**Challenges and Opportunities in** Manufacturing, High-Tech and Retail



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Challenges and Opportunities in Manufacturing, High-Tech and Retail

## **Background**

Order management and fulfillment has long been considered one of the core competencies of supply chain—and business—success. Today, maintaining a core competency in order management and fulfillment is more important than ever. At the same time, it has become tougher than ever. The reasons are familiar to any company operating in the global arena. Here are just a few:

- An explosion of order and delivery channels
- The complexity of global supply chains
- The rising expectations of customers and consumers

This story begins with a large, multinational manufacturer faced with siloed back office systems, multiple distribution centers, scores of inventory locations and a diverse mix of suppliers. They faced challenges around how to standardize business processes in order to gain visibility into inventory levels and the order fulfillment process; build a more efficient supply chain; and ultimately, improve customer satisfaction in an increasingly competitive environment.

Their initial thought was to "rip and replace" their existing legacy systems; however, this ambitious choice would have been extremely time-consuming, expensive, and disruptive, with value only emerging at the very end of the process. They also considered integrating the systems, an effort that might address today's problems but lead them to the same situation down the road when their business process changed again. The company ultimately determined that they would need the flexibility to change their business processes without the hassle of changing out all the systems in which they had invested during the last thirty years.

Does this scenario sound familiar?

Companies across all business sectors are facing a startling reality: How effectively they manage their order management and fulfillment processes has a direct and immediate bearing on the success—even survival—of their business. And nowhere is this any more evident than in the most dynamic sectors driving our global economy: manufacturing, high-tech, and retail.

## The Study

In a recent study conducted by Peerless Research Group on behalf of Supply Chain Management Review and Logistics Management for Oracle Corporation and Capgemini, 589 top supply chain executives in manufacturing, hightech and retail businesses around the globe give a good sense of how well companies in these key sectors are meeting the order fulfillment challenge—and where they need to improve their game. The research further reveals that order fulfillment processes are, in fact, becoming more intricate and that inventory management and delivery performance is slipping. The consequences are steep. Customer satisfaction and retention are put at risk and businesses are forced to allocate additional spending on resources and labor to address the situation. This, coupled with the rising price of raw materials and mounting transportation costs, are seen as a growing threat to the bottom line of businesses everywhere.

The following findings focus on the inventory fulfillment strategies and constraints faced in three specific industry sectors—manufacturing, high-tech and retail—and how these companies are doing in meeting these challenges.

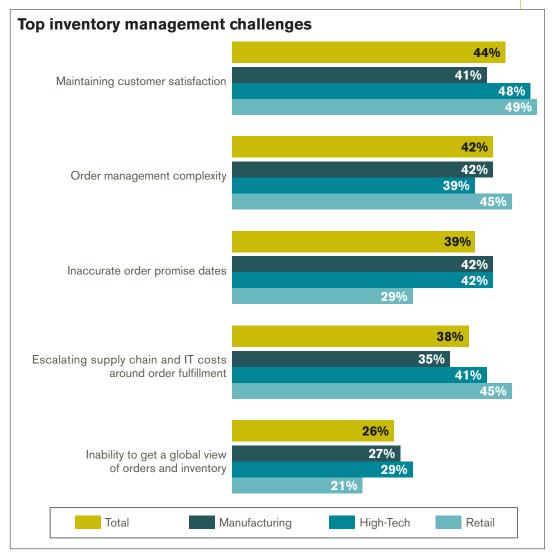
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## Critical Issues and Challenges Related to Order Management and Fulfillment

Businesses across the manufacturing, high-tech, and retail industry sectors face many of the same challenges in managing their supply chains.

Companies across the board are in agreement that managing order management systems and fulfillment processes is becoming more multifaceted and, subsequently, complicated. All this is happening as order processing windows narrow and customer demands intensify. Complying with the heightened demands likely increases internal costs to meet these order fulfillment requirements.

In particular, the complexity of order management systems, the ongoing challenge of keeping customers satisfied, adhering to delivery schedules, and combating rising costs related to order fulfillment are among the major issues companies now face in all three sectors studied. Even so, there were some nuances noted. For example, manufacturers appear somewhat less concerned than the others with regard to customer satisfaction issues and rising technology costs. Retailers, for their part, identified maintaining customer satisfaction as a top challenge but contend that holding to order promise dates is a lesser issue to them.



