Softeon

The Seven Key Benefits of Distributed Order Management in Retail - 2018

DOM Solutions have become the Center of the Omnichannel Universe, Providing a Long-term Platform for Supply Chain Orchestration, Increasing Speed And Flexibility, and Minimizing Costs

White Paper

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The Omnichannel revolution is obviously roiling the retail sector in many ways, providing enormous opportunities but also an equal number of challenges.

eCommerce sales continue to rise rapidly, up 14-16% quarter after quarter according to data from the US Commerce Dept. Many retailers - notably Amazon.com - are seeing their own on-line sales increase at even greater rates than those robust overall levels.

That healthy growth certainly looks like a significant opportunity, and it is. But let's be clear – in the end it's a zero sum game. The consumer has only so much disposable income to spend. That means that to a great degree the growth in on-line spending will simply be matched by a reduction in sales at some retailers' brick and mortar stores.

Perhaps more critically, that same zero-sum game applies to on-line sales as well. Even as the share of total retail sales coming from eCommerce continues to rise, total consumer spending will remain relatively fixed, based on disposable income and other factors. That by definition means retailers can only grow at faster than average rates at the expense of other e-tailers that will realize below average on-line revenue gains. And there are only so many "mom and pop" retailers to take market share from left.

The battle is likely to be a long one. Not long ago, Neil Ashe, president and CEO of global eCommerce for Walmart, was asked by a company board member how long the retail giant's Omnichannel "project" would take and how much it would cost.

Ashe's incisive 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."

So the stakes for retailers are high indeed. That fact, combined with the almost breathtaking speed at which the Omnichannel world is evolving, means myriad strategic and tactical decisions need to be made, usually with far from certain information and many unknowns as to what consumers will really want or demand over time.

Add to all that the extreme challenge retailers are finding in making eCommerce channels profitable. Despite its now huge revenue levels and growth rates of more than 20% quarter after quarter, Amazon runs basically a break-even business. Many retailers are said to be losing money on their eCommerce operations, as the brutal on-line price competition, high costs of piece picking, free or low cost shipping programs, generous return policies, high investment levels and more combine to wreak havoc on the bottom line.

But the challenge in making profits almost doesn't matter in terms of the need to charge forward and make investments. Retailers that move slowly to be more certain in their decisions or to shore up

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profitability are at risk of simply being left behind. "Pilot and learn" is the approach of the day, while retail leaders such as Amazon, Walmart, Macy's and many more continue to make heavy investments even in the face of bottom line challenges in eCommerce channels.

One of the key areas of investment for many retailers is in a software category called Distributed Order Management (DOM) technology. In fact, DOM systems are really becoming the center of the Omnichannel universe, providing a long-term platform for supply chain orchestration, increasing speed and flexibility, and minimizing supply chain costs – all of that contributing to improved productivity.

