

The State of Retail Logistics:

Strengthening Cross-Channel Supply Chain Execution

April 2010

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Executive Summary

This study of over 128 enterprises indicates that cross-channel logistics is increasing in depth and importance as retailers are expanding the scope and strength of their extended supply chains. Aberdeen's September, 2009 report, *The 21st Century Retail Supply Chain: Three Key Imperatives for Retailers* denoted that leading retailers are three times more likely than all other companies to focus on cross-channel logistics (in-bound and out-bound) needs by coordinating multi-warehouse, multi-site, and multi-tier product flow across all channels. As much as possible, these retailers address the imperatives for effective logistics through timely response to customer demand, visible operations, and elevated levels of collaboration across all channels. The goal for leading retailers and suppliers is to work cohesively to ensure that products reach the right place at the right time.

Best-in-Class Performance

Aberdeen used the following three key performance criteria to distinguish Best-in-Class companies:

- Complete and on-time outbound orders: 99.3%
- Complete and on-time inbound orders: 97%
- Year-over-year decrease in transportation cost per unit handled: 6%

Competitive Maturity Assessment

Survey results show that the firms enjoying Best-in-Class performance differentiate themselves from others by:

- A "speed-to-shelf" and adaptive logistics strategy for effective product flow and supply chain responsiveness
- A strategic complement of new logistics formats (e.g. DC Bypass) with supporting agreements to elevate financial and operational performance management for suppliers/trading partners/3PLs
- Integration of upstream and downstream supply chain logistics processes

Required Actions

In addition to the specific recommendations in Chapter Three of this report, to achieve excellence in Retail Logistics all companies should:

- Align their import/export and global trade capabilities to meet the need of their growing global supply chains
- Increase the judicious selection of logistics partners and capabilities to support cross-channel synergies
- Upgrade system and capabilities to support dynamic order / item / inventory quantity allocations and last-minute fulfillment processes

Research Benchmark

Aberdeen's Research Benchmarks provide an in-depth and comprehensive look into process, procedure, methodologies, and technologies with best practice identification and actionable recommendations

"Currently, our biggest challenge is integration with our suppliers and trading partners. We are using a legacy purchasing and order management system which is labor-intensive and non-collaborative from an execution standpoint. We must improve our data integration, order visibility, inventory flow, and route execution."

~ Director, Supply Chain
Distribution, BC Liquors (\$2.1
Billion Beverage Retailer in
Canada)

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Chapter One: Benchmarking the Best-in-Class

Business Context

Aberdeen's September, 2009 report, *The 21st Century Retail Supply Chain: Three Key Imperatives for Retailers* denoted that leading retailers are three-times more likely than all others to focus on cross-channel logistics (in-bound and out-bound) needs by coordinating multi-warehouse, multi-site, and multi-tier product flow across all channels. As much as possible, these retailers address the imperatives for effective logistics through timely response to customer demand, visible operations, and elevated levels of collaboration across all channels. The goal for leading retailers is to achieve a state where all logistics stakeholders work cohesively to ensure that products reach the right place at the right time, whether it is the retailer's store, or flow thru a DC, a direct-to-consumer online DC, or a traditional DC.

In order to understand the current state of retail supply chain execution models, processes and technologies, Aberdeen surveyed 128 companies between March and April 2010. Specific areas of analysis include distribution network strategies, warehouse systems, transportation, and labor and task management (at warehouse and store) and differences in capabilities based on direct to consumer fulfillment and in-store replenishment strategies.

Business Pressures: Demand Responsiveness and Inventory Reduction

The retail economy is finally seeing signs of an upswing in consumer spending, and with it, inbound freight traffic has seen an increase as well. However, the ability of retailers and their supply chain partners to respond to dynamic demand cycles in a timely manner is still far from certain. For example, demand has been so uncertain in the last 18 months that the volume of inventory in the retail supply chain and channels has straddled between too high (beginning 2009) to too low (rest of 2009) to the current high levels again. Overall, retailers identify "the need to respond to demand" and "reducing current inventory levels in stores, channels, and warehouses" as the top two pressures impacting retail supply chain distribution, transportation, warehouse, and overall logistics strategy (Figure 1).