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Contributing to the complexities of order management processes are the multiple, disparate order capture and fulfillment systems companies now operate. Roughly four out of five rely on several order capture mechanisms (79%), while more than two-thirds employ more than one order fulfillment system. In general, the companies in our study manage slightly more than three (3.1) order-taking channels such as e-commerce, call centers, and EDI. In addition, they have nearly three (2.7) systems for carrying out orders, which often includes ERP, WMS and order management applications. Survey data further reveals that larger companies, i.e., those with annual revenues of more than \$500M have an even greater number of systems, with an average of 3.5 order capture systems and 3.3 fulfillment systems.

Expediting fulfillment and shipping to meet order commitments is the primary factor contributing to order management expenses, as shown in the chart below. Adding resources to respond to shipping delays and taking on additional labor to handle order processing are other major expense factors.

ı	Factors that drive order fulfillment costs									
	Rank	Total	Manufacturing	High-Tech	Retail					
	1	Expedites to meet customer order dates								
	2	Shipping delays or transportation issues	Shipping delays or transportation issues	Number of staff required to manage order entry processes	Number of staff required to manage order entry processes					
	3	Number of staff required to manage order entry processes	Number of staff required to manage order entry processes	Shipping delays or transportation issues	Shipping delays or transportation issues					

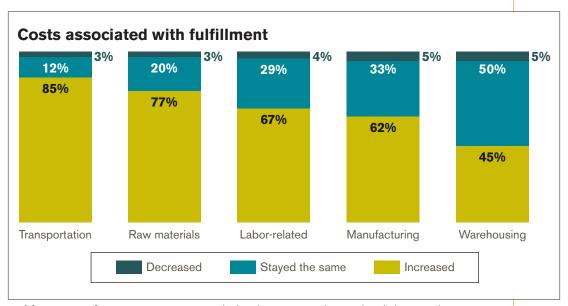
Meeting delivery timelines, flexibility in handling orders, and dealing with each customer's unique set of order requirements are challenges that manufacturers and high-tech firms in particular are dealing with. Yet, retail businesses face very different issues than these other sectors when it comes to the ability to keep customers satisfied. While retailers also are challenged with hitting promised target dates, they are further tested with securing visibility into planned inventory and handling multiple order systems, as shown here:

(	Challenges in maintaining customer satisfaction									
	Rank	Total	Manufacturing	High-Tech	Retail					
	1	Accurately promising dates based on fulfillment planning lead times/estimates	Accurately promising dates based on fulfillment planning lead times/estimates	Accurately promising dates based on fulfillment planning lead times/estimates	Visibility to planned inventories to commit (internally and across partners/supply base)					
	2	Responding to changing customer order delivery expectations	Responding to changing customer order delivery expectations	Responding to changing customer order delivery expectations	Accurately promising dates based on fulfillment planning lead times/estimates					
	3	Managing different rules and order man- agement processes for each customer	Managing different rules and order man- agement processes for each customer	Managing different rules and order man- agement processes for each customer	Multiple order channels and systems to manage					

## **Order Fulfillment in the Manufacturing Sector**

#### **Challenges**

Costs related to order fulfillment appear to be escalating across the manufacturing sector. Transportation costs are the biggest driver of the increases, followed by the price of raw materials, labor-related costs, and the costs of manufacturing processes. Combined, these cost increases have hit the manufacturing industry hard.



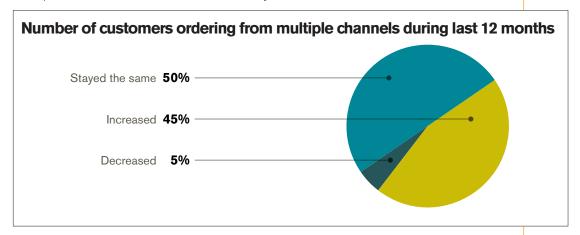
Many manufacturers we surveyed also have experienced a tighter order cycle as the time from order receipt to shipment out to customer has contracted (43%) or remained the same (29%).

"In the upcoming years, technology will help us streamline processes such as order fulfillment, procurement strategies, and aggregation of demand in order to lower production costs/lead times. It will also enable greater logistics visibility to help reduce redundancy in trucking."

—Vice President, Sourcing; \$500M - \$1B in revenues

#### **Order Processing**

As we emphasized above, most manufacturers have customers that are ordering through multiple channels. Among those we surveyed, almost nine out of ten (86%) have customers that are using multiple channels. In fact, four out of ten manufacturers report that more than twenty-five percent of their clients utilize multiple order channels. And this trend is on the rise! Just under one-half (45%) say that the number of customers who use multiple sources has increased during the last year while others say the number has stayed the same (50%). Only 5% have seen a drop-off here. With so many customers using various purchase paths, the ability to capture purchase data and understand buying trends becomes increasingly challenging. From a reporting perspective, if information is siloed by channel it makes it that much more difficult to have a 360° customer view. This also underscores the importance of multi-channel consistency.