But what is Distributed Order Management, and specifically how can retailers benefit from the capabilities DOM can provide? We will explore those key topics and more in the rest of this report.
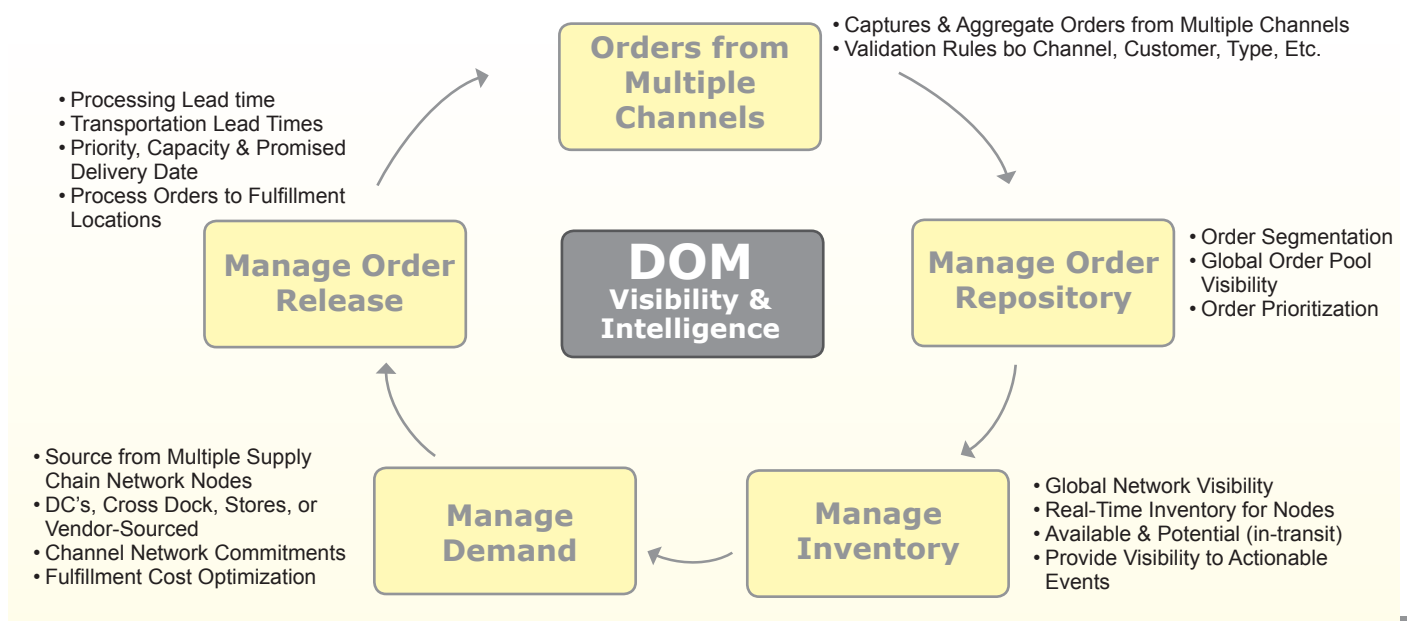
DOM Basics

Distributed Order Management systems were first invented in the late 1990s specifically to help new-to-the-world eCommerce businesses match demand with supply, often connecting e-tailers with suppliers that would drop ship goods for the orders they received on-line.

That basic demand and supply matching – more specifically, selection of the optimal sourcing point for an order – is still at the heart of what a DOM does for most retailers that deploy the technology – but as we will see some DOM systems can do a whole lot more.

A DOM differs from a traditional order management system (OMS) in its focus. An OMS is primarily used for order processing, at a line item level, and provides capabilities in terms of pricing, credit checks, substitute items and much more.

In retail, a DOM system is more focused on order fulfillment, or what many call order orchestration. It simply means this – a DOM system will integrate with many internal systems and often those of

DOM Delivers Intelligent Fulfillment Orchestration

Orders from Multiple Channels
- Captures & Aggregate Orders from Multiple Channels
- Validation Rules bo Channel, Customer, Type, Etc.

Manage Order Release
- Processing Lead time
- Transportation Lead Times
- Priority, Capacity & Promised Delivery Date
- Process Orders to Fulfillment Locations

DOM Visibility & Intelligence

Manage Order Repository
- Order Segmentation
- Global Order Pool Visibility
- Order Prioritization

Manage Demand
- Source from Multiple Supply Chain Network Nodes
- DC's, Cross Dock, Stores, or Vendor-Sourced
- Channel Network Commitments
- Fulfillment Cost Optimization

Manage Inventory
- Global Network Visibility
- Real-Time Inventory for Nodes
- Available & Potential (in-transit)
- Provide Visibility to Actionable Events

trading partners (e.g. 3PLs, suppliers). As a result, DOM also serves as a comprehensive visibility system, making orders, inventories, capacities and more visible across the extended supply chain network. Based on this visibility, a DOM marries the right fulfillment path for each and every order, based on rules developed by the business.

It is this sense that DOM is said to orchestrate order fulfillment, looking across the full network to ensure the right music is being played to meet customer requirements at the lowest cost given current network realities (e.g., what inventory is where).

All that said, it is likely that DOM systems over time will take on more capabilities that today are typically found in a traditional OMS.

