Conquering the Omnichannel Challenge – Today and for the Long Term
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The challenges and opportunities for Omnichannel commerce – both in and out of the retail sector – are by now well-known.

The graphic below illustrates some of the main challenges, though it would be easy to add a dozen more to the mix.

These Omnichannel-specific challenges include:

- Customer requirements that are unclear and evolving
- New order points, or what we call Points of Interaction (POIs), that are driven by technology and complicate demand forecasting
- The need to synchronize many variables (pricing, promotion, inventory, etc.) across channels
- A current economic model that makes eCommerce profitability a challenge

Similarly, companies must also enable new Points of Fulfillment (POFs)

All this with software systems frankly built for another era
The Stakes are Exceedingly High

“[Neil] Ashe’s pointed response: “It [multi-channel commerce] will take the rest of our careers and as much money as we’ve got. This isn’t a project... It’s about the future of the company.”

This is a high pressure game that will have enormous consequences for companies and their futures.

A couple of years ago, Leroy Allen, former SVP of Logistics for Lowes, told SCDigest that “Multi-channel commerce is a game changer. It will create real winners and losers in retail and beyond.”

More recently, Neil Ashe, Walmart’s president of global e-commerce, was asked by a board member about how much time the company’s Omnichannel efforts would take and how much it would cost.

Ashe’s pointed response: “It will take the rest of our careers and as much money as we’ve got. This isn’t a project. It’s about the future of the company.”

That as Walmart invested some $1 billion in its eCommerce ventures last year, and expects to spend another $1.5 billion in 2015 in the effort.

While much discussion of Omnichannel commerce is focused on the retail sector, the challenges and opportunities are clearly universal in nature, impacting manufacturers and wholesalers as well as retailers – though the specific challenges may be different.

A 2014 study by Forrester, for example, found 76% of consumer goods manufacturers are now selling direct to consumers on-line.

After distributor Grainger launched its eCommerce channel, it found major changes to its order patterns. Previously, orders would come in from its manufacturing customers by phone or fax fairly balanced throughout the day. But when the online ordering capabilities were launched, customers started placing the majority of orders all at the end of the 1st shift in the early afternoon – near Grainger’s commitment time to ship orders the same day they were placed.

That change in order profiles put major stress on fulfillment operations, and was a key factor in Grainger upgrading its DC automation systems at considerable expense in order the meet its Omnichannel service needs.

Apparel retailers targeting the teen market have seen similar shifts in demand timing – little or nothing throughout the morning and afternoon and then a big spike in orders as their customers came home from school.

Other developments outside the retail sector can be seen in such news as Procter & Gamble partnering with Amazon to set up a micro fulfillment center inside some of its mixing center DCs, or news stories about manufacturers struggling to support drop shipping for orders placed on the eCommerce sites of their retail customers.
And of course, the rapid growth of eCommerce further raises the stakes – which competitors will grab what share of this new revenue stream? Though numbers on the estimated growth rate vary depending on the source, data from the US Commerce Dept. finds recent quarterly eCommerce sales growth remains in the 14-16% range – meaning they will double approximately every five years (see chart above).

The Commerce Dept. further pegs on-line sales at about 7% of total US retail sales, up from around 2.8% in 2006 - but SCDigest believes that doesn’t tell the full story.

When you strip out components of retail sales that can’t be connected to eCommerce – automobiles, gas stations, fuel dealers, etc., the share of eCommerce grows to almost 10%, as shown in the chart below.
Then of course there is Amazon, which continues to show amazing growth despite battling the “law of large numbers” as its revenue line continues to expand. While overall US eCommerce sales are growing at about 15% each quarter, Amazon’s own merchandise sales continue to grow even faster than that – Amazon’s North American merchandise sales were up an amazing 28.5% in 2014.

That growth is obviously coming out of someone else’s market share, and there aren’t that many mom and pop operations left to drive out of business. What’s more, even brand companies and wholesalers are now worried about being “Amazoned” just as retailers have been, given its growing private label line and Amazon Supply channel.

Who knows what other product areas and channels Amazon may develop in coming years, posing threats to other companies and sectors.

**Don’t Count Out the Actual Store Quite Yet**

Despite the focus on eCommerce and its rapid growth versus brick and mortar stores, it is hardly the time to count out physical stores just yet.