"The adoption of new technologies could help in giving us a better picture of what types of orders are coming in, what our average order size is by volume and length, as well as streamlining our invoicing process. Currently, we do not have the ability to create one invoice for a customer that has placed multiple lines of shipping from different facilities."

—Vice President, Supply Chain Operations; <\$100M</p>

#### **Drop Shipping**

The majority of manufacturers (78%) drop ship their orders. Of these, more than one-fourth (27%) indicate that at least one out of every four orders is sent directly to the customer.

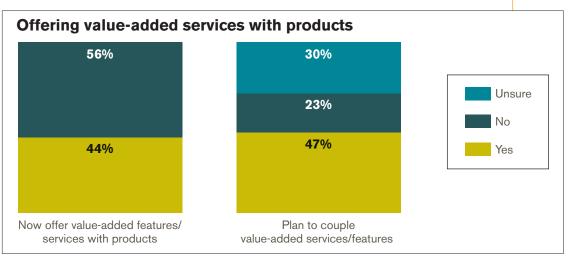
The practice of drop shipping has been on the rise over the last few years. Most companies either continue to experience an increase or maintain a comparable level in dealing directly with the customer. With drop shipments becoming a more attractive option for manufacturers, operations will require greater integration of systems as well as transparency across vendors' systems.



#### **Value-added Offerings**

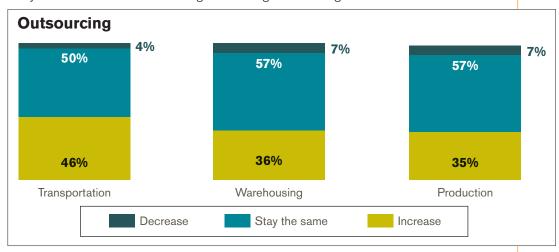
Interestingly, the manufacturers we surveyed are divided as to whether they currently offer value-added features or services such as warranties, or installation services, along with their sales.

This is likely to change over the next few years as more manufacturers add, or consider adding, value-added features to their products. In fact, roughly one-half of those we surveyed expect to couple more services with their products in the next two years. It would seem that coupling services with hard goods presents a real opportunity and competitive differentiator for companies who choose to take this path.



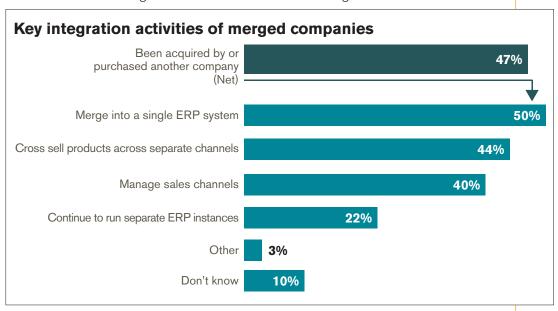
#### **Outsourcing**

Over the next few years, the outsourcing of transportation, production and warehousing is expected to rise. Just over one third of respondents expect to increase outsourcing of production and warehousing tasks, while 46 percent will subcontract more transportation and logistics activities. The survey indicates that change is inevitable. With one third of companies anticipating that their outsourcing business processes will increase, they will require systems that are flexible enough to manage this change.



#### **Corporate Mergers and Acquisitions**

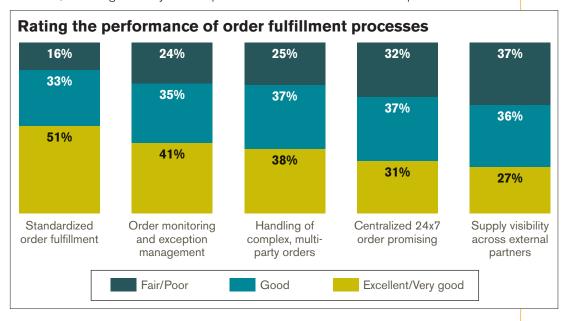
Interestingly, roughly one-half of the companies we studied have either been acquired by or have purchased another company sometime within the last five years. Of those operations that have been involved in such transactions, key integrative activities have involved merged ERP backbones, cross-selling products across divisions or merging sales channels. With less than fifty percent of companies planning to cross sell their acquired products, there is significant opportunity for those who decide to do so. These companies could also benefit from increased levels of customer satisfaction that result from being able to order all items from a single channel.