In fact, Softeon has a more expansive view of a DOM solution than most others in the market. Softeon's innovative technical architecture enables us to add bits of capabilities from other areas, such as transportation management, parcel management, inventory management, forecasting and more, to deliver a more complete solution than is typically covered by commercial DOM solutions, as shown in the graphic below:

Softeon's DOM Solution Can Provide Extension Functionality, as Required, Beyond Core Capabilities
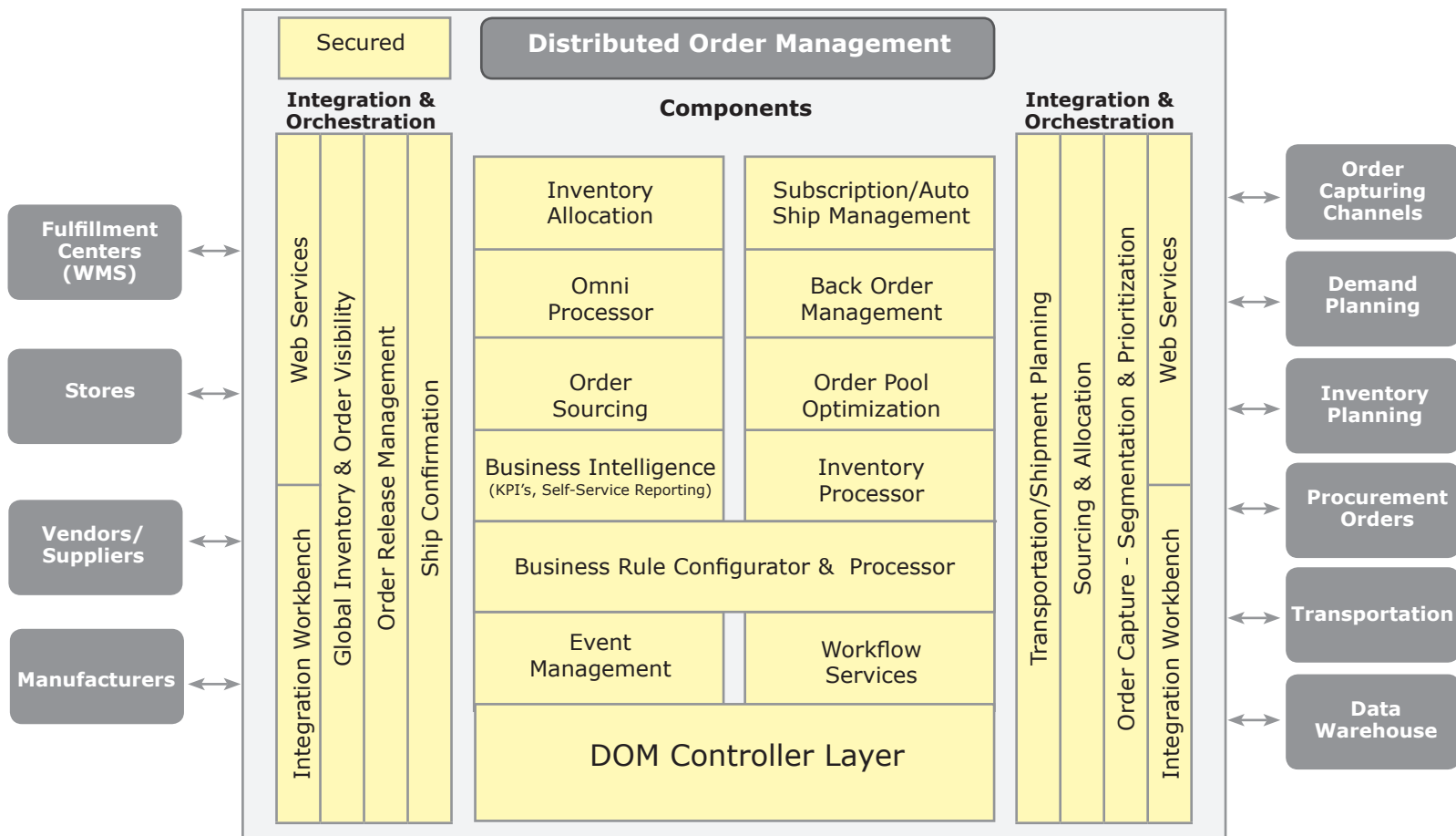
There is much to understand about DOM, and perhaps the best way to achieve that deeper under-standing is through looking at the many ways DOM solutions can provide real value for retailers.

We have organized the discussion around seven ways retailers are using DOM technology, each with their own set of benefits.

The Seven Ways Retailers Can Benefit from Distributed Order Management Technology

With that overview of DOM technology, we have identified seven specific ways that DOM systems can benefit retail Omnichannel operations and improve profitability.