Physical stores have emerged as a point of leverage for eFulfillment, with Macy’s, Walmart, Belk’s and many other retailers moving aggressively to build out such capabilities, as we’ll discuss later, in part to meet the Amazon fulfillment challenge, and in part to boost the top line.

What’s more, across the globe various flavors of “click and collect” are gaining steam, in which the customer orders on-line and can conveniently pick-up at the store – and maybe even have a store associate load the goods into their cars. Most retailers with pick-up in store capabilities report that a high percentage of the time those customers purchase additional items from the store shelves to go with the on-line order.

Bal Dail, CEO of JDA Software, said this and related realities have made “bricks the new black” during his keynote address at the National Retail Federation Big Show conference in New York City last January – meaning stores are key to driving Omnichannel profitability.

Respected academic Scott Galloway from New York University’s Stern School of Business has echoed similar themes, and is taking this thinking even farther, arguing that pure play etailers without physical stores are doomed in an Omnichannel world, and that he expects most of them to begin building out physical store channels.

“Stores are the new black in the world of eCommerce,” Galloway has said. Their roles may be changing, but they remain a central piece of the Omnichannel puzzle.

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- Scott Galloway, New York University’s Stern School of Business
The Profitability Challenge

Yet for all its growth, Amazon, as with other eCommerce channels in retail, finds consistent profitability very hard to achieve, amidst continued massive investments in fulfillment infrastructure, generous shipping policies and aggressive pricing. Even in its most profitable recent year of 2011, Amazon’s net income came in at a paltry 1.3% of sales, followed by a loss in 2012, an even smaller profit in 2013, and another loss for the year in 2014. Amazon right now is basically operating a breakeven business.

Other retailers often feel they must match many of Amazon’s moves, dragging the whole sector down in terms of profitability. One large retailer recently told SCDigest its eCommerce unit was losing 10-15% of sales.

The factors in the profit predicament are many, including aggressive and near totally transparent pricing, continued pressure to offer free or very low cost shipping (we remember back not long ago when shipping used to be a profit center), the high cost of piece-picking in a DC (or store) versus traditional case handling for store replenishment, the need to sometimes ship multiple products from different sourcing points for one order, often double handling at a case level between vendors and retailer, and more.

In fact, Amazon founder and CEO Jeff Bezos commented a few years ago that “There was a time when the customer would help offset fulfillment cost by paying for the shipping and accepting handling charges. Not anymore. This is now the retailer’s cost of doing business in the dot.com world.”

Amazon’s shipping costs were a heavy 6.5% of total merchandise sales in Q4 2014, SC Digest analysis has found, after spiking at 7.5% in Q1. For the full year of 2014, fulfillment costs – not including transportation – were a whopping 17.7% of merchandise sales. With that cost structure just related to logistics, it’s no wonder Amazon has a hard time turning a profit.

At a recent NRF conference, Overstock.com CEO Patrick Byrne noted that his company sees a clear sales lift when it drops shipping costs from just $2.95 to only $1.00, and that sales stay below baseline for some time after a shipping promotion ends. He also said that free or low cost shipping at any purchase level clearly decreases the average cart size, as customers are not forced to spend to a higher level to receive the complimentary freight.

All this and more explain the profitability challenge, but given the future stakes, it’s clear companies must keep moving forward despite low profits and returns in the short term or risk being simply left behind in the market.

That said, reducing cost to serve in all areas of operations, from shipping to the call centers, will be more of a long-lasting challenge in Omnichannel commerce than even for traditional retail operations that have long focused on logistics costs. That means of course that companies must maximize supply chain efficiencies, but now within a context of a new and different Omnichannel world.
Channels Will Continue to Expand

While traditional web and now mobile channels are well established, they certainly won’t be the last.

Several retailers, such as Tesco in Japan and Walmart in China, among others, are piloting “virtual stores” using the latest digital technologies. For example, in Japan some customers can place an order in the subway from a virtual storefront near their workplace, then pick up their order at a store near the home subway station.

We expect ordering from/through television sets will be commonplace in not too many years. We have also started to see some tests of fully automated stores that act almost like an extra large vending machine – no store personnel required most of the time. Customers place orders from a touch screen, and the mini-store’s automation system picks, packs and delivers the goods to the customer waiting outside.