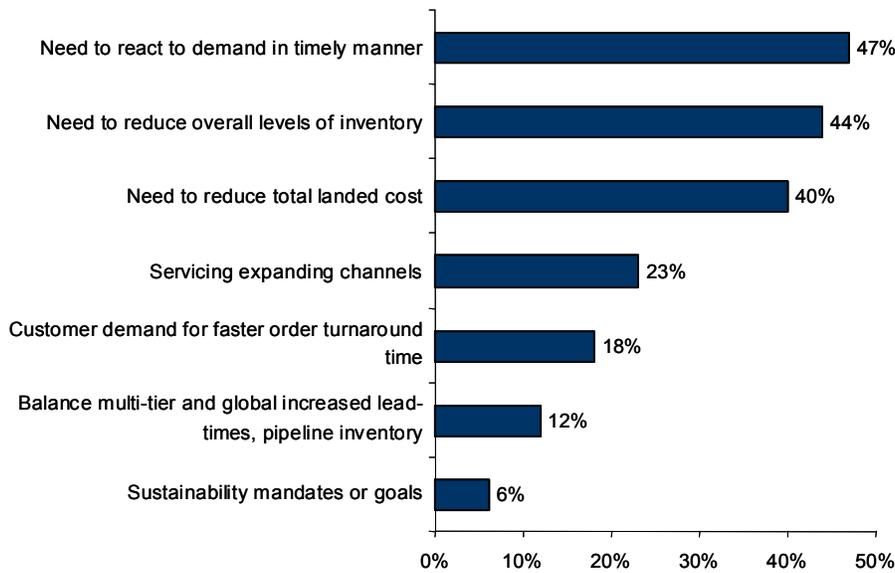
In fact, both of these pressures are directly tied to the third highest pressure (which is the need to reduce elevated total landed cost) that retailers must curtail to ensure a profitable 2010. There is an increasing need to reduce distribution, transportation, and order reconciliation costs in the retail supply chain. The fourth highest pressure facing almost a quarter of retailers (23%) relates to the channel expansion strategies of retailers. With 58% of retailers operating multiple channels for at least one year, the advent of e-commerce, call center, and e-fulfillment, on top of traditional brick-and-mortar retail challenges, has transformed the

Fast Facts

- √ The need to respond to demand (47%) and reducing current inventory levels in stores, channels, and warehouses (44%) are the top two pressures that are impacting retail supply chain distribution, transportation, warehouse, and overall logistics strategy
- √ Aberdeen's data denotes that the top retail logistics strategy is to use automated systems for enabling labor efficiencies in the upstream and downstream logistics operations, according to 37% of Best-in-Class retailers compared to 33% of all other retailers

traditional DC-to-store retail logistics model. Data shows that retailers are enabling direct-to-store drop shipments (51%) and direct-to-consumer deliveries (47%), which is a clear indication that the retail logistics landscape is seeing rapid structural changes in the areas of distribution, fulfillment, and transportation due to growth in multi-channel retailing.

Figure 1: Top Retail Supply Chain Execution Pressures



Percentage of Respondents, n=128

Source: Aberdeen Group, April 2010

“Our business spikes are enormous specifically during the heavy tire selling season in the winter months. The spike could be from 20,000 units to 60,000 units in a matter of days. The main challenge for us is to mobilize and leverage our distribution center capacity and handling capabilities to maximize timely deliveries. The main issue is to balance demand and supply with the costs involved- from the suppliers to the DCs and then ensure deliveries to the stores as tires and parts are not easy commodities to handle.”