1. **Automate New Order and Fulfillment Flows without Reworking Existing Applications:** *The challenge of Omnichannel commerce is that it creates new points of inter-action (POIs), points of fulfillment (POFs) and points of return (PORs), as well as new combinations of those nodes across a network.*

An easy example is order on-line, pick up in store. Simple enough, right? Well not if current IT systems don't support that transaction and work flow. This simple example highlights the real challenge: many existing IT systems were built and deployed well before the Omnichannel era began.

DOM Can Enable Omnichannel Transactions and Workflow without Need to Modify Existing IT Systems
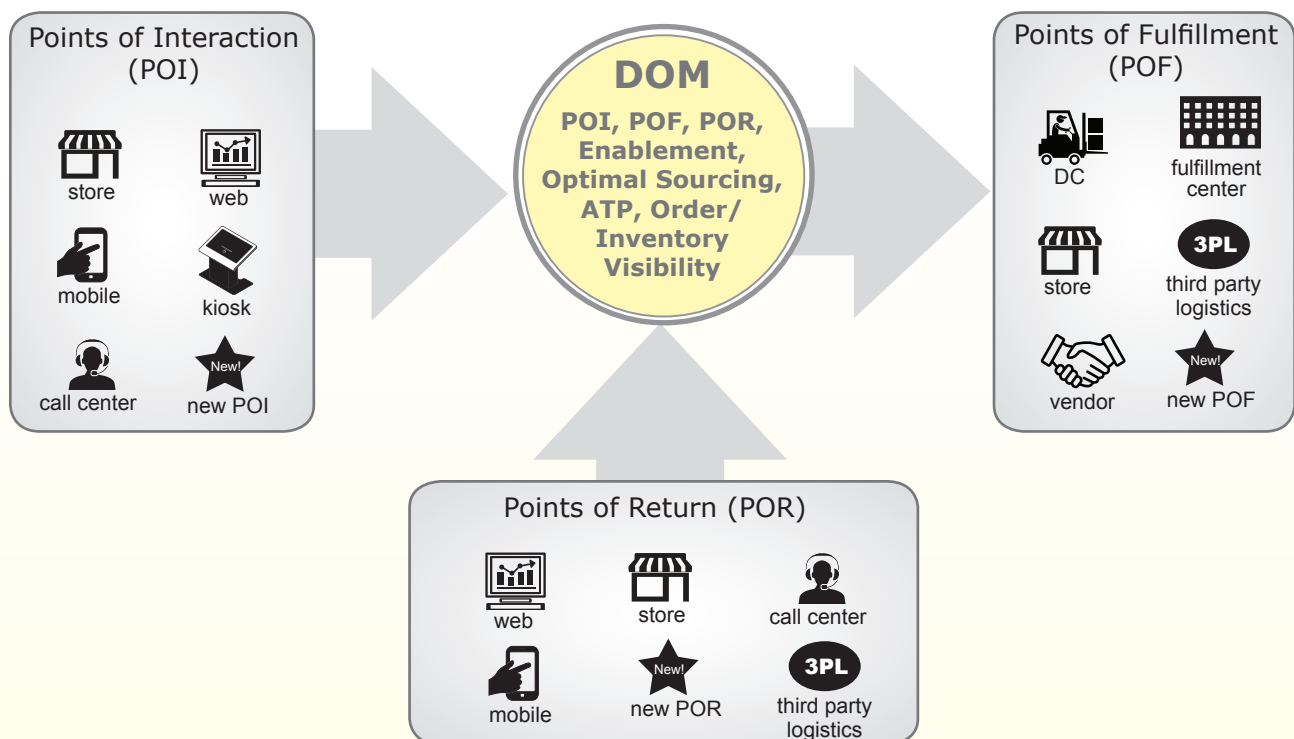
Retailers are left with one of two choices: go into existing software systems and create these new POIs, POFs and PORs and their various workflow combinations, or deploy a Distributed Order Management solution that connects to all the existing systems and provides new capabilities that existing systems do not possess.

In most cases, the DOM approach will get the retailer to its desired state faster and at a lower cost than trying to rework existing systems – and provide considerable more flexibility for adapting to new requirements down the road, as we discuss later in this paper.