The point is just that demand and related fulfillment will come from a growing array of devices and sources, so flexibility will be a key hallmark of Omnichannel commerce and the supply chains that support it.

And as John Phillips, SVP Customer Supply Chain & Global Go-To-Market for PepsiCo has been eloquently noting in a series of conference presentations over the last couple of years, the challenge for companies will be to closely marry the digital and physical worlds – something that will require a strong team effort between IT, marketing and operations to get it right, and will likely require significant investments.

Primacy of Technology

There is something else different about Omnichannel commerce and fulfillment – and that is the predominant role that technology plays in executing strategies and satisfying customer needs.

Meaning simply this: if you are a retailer, for example, either you have systems that support order on-line, pick-up in store or you don’t. The same with store-based fulfillment, or many other examples, such as drop shipping from vendors for both retailers and manufacturers. It is a binary scenario: a company’s systems can support a given capability or they can’t. Manual workarounds are often just not possible.

While as always people and processes are also important in Omnichannel success, strategy plus technology generally takes the lead here, changing the normal dynamics when it comes to technology planning and investments. This is simply the harsh reality, as thousands of companies are finding right now.

“...people and processes are important in Omnichannel success, [however strategy and technology generally take the lead, changing normal dynamics in planning and investments... [this is] the harsh reality, thousands of companies are finding right now.”
Key Concepts: POIs, POFs & PORs

It is important to understand three key Omnichannel concepts:

- **Points of Interaction (POIs):** The physical or digital locations from which orders can be placed.
- **Points of Fulfillment (POFs):** Locations from which a customer order can be shipped/fulfilled.
- **Points of Return (PORs):** Physical or digital locations from which a customer can return all or part of an order.

These concepts, roughly equivalent to supply chain “nodes,” all interact with each other, as simply illustrated in the graphic nearby.

A critical early step in the Omnichannel journey is in fact to identify current or planned Points of Interaction and Points of Fulfillment. Obviously, this exercise is done in conjunction with the overall Omnichannel strategy and (probably at some future point) more rigorous supply chain network optimization. Points of Return also need to be identified.

The next logical step is then to map what Points of Interaction will potentially have customer orders fulfilled from which POFs.

This of course then provides a clear roadmap for which combinations of POIs and POFs need to be technically enabled. When Omnichannel leader Macy’s undertook this exercise, it identified 16 such combinations its systems would need to support – plus a couple more that would occur rarely enough that manual workarounds were in fact feasible without much technology investment.
Similar effort of course needs to be placed on mapping Points of Return – not only where customers can return a product, but just as important how that returned item will flow through the reverse logistics chain when it is received. This is an area that most companies would benefit from paying more attention to – later in this report we discuss the concept of “saving the return” as a benefit of Distributed Order Management technology.

Stages of Omnichannel Evolution

Given the pressure and stakes, advances in Omnichannel by retailers and many non-retailers as well have lately been achieved in very rapid fashion. But it wasn’t very long ago that many were just getting started, as the spacing expands between those still crawling while others are walking and in some cases starting to trot.

*SCDigest* believes the “crawl, walk, run” metaphor is a good one for Omnichannel commerce. The following graphic demonstrates the common strategic activities along each stage.

Early on – and to an extent longer than that – there is a great sense of uncertainty about customer requirements and what services and capabilities need to be provided - combined with a justified sense of urgency to “just do something.” As an example of the uncertainty and pressure to act, not long ago a supply chain executive at JC Penney said a critical question her company was trying to answer was when its customer was placing her order through a tablet computer sitting on the couch in the evening, did she really need the product the next day, or would the day after suffice? That made all the difference about which capabilities needed to be put in place.
SCDigest would say right now that customers themselves often don’t know what they really want, with expectations often driven not from core needs but rather shaped by the latest program from Amazon or others. This makes strategy and decision-making tough, and in some cases something of a crapshoot.

As strategies and technologies advance, basic capabilities are achieved, meaning POI and POF combinations are enabled through software. But there is still uncertainty, and companies must adopt a “test and learn” paradigm that encourages experimentation, refinement – and the occasional failure.

Technology bets are also made – with companies needing to walk the fine line of placing bets before requirements are really well understood, because waiting for a greater level of certainty will leave a company far behind rivals more willing to roll the dice in the name of speed.

In the walk phase, we also see the early stages of cost to serve optimization – key to Omnichannel profit realization.