~Rick O'Connor, Director,
Supply Chain, VIP Parts and
Tires

The Maturity Class Framework

Aberdeen used three key performance criteria to distinguish the Best-in-Class from Industry Average and Laggard organizations. These metrics are defined as follows:

- Complete and on-time outbound orders: products delivered to customers complete and on-time
- Complete and on-time inbound orders: products received complete and on-time by retailers
- Year-over-year transportation cost per unit handled: total freight costs divided by the number of units shipped per period

Table 1: Top Performers Earn Best-in-Class Status

Definition of Maturity Class	Mean Class Performance
Best-in-Class: Top 20% of aggregate performance scorers	<ul style="list-style-type: none"> ▪ Complete and on-time outbound orders: 99.3% ▪ Complete and on-time inbound orders: 97% ▪ Year-over-year decrease in transportation cost per unit handled: 6%
Industry Average: Middle 50% of aggregate performance scorers	<ul style="list-style-type: none"> ▪ Complete and on-time outbound orders: 96.8% ▪ Complete and on-time inbound orders: 94.5% ▪ Year-over-year increase in transportation cost per unit handled: 2%
Laggard: Bottom 30% of aggregate performance scorers	<ul style="list-style-type: none"> ▪ Complete and on-time outbound orders: 85.9 % ▪ Complete and on-time inbound orders: 83.3% ▪ Year-over-year increase in transportation cost per unit handled: 15%

Source: Aberdeen Group, April 2010

The Best-in-Class PACE Model

Implementing an effective retail logistics model and achieving overall retail supply chain goals require a combination of strategic actions, organizational capabilities, and enabling technologies that can be summarized as shown in Table 2.

Table 2: The Best-in-Class PACE Framework

Pressures	Actions	Capabilities	Enablers
<ul style="list-style-type: none"> ▪ Need to reduce overall levels of inventory 	<ul style="list-style-type: none"> ▪ Improve direct-to-consumer replenishment / delivery ▪ Cost to Serve initiative: SKU Rationalization or Optimization 	<ul style="list-style-type: none"> ▪ Centralized planning authority for inbound (from suppliers) and outbound (to store/customer) logistics ▪ Ability to capture store and supply chain event data at SKU level ▪ Reporting structure in place to balance the needs of cross channel logistics/operations needs ▪ Standards for labor and task management ▪ Established accountability metrics/SLAs across suppliers/trading partners/3PLs against overall financial and operational performance 	<ul style="list-style-type: none"> ▪ WMS-Warehouse Management Systems ▪ Customer fulfillment suite ▪ Technology to transmit/receive order level ship-to information and to pre-label, tender and scan cartons ▪ Trading partner, supplier, carrier portals ▪ Supply chain execution suite ▪ Warehouse labor management software ▪ Transaction and data collection tools: speech/voice, mobile computers, ▪ Labor process efficiency tools: conveyors, sortation, task management, and warehouse labor management application