This is exactly what one leading Internet retailer did when it began opening its own network of retail stores, from which it wanted to perform eCommerce fulfillment, while simultaneously starting a new 3PL relationship for order fulfillment.

The existing systems did not support either of these changes. But with Softeon's DOM solution, the retailer was able to quickly connect these new fulfillment points and processes and route orders to the right sourcing location, all without modifying its existing systems.

2. ***Define and Instantiate the Rules That Will Run the Business:*** *Managing an Omnichannel world is obviously complex and growing more so. It is of course possible for a retailer to define on paper how it wants its business to work – what the rules should be for how eCommerce is managed, how orders and merchandise should flow, and more.*

Before DOM, instantiating those business rules across disparate retail systems and applications was not easy, and generally not fully possible. But in the pre-Omnichannel era, where the focus was almost exclusively on stores, with other channels (e.g., catalog) operating very much in their own silos, so that such business rule development was less essential for success.

Now that has all changed, with a proliferation of channels that must be synchronized in terms of pricing, inventories, information flow, fulfillment and more – and which require a much more complex set of business rules to manage all that.

The great news is that a DOM solution will provide a platform for instantiating those rules into a software system, which will then enforce that rule logic automatically, consistently, and predictably. In fact, at the heart of most if not all DOM solutions available in the market is a "rules engine" where such business logic is defined.

To go into detail on the specifics of rules engines is beyond the scope of this paper, but the technology can be thought of as providing a nearly infinite set of "if then" statements that govern operational decision making. That means that those with DOM can – in one place – define the rules a retailer wants to govern its Omnichannel commerce operations.

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This is simply a capability that did not exist before DOM technology, and provides an incredible amount of power.

We will note, however, that while a rules engine is at the core of most DOM solutions, those rules engines are not created equal. When evaluating DOM solutions, be sure to dig deep into the range and flexibility of the underlying rules engines. Avoiding that thorough analysis might result in selecting a DOM provider that limits current and future agility.

3. *Integrate Disparate Data Systems and Sources:* *Nearly all companies, but especially retailers, are challenged by having data in many different places and systems. Distribution inventory system, store perpetual inventory systems, Advanced Ship Notices and other EDI information, merchandising systems - retailers generally don't lack for data, but they often do lack for information because this data is not integrated in a way that allows managers to see the big supply picture, in one place.*

The very nature of DOM technology puts a focus on integration of these various data sources. While there is no magic bullet here – integration is still integration – one difference is that leading DOM systems were designed from their inception to integrate with other data sources inside and outside the enterprise - and leading DOM providers such as Softeon have developed core competencies in connecting those data sources to the DOM.

With DOM, a retailer at last has its critical supply chain information – orders, inventory, expected receipts, forecasts and more - all in one place. As we noted above, it is in fact this cross supply chain visibility that enables DOM to orchestrate a retailer's supply chain.

Distributed Order Management can deliver to retailers a real-time data hub that many have long hoped for but have not been able to achieve. This is indeed a core benefit of DOM technology.

4. *Flexibly Adapt the Supply Chain Over Time as Needs Change:* *Perhaps the only thing we can know for sure about Omnichannel commerce is that we are in its very early stages, and that there will be many changes over time.*

One of the greatest benefits of DOM technology is that it can enable retailers to move very swiftly to enact changes to their Omnichannel strategies and enable evolution – or even revolution – in their supporting supply chain networks.
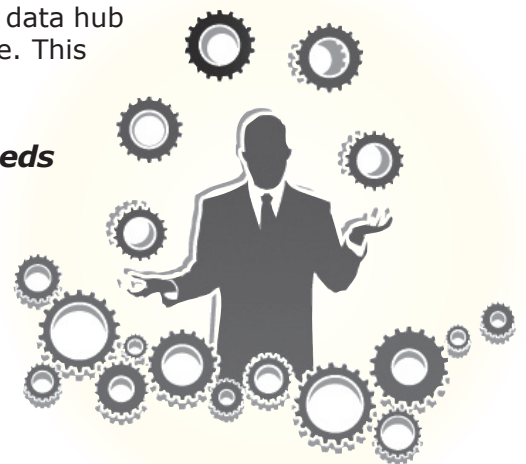
In the same way that an initial DOM implementation will automate new order and fulfillment flows without reworking existing applications, and also enable a retailer to define and instantiate the rules that will run the business, those same capabilities can of course also be leveraged to adapt as strategies and conditions change.