SCDigest believes that as Omnichannel thinking and capabilities advance, the mid to long-term goal must be to simply embrace Omnichannel commerce as how the business now works, not as some new and strange facet of the business, as often seems the case today. In that, we are reminded of the comments a few years ago from Jake Barr, who was then global director of Procter & Gamble’s supply chain. During a presentation at the annual CSCMP conference, Barr said that each year, P&G’s supply chain was charged with driving $2-3 billion in new revenue growth by enabling new channels to market across the globe.

That goal was primarily in a physical sense – could P&G’s supply chain profitably make product available in new countries or sales channels?

That same type of perspective needs to be brought to Omnichannel - supply chain and IT need to work together to empower profitable growth as new digital or physical channels emerge – faster and better than the competition. As Omnichannel becomes simply the way business is done, it is no longer managed by separate organizations but by a single organization across all channels, and this the same for technology support.

Unfortunately, for some if not many companies this future state will involve the need to substantially refresh initial technology partners, as they either failed to choose well or did not build in flexibility to meet unforeseeable future requirements. To escape that fate may mean spending a bit more today to avoid spending again in 3-5 years. We encourage companies to err on the side of future agility.
Distributed Order Management (DOM) has emerged as the defining application of Omnichannel commerce. First invented in the late 1990s, but with relatively little traction until the past few years, DOM technology now serves to orchestrate order fulfillment across channels as well as unifying order processing across disparate ERP or other systems in a company.

What is a DOM, and how does it differ from the traditional Order Management Systems (OMS) that have been around really since the earliest days of supply chain related software?

As illustrated in the graphic below, while there are some modest overlaps between the two categories, the central missions of DOM and traditional OMS differ.

An OMS is primarily focused on order processing, and addresses all the items need to successful complete that task, including pricing, promotions, credit checks, credit card processing, etc.

A DOM, by contrast, is order fulfillment centric, looking at how to source an order in a way that meets customer service commitments at the lowest total cost or some other objective. Generally at the heart of a DOM is a powerful, configurable rules engine that enables companies to define sourcing and fulfillment policies and logic.

Let’s take a very simple example: say a retailer has several DCs in different time zones across the US. As the day proceeds, even orders from the East coast may be routed by the DOM to DCs going further West in order to meet cutoff times for parcel carrier pick up, depending on service commitments to individual customers. So a customer that chose free ground shipping with somewhat loose commitments for order delivery would be routed to the DC that would incur the lowest shipping costs, whereas the orders for customers paying for one or two-day delivery would have their sourcing points dynamically moved throughout the day to take advantage of later cutoff windows further West.

As a further point of differentiation, a DOM system often sits over top of multiple traditional OMS systems, we’ll discuss in more detail below.

A DOM can be said to orchestrate order fulfillment, maintaining visibility to inventory, costs and capacities across the extended supply chain (including those of suppliers), as well as specific inventory or handling requirements defined by channels or customers.

Based on that data, and the sourcing logic instantiated in the rules engine, a DOM will provide available-to-promise (ATP) capabilities, determine
optimal sourcing points based on costs, customer requirements and network constraints, and often pass other channel customer requirements (e.g., labeling) to downstream execution software, such as Warehouse Management Systems (WMS).

That order execution piece provides a great example of how in the end these integrated systems can drive real value for Omnichannel commerce. A category of software known as Labor Management Systems, for example, can be very useful when tied to a WMS to calculate distribution center “cost to serve” at a very detailed level, which informs logistics decision-making, and can very accurately determine whether a given DC on a particular day, based on available labor and the order pool, has the capacity to process additional orders - intelligence that could be made visible to the DOM for sourcing decisions.

**DOM Systems Orchestrate Order Fulfillment**

![Diagram of DOM Systems Orchestrate Order Fulfillment]

- Inventory Visibility
- Cost Data
- Capacity Data
- Sourcing Rules
- Channel/Customer Rules
- Distributed Order Management (DOM)
- Available to Promise
- Sourcing Decisions
- Customer/Channel Rules
- Internal DC
- 3PL DC
- Vendor
- Retail Store

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DOM Has Applicability in Almost Every Sector

While DOM applications have gained prominence in retail for support of complex order sourcing capabilities, the technology has applicability in almost every sector.