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#### **Process Performance**

When asked to evaluate their own key order fulfillment processes, a majority of companies indicated that standardized fulfillment solutions operate efficiently. This suggests that multiple order taking and delivery modules can contribute to creating fulfillment systems that are more difficult to control. As previously noted, attaining visibility across partners is one area in need of improvement

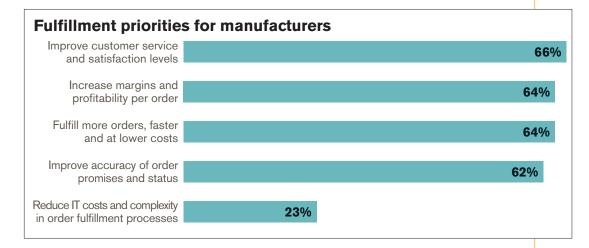


"We are looking to reduce disparate systems with a centralized system, provide seamless experience to the customer, and improve service levels."

—Director/Manager, Supply Chain Operations; \$2.5B+

#### **Priorities**

In the upcoming months, manufacturers are likely to focus on multiple aspects of their order management and fulfillment operations. Upgrading customer service, fulfilling more orders at a faster rate and doing it less expensively, increasing profits on a per-order basis, and improving the accuracy of order promises are all top level priorities for most manufacturers.



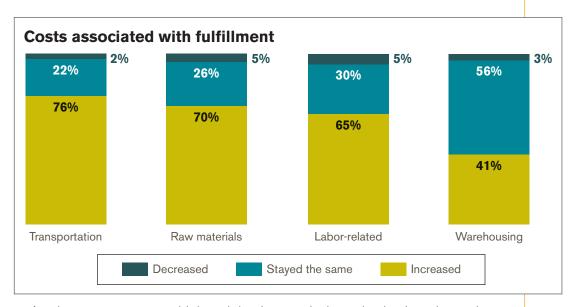
"We are looking for technology to provide leverage in order fulfillment, better and more accurate investment in assets, higher customer satisfaction and possibly reduce overall costs and increase profitability per product."

—Director/Manager, Supply Chain Operations; \$2.5B+

## **Order Fulfillment in the High-Tech Sector**

#### **Challenges**

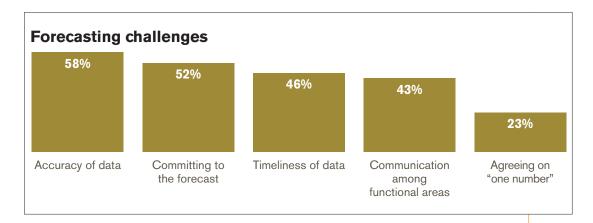
Order fulfillment costs for those respondents in the high-tech industry are on the rise for most key areas. The vast majority of companies are experiencing increased costs for transportation, raw materials and labor, while only a small percentage are seeing a drop in costs in any of these areas.



Another concern among high-tech businesses is the reduction in order cycle times. Comparable to the manufacturers studied, the period from receipt of an order to the outgoing shipment to the customer has contracted for nearly one out of every two businesses (46%) in our study.

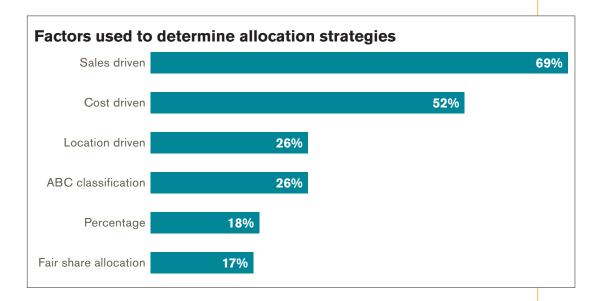
#### **Collaborating on Forecasts**

Many high-tech companies collaborate with their partners on demand forecasting. More than half (53%) indicated that they work with at least 10% of their customers on estimating sales needs. However, the biggest forecasting challenge companies face is the accuracy of data used in the collaboration process, which further tests order planning and fulfillment capabilities. Other significant hurdles involve customers' ability to make a firm commitment, timeliness of the information, and a lack of communication across functional areas. A possible reason for the problem of forecasting accuracy lies in the reliance on Sales for allocation. The prevalence of this practice should drive a significant effort among companies to track, evaluate and resolve those factors which are preventing timely commitment to the customer.