For example, what if a retailer decides to move some of its fulfillment operations to a 3PL? While of course some modest integration work will be required, developing the logic as to the circumstances under which orders should be routed to the 3PL becomes an almost trivial task – as would be achieving visibility to inventory and order fulfillment at that new provider.

Or consider a retailer using store-based fulfillment for eCommerce orders that over time and experience finds it needs to add, reduce or reconfigure which stores will serve this role, which in turn requires amending the rules about order routing for store fulfillment.

In most traditional retail IT systems, retooling this logic would probably be a fairly substantial effort. With the right DOM in place, the task will likely be accomplished in just a few days, if not a few hours.

Retailers need systems that can react at the blazing pace of Omnichannel commerce. DOM can deliver that agility across the supply chain and customer experience. We also find that as retailers use DOM and the capability to define business and supply chain rules, over time they want to become more nuance or granular in those rules, based on new insights, experience, changing points of interaction, fulfillment and returns, and more.

Rather being constrained by the capabilities of existing systems, DOM users instead can easily make those changes and enhancements in perfect concert with how a given retailer wants the system to operate right now. This is a huge competitive advantage, and critical in the rapidly evolving Omnichannel world.

5. Choose Best Sourcing Point That Meets Service Requirements at Least Possible Cost: *Critical of course to Omnichannel retailers – and an important driver of DOM adoption – is the core capability to identify the optimal sourcing location for a given new order.*

Within the constraints of customer service commitments and other parameters discussed in a moment, the DOM will select the point of fulfillment that results in the lowest fulfillment costs. This capability is a key factor in how DOM solutions can help retailers move towards enhanced Omnichannel profitability.

To accomplish this, the DOM leverages its rules engine technology combined with visibility into network inventories.

For example, when a given customer order is received, should that order be fulfilled from a traditional DC, a focused eFulfillment center, or a store? Well that depends on many factors and constraints. When was delivery promised, using what level of parcel service? What network nodes have the inventory required to fulfill the order? What will be the transportation costs? What if there is a need to split sourcing locations across the order?

Even sorting through those basic questions can be complicated enough. But in an Omnichannel world, the logic can become even more complex. For example, does the store that might normally be selected for fulfillment for this order have enough labor capacity to get the work done given other orders it has already received? Would fulfilling this order push store inventory below the minimum threshold that has been defined in the system?

This is complex decision-making that often needs to be determined in real time. Traditional order management systems are simply not designed for this type of scenario - but DOM is.

DOM is simply designed for this type of automated decision-making. It will route orders to the optimal fulfillment point based on a myriad of factors and constraints, and thus ensure fulfillment costs will be at a minimum for the customer service levels a retailer wants to achieve.

6. *Optimize Multi-Channel Inventory Management:*
Perhaps no issues are more vexing for Omnichannel retailers than those around managing inventories. The questions are many: should each channel maintain its own inventory, or should it be just one pool across channels? Does a retailer even have the technology capabilities to manage inventory as one pool, or do limitations in its systems require channel-specific inventories?

The general consensus is that a single pool of inventory across channels is the right model, leading to lower total inventory levels, improved customer service, and thus higher sales. At the same time, companies need to be able to maintain accountability by channel for forecasts and inventory levels, and also deal with the reality that suppliers will often ship short and thus received inventory needs to be re-allocated.

DOM solutions provide a number of capabilities that can significantly address these multi-channel inventory challenges.

A robust DOM allows for dynamic definition of rules to manage inventory in near real time. Complex rules for allocation of existing inventory by channel, customer, vendor or supplier at a single node level or the broader network ensures significant levels of customer satisfaction – be it available-to-promise for web channels or transfer of inventory between nodes or channels - to ensure timely, and accurate delivery.

In addition, for inventory that is in-transit (either en-route or in manufacturing) DOM also allows for "mortgaging" of inventory by channel, customer or even specific account managers. Finally, DOM, through dynamic rules, enables inventory re-balancing between nodes on the network – using cross-dock, inter-warehouse transfers, and other strategies that the business requires to ensure inventory is deployed commensurate with demand.