In manufacturing, for example, many companies have been part of numerous mergers and acquisitions that have left them with numerous ERP and OMS systems across different business units and often even individual plants. That has led to a series of challenges, including a lack of order visibility, excessive order processing overhead, difficulty in consolidating orders to a single invoice and more.

That has driven the need for what is often called an Order Hub – a central repository through which all incoming orders flow.

A DOM – whether commercially purchased or developed in house – is the technology that powers the Order Hub concept. (See graphic below).

The DOM provides centralized visibility and routing of orders across all customers, presenting one order management face to those customers despite disparate and in many cases even aging traditional OMS technology underneath, now invisible to the customer.

It was a term coined many years ago, but the “order is [still] King!” – only in today’s Omnichannel world, it is more likely to be managed by a Distributed Order Management system than a traditional OMS.
Global Commerce Challenges

For all the challenges of running an Omnichannel operation domestically, the complexities grow many fold for companies operating on a global basis.

The challenge starts, obviously, with what product assortment will be carried in each country or region. But even for the same base SKU, it may be necessary to maintain country-specific content on digital channels relative to language, pricing, taxes, what product images and descriptions are used and more.

This is an enormous task, and can lead to lots of expense from maintaining a small army of staffers who manually manage this content country by country.

Fortunately, a new generation of global commerce solutions are emerging that provide tools to better manage and automate this mountain of work, enabling product hierarchies, for example, in which a product image can be updated globally, or at a regional or specific country level, as just one simple example.

Of course, these commerce solutions are valuable to manage content even within a single country, but the challenges explode for a global operation.

The Drive to Store-Based Fulfillment

In the retail sector, there has been of late a rush to add store-level fulfillment capabilities – with an interesting twist.

The move to store fulfillment was first touted by Walmart and others as means to gain some advantage over Amazon.com and its rapidly expanding network of fulfillment centers – the thinking being that by leveraging an ability to ship from local stores, retailers could have lower shipping costs and/or faster delivery than an FC-based approach.

That may very well be true – but retailers have found direct revenue benefits as well. This is a result of expanded product availability for web and mobile channels.

When a distribution center serving the eCommerce channel incurred an out of stock of an item, normally that meant a period of lost sales until the SKU was back in the DC.

But when store inventory can now be tapped, the percentage of stock outs and orders that cannot be filled often drops dramatically – providing an immediate bump to the revenue line and hopefully profits as well.

There are other financial advantages as well, especially when that store fulfillment capability is connected to a DOM system. For example, when a chain sees it has unsold inventory of shorts as summer winds down in stores in more Northern regions, it may be able to sell those shorts to customers in warmer regions over the web and ship them from those Northern store locations.

And they may be able to do so at near full price, versus the steep markdowns or outlet channels that may have been required to move the goods before this new paradigm.
There is a related “save the return” concept. If a store allows order on-line and return in store, it may be stuck with the return of an item that is not part of its normal assortment. Again, in the past this would result in costly extra handling and maybe shipping to deal with this orphaned item. But with DOM and store-based fulfillment, the store may be able to ship that returned item to the next customer that orders it from the web.

Given all this, it is clear why CEOs in retail are now very interested in developing store-fulfillment capabilities. But there are many questions that must be addressed: which stores should serve as fulfillment centers? Will a dedicated packing and shipping area be created in the backrooms of those stores? What capacity does a store really have to pick and ship orders? How can retailers balance walk-in and eFulfillment inventory?

Here again, a DOM system becomes critical, as it can manage all of these variables, such as respecting capacity limits, maintaining minimum store inventories when deciding sourcing locations, and determining whether a given order is better sourced from a store or eCommerce DC. Belk’s department stores, for example, has found that store fulfillment costs around $1.00 per order, versus just 48 cents when performed in the DC – and that it is important to also calculate indirect store fulfillment costs, such as the extra hours needed to accurately maintain store inventories.

For any stores of decent physical size, other systems besides DOM should be strongly considered. This includes a form of store-level WMS – what we might call “WMS lite” – to provide functionality such as maintaining inventory locations and quantities, creating optimized “pick paths,” supporting picking instructions on wireless or voice-based systems, and other capabilities.

A growing number of retailers have implemented such in-store systems, and learned lessons in the process. For example, given the similarity of many items and the less structured approach to inventory locations versus that in a DC, it is very helpful for the system to also display an image of the item to be picked along with the quantity and location.