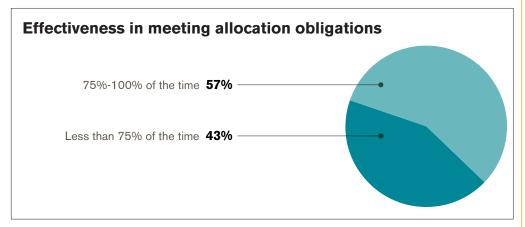


#### **Allocation Strategies and Commitments**

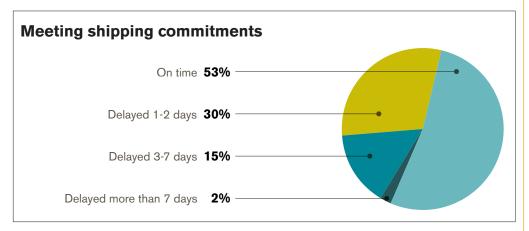
Product allocation and distribution are often determined by several key factors and are largely driven by sales and cost. With the majority of companies relying on sales for allocation, it is critical that they have the proper tools in place to validate the accuracy of sales forecasts. The survey confirms that sales figures provide valuable customer insights that cannot be ignored. However, the survey also points out that, on average, high-tech companies are not meeting their allocation commitments 50% of the time. This contradiction suggests that these companies are not doing a good job of constraining their allocations against a realistic supply picture, nor are they holding themselves or their customers to their commitments. Two questions arise: 1) Do the manufacturers not believe the forecast and plan production to a different number? Or, 2) Are the customers ordering more than agreed? In either case, companies need tighter controls over this process from planning through execution.



The high-tech companies surveyed certainly could improve meeting their allocation scheduling commitments. While slightly more than one out of two (57%) said that they meet their promised timeline all or most of the time, the remainder do not!



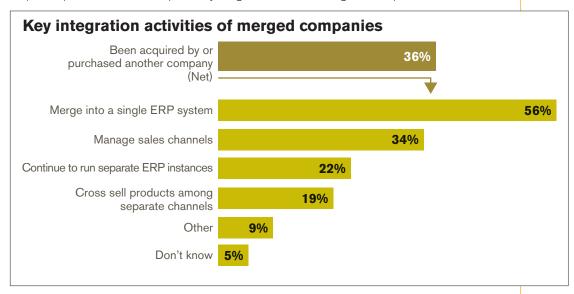
In addition, almost one-half further contend that shipments are often delayed by a day or longer. These failures are likely attributed to using inaccurate or dated forecasting and planning information.



Here, there is clearly an opportunity for competitive advantage for companies that can successfully implement collaborative forecast compliance programs and drive real improvement in this arena, from the planning through the execution of the orders.

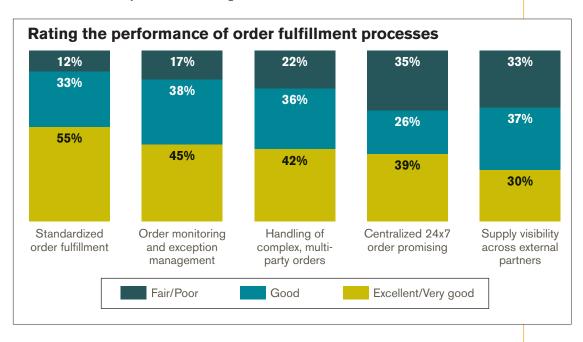
#### **Corporate Mergers and Acquisitions**

One out of three high-tech companies surveyed have undergone a corporate shake-up in the last few years. And, much like the majority of manufacturers that have experienced a similar transition, integration of disparate ERP systems into a single platform has been a priority. However, only about a third of respondents (34%) plan to merge sales channels and only 19% plan to cross sell products. For a large number of high-tech companies in the survey, these decisions beg the question: What opportunities are they missing for better customer penetration, and what infrastructure could they put in place to better capture synergies from the merged companies?



#### **Process Performance**

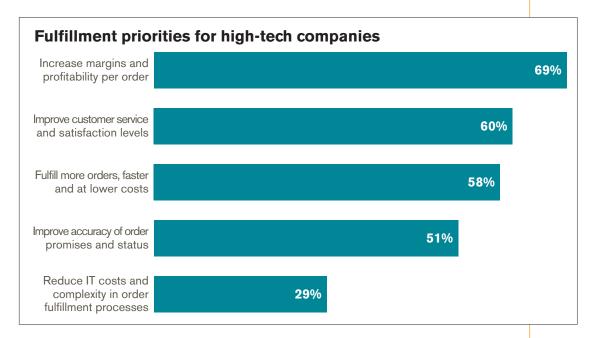
High-tech companies, similar to manufacturers, favorably rate their standardized order fulfillment practices as highly efficient. Their performance on centralized order fulfillment system uptime and supply chain visibility received relatively lower self-ratings.