7. *Optimize the Flow of Inbound Goods:* *Most supply chain and Omnichannel managers associate Distributed Order Management with fulfillment optimization, as described above. While DOM can indeed deliver significant benefits on the fulfillment side, unknown by many in retail is that some DOM solutions can also optimize the inbound flow of goods, especially for those being offshored, with long lead times.*

At a high level, the kind of precise logic about where an ordered item should be fulfilled from across the network can be replicated for determining how inbound inventory should optimally be deployed.
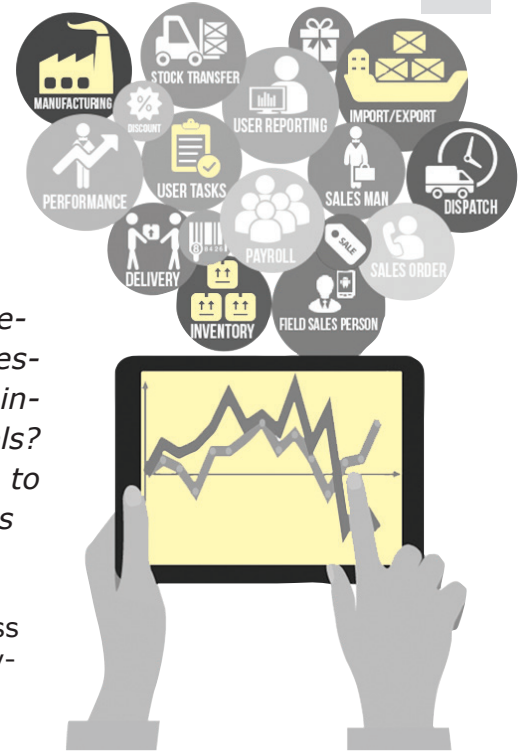
This is illustrated in the graphic below. As can be seen, the process often starts with the implementation of a vendor portal that connects suppliers and provides high levels of visibility. The portal can be used for such processes as purchase order communication and acceptance, label printing, Advanced Ship Notices (ASNs) generation and more.

Softeon's DOM Solution Can Also Optimize Inbound Retail Inventory Flows
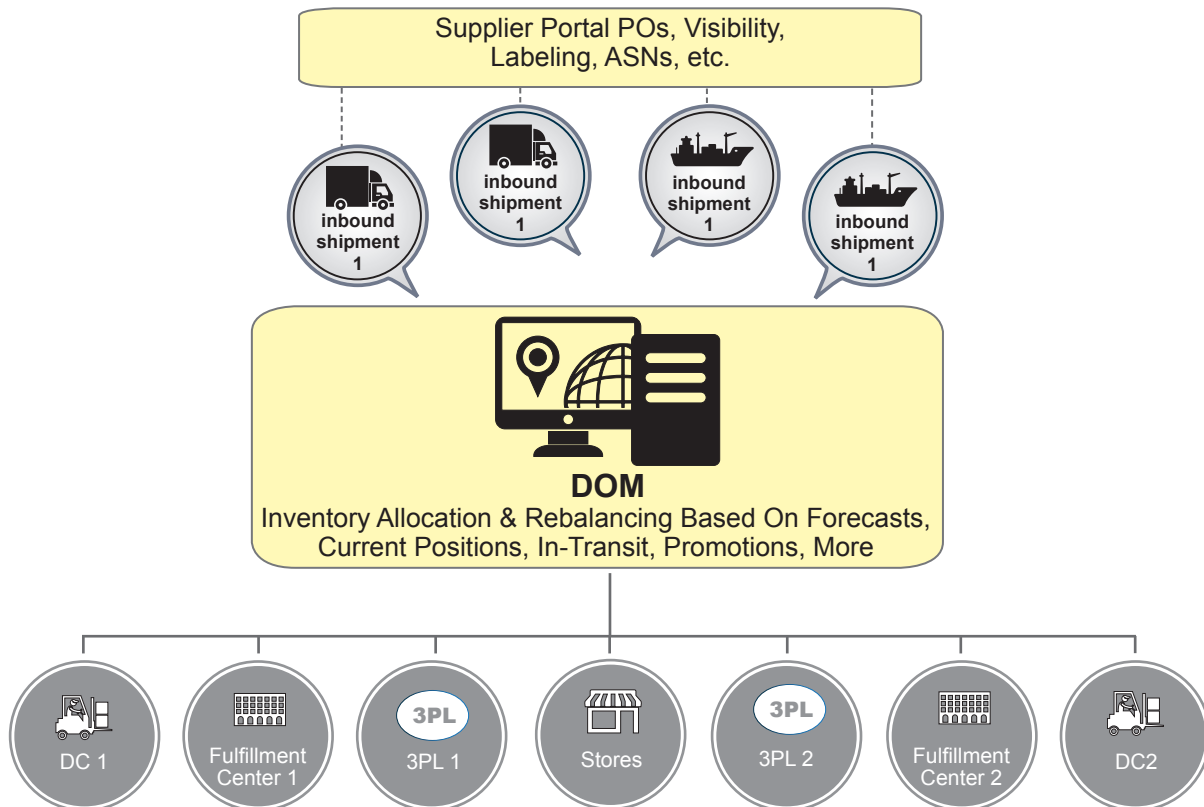
Often many weeks or months after issuing the PO, the retailer receives the goods at a port of entry. There may or may not have been a clear inventory plan at the time of the PO, but regardless – how should it best be deployed now?