In the grocery and perhaps other retail sectors such as hardware, the system needs to support the picking of variable weight items, such as produce.

In addition to this store-level WMS, Workforce Management systems can also play a key role in terms of scheduling the fulfillment tasks and maintaining standards for productivity, very similar to the way a traditional Labor Management System functions within a distribution center.

Store-based fulfillment has become the driving initiative for dozens or hundreds of retailers – but for maximum success, it must be connected to a DOM system and supported by other in-store technologies to provide those capabilities at lowest cost.

= Omnichannel Technology Evolution

Using the same crawl, walk, run metaphor used earlier in this report, we can also look at some basic levels of Omnichannel technology maturity.

Early on, companies must obviously develop overall strategies, and we suggest performing the POI-POF mapping discussed above to set a road map for what processes and flows need to be technically enabled. The walk stage involves completing that technology enablement, as well as DOM adoption at a basic level – the sophistication of which will grow over time as needs and costs are better understood (meaning the fulfillment rules will become increasingly nuanced over time).

DOM can also play a role in pooling inventories across channels, a move which should reduce inventory costs and improve sales, though there are some complexities here. The challenge is how to achieve those benefits from inventory pooling while
still maintaining accountability at the channel level for forecasting accuracy and sales execution.

*SCDigest* believes this will involve tracking sales by channel against forecasts, freeing up inventory for other channels when those forecasts are not being met, and allowing channels overselling forecasts to grab inventory from other channels to ensure the sale – but at the price of some kind of crosscharge penalty for the poor forecast.

We first heard this vision for cross channel inventory from an executive at LL Bean more than 15 years ago, but we’re not sure anyone has achieved such a capability yet – but some may be getting close.

Of course, in this altered landscape, it may be prudent to re-analyze the total fulfillment network using network optimization tools. That effort should provide answers as to how many DCs are needed and where they should be placed to support eCommerce and other new channels, and ditto for what stores should do fulfillment tasks, answering both the DC and the store questions in parallel.

As companies move to embrace Omnichannel commerce as just the way business is done, a more end-to-end technology support will be required.

That includes what we might refer to as next-generation DOM that provide even more advanced capabilities – and which we believe will in part involve taking on more functions associated with traditional OMS platforms. It will also involve some of the more advanced inventory management functionality described above.

At the 2014 CSCMP conference in San Antonio, Jeff Starecheski, VP of Logistics at Sears, said that “What is coming is something I will call COOL – Customer Order Orchestration Layer.” We are closer to that right now than perhaps Starecheski knows, but there is certainly still room for DOM advances.

“As next-generation DOM will provide even more advanced capabilities - which we believe will in part involve taking on more functions associated with traditional OMS platforms... and will also involve more advanced inventory management functionality.”
The Role of Integrated SC Planning & Execution

Retailers and others naturally place a lot of focus on the front end of the Omnichannel delivery – enabling new Points of Interaction and Fulfillment, customer engagement on the web or in-store.

But to achieve solid profitability and gain and disproportionate share of eCommerce growth will take an equal focus in the end on integrated supply chain planning and execution, tailored to the evolving needs of Omnichannel commerce – marrying the digital and the physical worlds, as Pepsico’s John Phillips says.

Success will not come from adding buffers of inventory to compensate for uncertainty—it will come from Lean out Omnichannel supply chains in a way that lowers costs while retaining high levels of agility.

That will start by ensuring Omnichannel commerce is “demand-driven,” with the rest of the supply chain pulled by what customers are and will be buying—and importantly where.

That means advanced demand planning capable of accurately forecasting demand across all channels and fulfillment points. Forecast accuracy must not be considered from an aggregate perspective but rather a POI and POF-specific vantage, using final customer location as the true source of demand. While DOM provides agility in identifying alternative sourcing points, the lowest cost will always come from having inventory in the right place at the right time.

That Omnichannel demand plan must serve then as the “single version of the truth” that drives the rest of the supply chain, with replenishment, manufacturing, procurement, etc. all operating off of that demand schedule.

But of course, there will always be demand volatility, and forecasts will be wrong. What is needed therefore are systems that smartly identify when imbalances between demand and supply exist and intelligently reposition inventory to get back in balance.