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#### **Priorities**

Integration, visibility and collaboration are the areas in which high-tech companies believe they need to upgrade. In the upcoming months, more than one-half of these high-tech operations will concentrate on improving margins, enhancing customer service, making order fulfillment more efficient, and improving the accuracy of order promising. With close to 70% of respondents looking to increase margins and profitability per order, companies have a real opportunity to introduce margin or profitability-based promising and order exception management into their business processes.



"We are looking to improve visibility all along the supply chain, thus removing any wastage or bottlenecks. This will ensure efficiency and effectiveness in the supply chain, thus meeting the expectation of increasing demand by knowledgeable customers who want their orders in the quickest manner at an optimized cost."

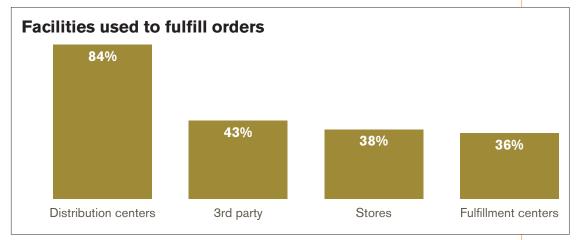
—Director/Manager of Supply Chain Operations; \$500M - \$1B

#### **Order Fulfillment in the Retail Sector**

Among the retailers surveyed, one out of four operates more than 500 stores while two out of four run 35 or fewer outlets. Also, half of the respondents operate one or two warehouses or distribution centers, while one third (31%) manage at least five such facilities.

#### **Fulfillment Services**

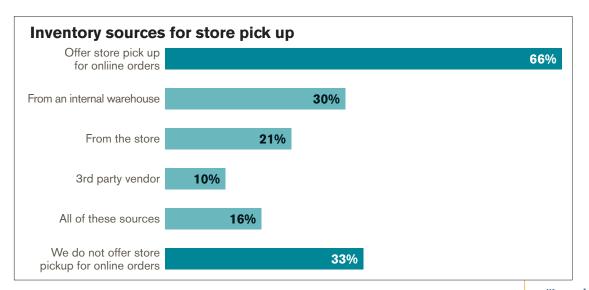
Nearly nine out of ten retailers report that they support more than one selling channel. In fact, retailers maintain roughly four different types of selling channels, on average. These channels include catalogs, websites, storefronts, call centers and telephone orders. For multi-channel orders, fulfillment is typically handled through distribution centers. Slightly over one third of respondents (38%) use their store inventory to fulfill orders. With leading retailers making headlines for their ship-from-store programs, a new bar is being set for inventory utilization in retail, but many retailers do not yet have the infrastructure in place to meet this challenge.



#### **Fulfillment for Online Orders**

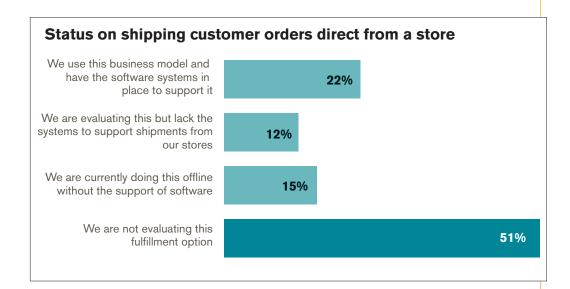
For orders placed on-line and subsequently picked up at a store, the origin of the inventory is mixed. Most commonly, the merchandise is from an internal warehouse (30%) or from the store (21%). Interestingly, one-third of these retailers do not even offer an in-store pick up service. Retailers who do not leverage their store inventory to fulfill orders are at risk of losing customers to competitors. Therefore, the time is approaching for companies to re-evaluate their infrastructure, and consider investing in systems that offer the flexibility to pull from store inventory for fulfillment.

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Retailers are also equally divided on direct shipping policies; roughly one out of every two ship directly from the store (48%) to customers while the others do not (52%).

Interestingly, only one out of four (27%) of the retail businesses we questioned are either evaluating whether to ship customer orders directly from the store or currently doing it offline. While 22% say they currently have the resources in place and embrace this strategy, others who are evaluating shipping directly from a store assert that challenges exist. Some claim that even though they are evaluating this option, they lack the necessary systems to handle the task or are simply performing it manually, which most assuredly comes with further costs and risks.



"I could see allowing customers to reserve select items in a store using a smartphone application that allows us to know who they are and what they mean to us. This would require back room inventory, hence the select items. We can't afford to handle product multiple times.