Source: Aberdeen Group, April 2010

Best-in-Class Strategies

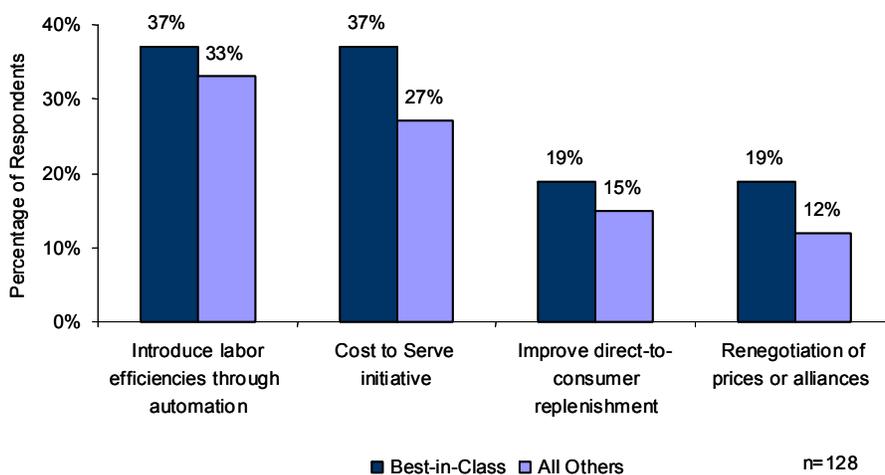
Aberdeen's data denotes that according to 37% of Best-in-Class retailers compared to 33% of all other retailers, the top retail logistics strategy is to use automated systems for enabling labor efficiencies in the upstream and downstream logistics operations. Retailers must focus on standards for labor and task management based on seasonal and non-seasonal demand in the operations (DC, store, or other). The non-adopters of automated labor and task management run the risk of operating with inefficiencies that easily drive up the distribution, transportation, and ultimately overall cost of goods sold and increase landed costs for retailers. Secondly, as Wal-Mart has shown recently that more than a third (37%) of Best-in-Class retailers (compared to 27% of all other retailers) are using SKU rationalization and optimization or cost-to-serve initiatives as one of the top strategic drivers for successful short-term and long-term supply chain and store operations. This strategy not only facilitates the overall balance between profitable and non-profitable SKUs but also lessens the burden on an already stretched supply chain logistics framework, from a labor, inventory investment, and network utilization standpoint. Aberdeen's upcoming [Retail Summit](#) will address some key challenges within current retail logistics models.

The third strategy that retailers are currently implementing is improving direct-to-consumer replenishment and fulfillment. This strategy covers all processes right from demand sensing, warehousing, labor optimization, order fulfillment, transportation, and delivery from the retailer's warehouse to the store or direct-to-customer. Whether Best-in-Class companies use their own distribution network for branded and private-label goods or third-party logistics services (3PL), direct-to-consumer entails a series of steps that require integration of upstream and downstream supply chain processes both for in-bound logistics (shipping, distribution, receiving) and out-bound logistics (delivery, transportation, and fulfillment to customers).

"We have a slow moving item business. What we need is local supply chain optimization. That is our biggest challenge. We need to accurately monitor product flow with buying trends in stores (e.g. stock to meet sudden and anticipated customer demand spikes and troughs). Our supply chain has several business components and technology components such as store and warehouse demand, forecasting, inventory and replenishment, and direct import process. We are currently trying to improve our purchase to pay cycles and cost of import operations."

~ Paul Kimsey,
Director, Information Systems
(Home Retail Group- Argos
and Home Base)

Figure 2: Best-in-Class Retail Logistics-Related Strategies



Source: Aberdeen Group, April 2010

Aberdeen Insights — Strategy

In the retail supply chain, retailer-run networks and the strategic use of 3PLs is now a reality. Figure 3 shows the difference in the formats being served by 3PLs and retailers that are running their own networks. The reality is that in order to elevate product lead time responsiveness in the supply chain, the retail industry is grappling with several different approaches to distribution, transportation, and fulfillment. Currently, as more retailers are applying cross-channel strategies (particularly the growing popularity of online) in terms of sales, service, and delivery, the gap between the most preferred retail logistics formats (direct-to-store and direct-to-consumer) is narrowing (51% versus 47%). However, most 3PL companies are operating or supporting retailers via a DC Bypass or cross-dock approach, and this emerges as the leading format, according to 63% of 3PL companies. This approach addresses both direct-to-store and direct-to-consumer distribution and fulfillment needs.