SCDigest believes what will also emerge is something we might call constraint-based planning and execution, in which constraint-aware planning systems will create replenishment, warehouse and transportation plans that can be consistently executed.

Visibility into network-wide inventory will support the re-planning process when exceptions or disruptions occur during the execution cycle. Distributed Order Management systems use visibility to both what is occurring right now in the supply chain and iterative time-phased deployment plans to improve service and profit performance. Execution decisions previously made based on static rules and positions will be replaced by dynamic decisions considering impacts of future demand and current constraints, such as DC and transportation capacity and labor, on revenue opportunities, costs and customer satisfaction.

Omnichannel and end-to-end – that is the future of the supply chain.

“SCDigest believes what will also emerge is something we might call constraint-based planning and execution, in which constraint-aware planning systems will create replenishment, warehouse and transportation plans that can be consistently executed.”
While there are a number of vendors providing some or most of this functionality, the partnership between IBM and JDA Software provides an interesting example of an advanced vision and end-to-end thinking on Omnichannel technology enablement.

Greatly simplifying, IBM brings to the table its DOM and eCommerce solution, as well as channel applications, including Call Center for Commerce and Store. IBM’s DOM is a market leader in the space, offering robust tools to streamline execution with a single view of all orders and inventory across the entire fulfillment network, leveraging store networks to service customers with flexible fulfillment scenarios across all channels, and establish best fulfillment options by linking inventory with demand to pinpoint the delivery window.

JDA, also a clear market leader in retail and consumer goods sectors, provides a broad range of planning and execution solutions, including traditional and in-store WMS, plus TMS, LMS and Workforce Management, and an array of planning solutions in such areas as demand and replenishment planning.

The two companies are moving down the path of integrating their respective solutions (which will be performed in phases), and are communicating an increasingly compelling vision, especially for JDA as its thinking behind what it calls Intelligent Fulfillment continues to advance. The Intelligent Fulfillment vision is one that starts with a demand-driven model and then adds the ability to create plans based on real-world execution constraints in the network, and then flexibly react to events with iterative planning and execution. JDA is able to demonstrate how this iterative planning approach is able to produce better results than more traditional static planning processes.

This IBM-JDA joint vision from a high-level perspective is illustrated in the graphic below.

It should be taken in the context that maximum results will not be achieved by some sort of point solution approaches to Omnichannel enablement, but rather more holistic thinking about a future technology platform.
Business as we know it has changed forever with the advent of Omnichannel commerce. It is transforming the face of retail, creating new pressures and opportunities for brick and mortar stores, and seriously impacting companies in almost every industry sector.

Some day – and we believe soon – Omnichannel will move from being a new and somewhat scary thing to simply the way companies do business, as adding new channels and fulfillment systems becomes for leaders a core competency, supported by technology built to enable that level of flexibility.

But while at one level we are very early in this game, many companies are moving extremely fast, hoping to accelerate the crawl, walk, run cycle in their favor.

All that said, below is what we can legitimately say we know at this point:

• There are little to no Omnichannel best practices yet, though pooling inventories across channels is close to reaching that status.
• Companies need to walk a difficult line of “test and learn” while simultaneously placing some long-term technology bets, lest they simply be left behind. Being a laggard, which can sometimes be a smart strategy, is not a very safe bet here.
• POI, POF and POR mapping is a great place to start.
• Distributed Order Management has become the lynchpin of Omnichannel fulfillment for both retail and non-retail companies.
• Retailers are rushing to store-based fulfillment not only to meet fast delivery requirements but now also to boost revenues from broader inventory availability – but need new tools to do so successfully and profitably.
• Achieving or maximizing profitability in the mid-to-longer term, will require intelligent, automated, end-to-end decision-making based on real-time visibility into inventory, orders and events, facilitating iterative, constraint-based planning.
• Companies must prepare for Omnichannel commerce not as something special, but as simply the way business is done.

Companies can either harness the power of change to their advantage, or be swept away by it. Amazon continues to grow at much faster rates than the overall eCommerce market, and increasingly threatens other business sectors besides traditional retail.

As we quoted former Lowes VP Leroy Allen early in this report: “Multi-channel commerce is a game changer. It will create retail winners and losers in retail and beyond.”

We encourage companies to move fast enough and invest smart enough to be on the winning side.

About Supply Chain Digest

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