—Vice President, Supply Chain Operations, \$100M - \$250M

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#### **Measuring Success**

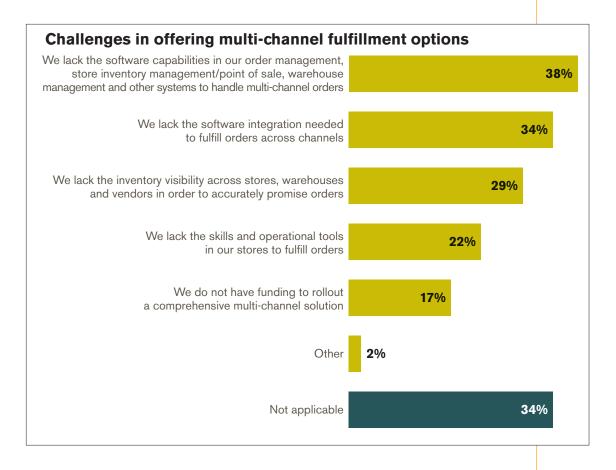
Three out of every four retailers (78%) use a "same store sales" metric to evaluate a store's measure of success. This metric, while common, does not take into consideration the multi-channel aspect of retailers. Given the growth of multi-channel retail, perhaps it's time for the industry to consider new success metrics that incorporate the multi-channel aspect of their business.

#### **Challenges**

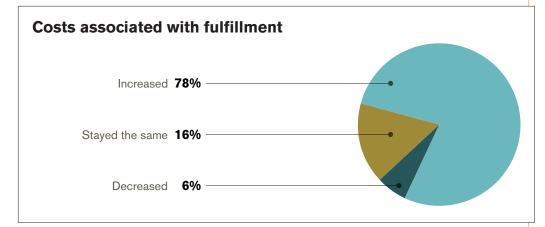
Offering fulfillment options to customers across multiple channels is problematic for many retailers. These issues are primarily a result of retailers just not having the technology capacity to handle multiple options. The challenges typically revolve around insufficient inventory and warehouse management software capabilities, multi-channel systems integration issues, transparency across inventory procedures, and a lack of internal aptitude.

"We are looking to move from an annual inventory cycle to a perpetual inventory, implementing more cycle counts, etc. Additionally, we hope to have greater (and more accurate) visibility of products throughout the supply chain (vendor, transit, DC and store)."

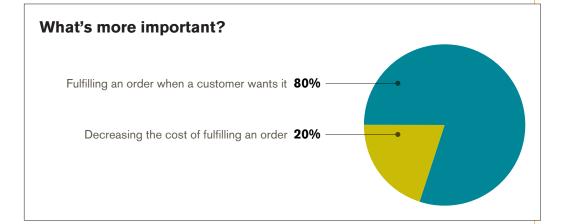
—Vice President, Supply Chain Operations, \$1B - \$2.5B



Yet, for many of these retailers, fulfillment costs continue to climb.



In general, though, it's all about long-range vision and customer service versus the immediate payback. Overwhelmingly, four out of five respondents to our survey profess that fulfilling orders according to customer requirements outweighs any efforts to cut costs.



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### **Conclusion and Recommendations**

It was not a big surprise that this survey revealed the increasing complexity and costs associated with managing and fulfilling orders. The survey did, however, reveal several opportunities for companies in the manufacturing, high-tech and retail industries to embrace these changes and improve both their competitive positioning and their bottom lines.

- Manufacturers should consider following retailers in embracing the new multi-channel reality by evaluating up-sell and cross-sell opportunities across product lines. They should also consider focusing on creating a consistent customer experience across all channels. Investing in a technology platform to help manage these changes will make it easier to adopt new business processes and create a single face to the customer.
- High-tech companies should collaborate, enforce, and measure their allocation commitments with their key customers. To be most effective, these allocation strategies ought to be quickly constrained by supply and re-communicated to customers as required. As demonstrated in the survey, even if high-tech firms do a good job of planning their allocations, these commitments are not being enforced at the time of order execution. To address this situation, companies need to integrate their allocations into the promise dates that are provided to customers. If better decisions are to be made in the future, high-tech companies should measure their effectiveness in keeping these commitments and, on the flip side, have honest conversations when customers deviate from the agreed upon plan.
- Multi-channel commerce is a reality that retailers must embrace. To make better use of their
  assets, retailers should consider exploiting in-store inventories. Although the barriers to
  including in-store inventory for fulfillment may be high, the rewards will likely outweigh the
  costs in the long run.

Finally, across all three industries, it is clear that customer service outweighs considerations of cost in order fulfillment decisions. However, the ability to consistently view margins in promising, fulfillment, and particularly expediting activities, could improve decision making without sacrificing service level agreements.

It is worth exploring innovative technology solutions available today that can address these issues and drastically improve an organization's order orchestration and fulfillment practices.