Some DOM solutions have the capability to make those decisions, based on a variety of factors, including: current inventory levels across the network, inventory in transit, inventory targets, demand forecasts, promotional plans and more.

The DOM output can either be in the form of simple "decision support," providing recommendations to retail inventory and replenishment planners, or actually automate that decision-making process. That might involve, for example, directing that incoming merchandise to be cross docked from a transload facility at the port of Los Angeles straight to a store or third party fulfillment center rather than first passing through an existing DC.

The result: more optimized inventory deployment across the network in sync with real-time needs, including stores, and reducing management time and effort by providing automated decision-support.

A leading Internet retailer - one of the most recognized on-line apparel brands that has now started opening a series of brick and mortar stores - is currently using Softeon's DOM solution and vendor portal to automate these inbound processes and optimize its inventory deployment – with great success.

An interesting aspect to this initiative is that the retailer was originally looking for a Warehouse Management Solution, which it ultimately deployed (also from Softeon), but came to understand early in the process that the place to start was actually with DOM, focused on this inbound optimization capability.

So there you have the seven key ways...

in which Distributed Order Management solutions can drive real value for retailers in an Omnichannel world. As should be clear, leading DOM solutions provide a powerful set of capabilities to address a wide range Omnichannel retail challenges, though we believe only Softeon's DOM solution fully addresses all the seven benefit areas we have discussed in this paper.

We would love to show you the rich capabilities of Softeon's DOM solution and explore the areas Distributed Order Management can help you meet your business needs.

The Future of Omnichannel

There is only one thing we can know for sure about Omnichannel retailing, and that is that it will continue to evolve at a rapid pace for many years.

Remember the quote from Walmart executive Neil Ashe, who said of Omninchanel that "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."

Therefore, retailers must certainly place an imperative on operational agility, and not be continually constrained by the inflexibility of existing systems to move at the pace of the Omnichannel environment.

What makes DOM so interesting is that it can solve a series of short-, mid- and long-term challenges by providing value from day one through enabling and automating Omnichannel ordering and fulfillment combination, defining the rules that will manage the business, and improving inventory management across channels.

It will provide capabilities in the mid-term as retailers refine their networks and business rules, and provide a platform for maximum agility over the long term.

These are exciting times in retail - with a lot at stake. Let us show you how a Distributed Order Management system from Softeon can change the Omnichannel game in your favor.

About Softeon

Softeon is a global provider of supply chain solutions from planning through execution. We deliver supply chain success - every time. We have particular emphasis on Warehouse Management and Distributed Order Management (DOM) solutions.

Our modern platform is engineered to reduce complex problems into simple solutions for a faster time to market and lower cost of ownership. Users can implement solutions incrementally to solve a specific challenge or deploy an integrated system. Configurable modules and rules-based solutions give market leaders the business agility they need to get ahead and stay ahead. Companies choose the flexibility and ease-of-use of the Softeon platform to drive higher business value and accelerate ROI. Deployment options include on-premise or in the Cloud.

For more information, please visit www.softeon.com.