT systems Limited cross-channel visibility Cross-allocation possible	Partially combined stock (e.g. only at DC level) Separate forecast Cross-channel visibility Automated inventory transfer	Single stock at all levels (DC and store) Combined forecast
	Fulfillment & warehousing	Fulfillment from stores / replenishment DC	Fulfillment from e-Commerce DC	Several fulfillment options (incl. hybrid DC)	Flexible fulfillment with real-time decision-making
	Final mile delivery	1–2 delivery service providers No operational optimization	Several delivery service providers Limited operational optimization	Best-fit providers portfolio Optimized final mile network structure	Best-fit providers portfolio Dynamic operations Optimization enabled by IT
	Return handling	No established returns handling process	Returns handled at e-Commerce DC	Optimized returns handling process for cost	Optimized returns handling process for cost and speed

Each retailer will find the right omni-channel capability maturity level that best fits its strategy and omni-channel ambition. However, it is essential that the front-end and back-end maturity stages are aligned (see Figure 11). In other words, the customer-facing supply chain offering needs to be enabled by the right operating model.

Problems can occur when retailers grow the customer promise, but don't back that up with solid back-end supply chain capabilities. This imbalance can cause higher costs and can result in a negative customer experience.

FIGURE 11: ALIGNMENT OF FRONT-END AND BACK-END CAPABILITIES

Front-end: Customer promise maturity

Back-end: Multi-channel supply chain capabilities maturity
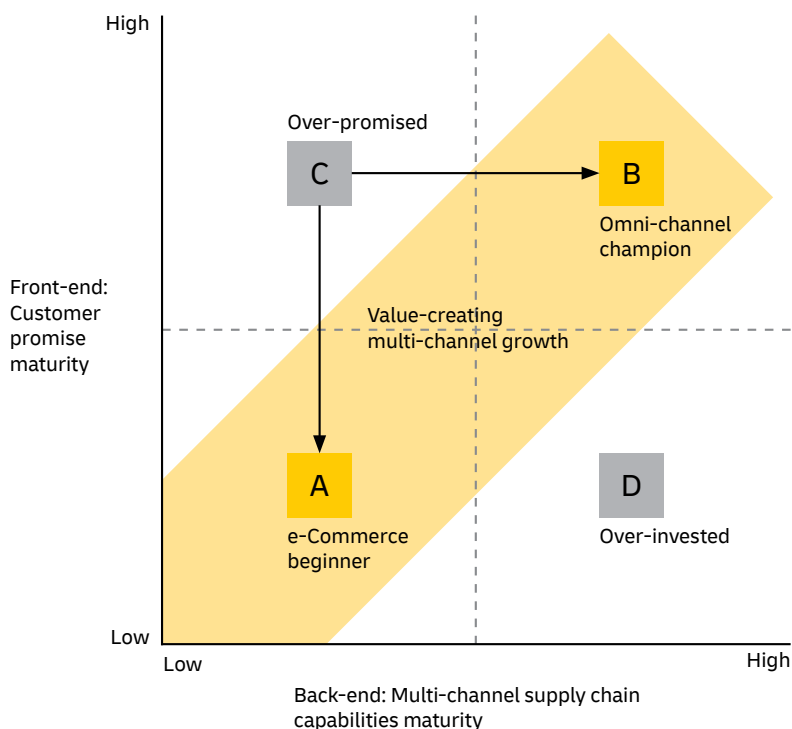
In trying to catch disruptive market trends and satisfy customers, some retailers have become carried away in the race for omni-channel and are now rethinking their omni-channel initiatives.

Athletic footwear retailer **The Finish Line** announced they will prioritize the improvement of physical stores in the near future, as they feel they have lost their focus on business fundamentals. "We have underinvested in our physical presence over the past few years as we dedicated the majority of our capital spending to essential technology and infrastructure projects" said Sam Sato (The Finish Line CEO).[21]

U.S. retailer **Nordstrom** admitted earlier this year that while heavy investment in omni-channel (over 3bn USD over the last five years) has delivered great success to their e-commerce sales (now 20% of total sales, up from 8% five years ago), it has had a negative impact on profitability. "With our increased investments to gain market share along with the changing business model, expenses in recent years have grown faster than sales," said Nordstrom CFO & EVP, Michael G. Koppel.[22]

Nordstrom is now planning to focus on fewer, "more meaningful" omni-channel initiatives and take a closer look at ways of generating efficiency around delivery, fulfillment and online assortment.

[21] http://www.retailwire.com/discussion/have-omnichannel-initiatives-taken-attention-away-from-stores/
[22] http://uk.businessinsider.com/nordstrom-president-on-ecommerce-issues-2016-2

HOW TO BUILD A PROFITABLE MULTI-CHANNEL SUPPLY CHAIN STRATEGY

There is more than one way to be successful at multi-channel retailing. The true challenge for retailers is to find the balance between fulfilling growing customer expectations and following market trends, while at the same time not losing sight of profitability.

Retailers should define their multi-channel supply chain strategy using the following steps:

- **Create transparency across channels.** Develop an understanding of true channel profitability by establishing accurate end-to-end supply chain cost allocations for each channel.

- **Understand business strategy and supply chain objectives.** Start at the top and translate market positioning, value proposition and channel strategy into clear multi-channel supply chain objectives.

- **Develop a target service offering.** Outline customer-facing front-end supply chain design by defining assortment strategy, delivery and return option space. This must be done in close collaboration between the commercial and supply chain organization. It is critical to understand what customers genuinely value, to avoid over-committing and focusing on service aspects that make no real difference.

- **Operating model.** Outline several back-end operating model options to meet the target service offering and test them via simulations. This may require several iterations of scenario modeling to find the right balance between the desired front-end service offering and a cost-efficient operating model. To enable effective comparison of options, establish visibility into the end-to-end unit cost to serve.

- **Pilot and implementation.** Test elements of the operating model on a limited scope via a number of pilots. Collect customer feedback, measure results and make the necessary adjustments before full-scale implementation. It is especially important to establish a fast feedback loop when making major adjustments to the operating model (e.g., implementing flexible fulfillment).

There is no one answer – or single blueprint – to solving the omni-channel retail supply chain challenge. However, retailers and their logistics service providers have come a long way in turning a margin-eroding endeavor into a profit-generating one. More work needs to be done, but as this paper illustrates, strategies exist to drive the supply chain transformation needed to make omni-channel retailing work for retailers and consumers alike.

shopping

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