Returning to the story of the large, multinational manufacturer, this company found a solution to design and implement a new, integrated, end-to-end business process without reimplementing non-value added functionality. They inserted applications that could co-exist with their existing legacy systems to create a new standardized process, across all sites. By leveraging systems that separate the master data, business rules, and business process from the physical integrations, they now have a platform for the future which delivers immediate benefits, including:

- Greater transparency and a single source of inventory information
- Reduced cycle times for proposals, orders and fulfillment
- Improved ability to address complex customer needs more quickly and with fewer data errors.

In addition, standardizing business processes across all sites creates the ability to capture best practices for further improvement and efficiency; furthermore, the threats of volatility and change in the marketplace are mitigated by the existence of an agile and scalable supply chain platform.

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## Methodology

This research was conducted by **Peerless Research Group** on behalf of *Supply Chain Management Review* and *Logistics Management* magazines for Oracle and Capgemini, leading providers of supply chain software solutions and consulting services. This study was executed in December, 2012, and was administered over the Internet among subscribers to *Supply Chain Management Review* and *Logistics Management* magazines and enewsletters. The survey was also sent to a small sample of names provided by Oracle.

The findings are based on information collected among 589 top supply chain executives.

All respondents were pre-qualified for being involved in decisions as they relate to supply chain order fulfillment and order management solutions for either their company or for others. Respondents were further qualified and segmented into one of three industry categories: Manufacturing (355 respondents), High-Tech (101) and Retail (133).

Overall, respondents are predominantly upper level executive management and included job titles such as President/CEO/Owner (15%), VP/Director/Manager of Supply Chain Operations (25%), and Director/Manager of Distribution and Logistics (21%). Companies of all sizes are also well-represented in the findings; results are further based on businesses located across the globe and encompasses North America (77%), Asia Pacific (16%) Latin America (10%), and Europe (10%).

#### **About Oracle**

Oracle is a leading provider of supply chain solutions across all industries. Oracle Supply Chain Management, the most complete supply chain solution, is comprised of: order orchestration and fulfillment, value chain planning, value chain execution, product lifecycle management, advanced procurement, manufacturing and asset lifecycle management. Customers can choose to adopt individual applications or the entire suite. This allows organizations to create a flexible path to value chain transformation.

In the area of order orchestration and fulfillment, Oracle has developed Oracle Fusion Distributed Order Orchestration (DOO), a transformational solution designed to address the increasingly complex world of order management and fulfillment. Oracle Fusion DOO works with existing order capture and fulfillment systems to create a centralized view of all orders, enables order management personnel to define and apply enterprise-wide order orchestration rules and processes, and allows delays and other problems to be quickly identified and rectified via jeopardy alerts. Oracle Fusion Global Order Promising (GOP), an optional component of Oracle Fusion DOO, allows users to make optimal product availability commitments, and take advantage of all available supply with order promising. In doing so, Oracle Fusion DOO and Oracle Fusion GOP enable manufacturing, high tech, and retail organizations to streamline order management processes for lower costs, higher margins and improved customer service.

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**Contact info:** For more information, please contact Brad Kerr, Senior Director, Application Business Group, brad.kerr@oracle.com

Or please visit:

www.oracle.com/goto/scm

http://www.oracle.com/us/products/applications/fusion/supply-chain-management/distributed-order-orchestration/overview/index.html

#### **About Capgemini**

Capgemini, in partnership with Oracle, offers customer-centric solutions to help manage supply chain complexity across major verticals from retail to manufacturing. With over 13,000 Oracle consultants worldwide, our practice offers deep sector knowledge, experience, and methods to drive future strategies and roadmaps with industry leaders.

Our successful Oracle Fusion Supply Chain Management projects demonstrate our ability to leverage global capabilities to help organizations realize significant business benefits. Capgemini's approach includes an accelerated delivery methodology, ROI analysis, business process management (BPM), business information management, change management, hosting, testing, and application maintenance, to name just a few.

With more than 120,000 people in 40 countries, Capgemini is one of the world's foremost providers of consulting, technology and outsourcing services. The Group reported 2011 global revenues of EUR 9.7 billion. Together with its clients, Capgemini creates and delivers business and technology solutions that fit their needs and drive the results they want. A deeply multicultural organization, Capgemini has developed its own way of working, the Collaborative Business Experience<sup>TM</sup>, and draws on Rightshore<sup>®</sup>, its worldwide delivery model.

**Contact info:** For more information, please contact Mike Pearcy, Senior Manager, michael.pearcy@capgemini.com

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