The Players by Classification

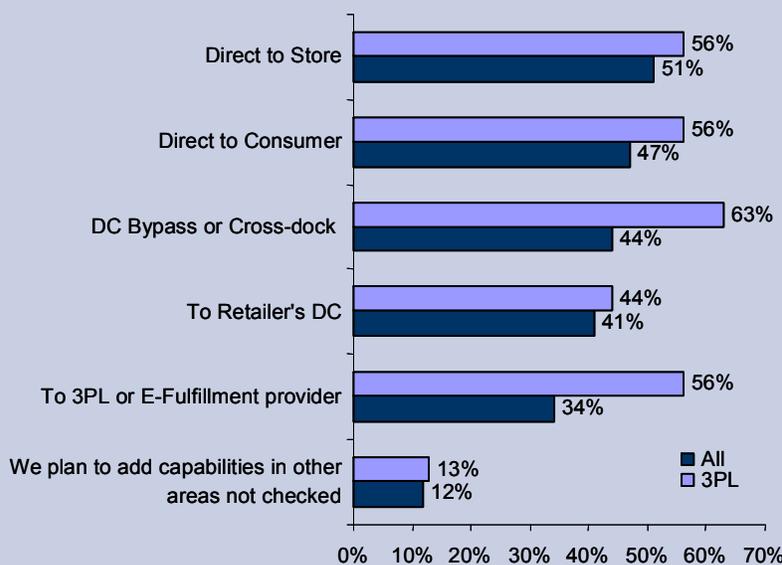
3PL serving retail:

- ✓ 3PL: Warehousing provider
- ✓ 3PL: Transportation provider
- ✓ Freight forwarder

Mfg/supplier/other:

- ✓ Suppliers to retail
- ✓ Mfg/wholesaler distributors
- ✓ Trading Partners

Figure 3: Varied Formats Used in Retail Logistics



Percentage of Respondents, n=128

Source: Aberdeen Group, April 2010

In the next chapter, we will see which capabilities and technology enablers the top performers are using to achieve a balanced retail logistics model.

Chapter Two: Benchmarking Requirements for Success

The advent of new retail logistics operating models to address cross-channel needs and the selection of supply chain management systems that spans the end-to-end supply chain from supplier to store/customer plays a crucial role in the ability to turn the strategies outlined in Chapter One into profit. The case study of Family Dollar exemplifies the upheaval in retail logistics that is impacting overall retail operations, from the retail store or channel all the way to the supplier.

Case Study — Customer-Centric Supply Chain Strategies of a Large Recognized Variety Product Retailer

This large chain of variety stores operates several thousand stores in the United States and several distribution centers that undertake the inbound and outbound distribution and transportation of products to stores nationwide. Within their existing retail logistics and supply chain model, this retailer is grappling with high volume and highly volatile domestic and international variable lead times constrained by ocean freight capacity shortfalls. According to the SVP of Global Sourcing and Supply Chain, “From a freight perspective, routing timely rotation of product, and moving product in and out in an agile manner to even save a day in the overall process can make a big difference on the costs from allocation to replenishment.”

The reasons for these pressures as cited by this retailer are 1) the rapidly expanding supply chain footprint and associated risks; 2) too many stakeholders in the supply chain that potentially hampers quick decision-making when balancing product demand with the demand-supply network; and 3) the just-in-time production schedules of manufacturers which ultimately delays product flow cycle time in the supply chain.

From a store operations perspective, this company’s store teams face pressures related to sequencing receiving and breakdown of freight and supplementing the on-time stocking in stores on “pull items” prior to stock-out. This is compounded by the seasonal and “push items” as often inventory associated with weekly ads and promotions is sent to stores two weeks in advance, which ends up being a store operations storage, labor, and workflow problem. In order to address some of these pressures and business challenges, this retailer has adopted a more customer-centric approach to managing product demand, supply chain planning, workforce management and execution.

continued

Best-in-Class companies are:

- √ **2.4** times as likely as Laggards to delay final store quantity allocation until arrival of PO at DC
- √ **1.3** times as likely as all other companies to capture store and supply chain event data at SKU level
- √ **1.4** times as likely as all others to automate transmit/receive of order level ship-to information and pre-label, tender and scan cartons from supplier or partner

Case Study — Customer-Centric Supply Chain Strategies of a Large Recognized Variety Product Retailer

The biggest steps towards developing a more effective customer-centric (demand-based) retail logistics model include the store cluster-based or more localized allocation and replenishment strategy. According to the SVP this tactic is now a formal strategy and breaks the traditional broad-based distribution model that relies on the notion of simply “just moving the product to stores.” Currently, this retailer is attempting to scale and leverage this customer-centric supply chain strategy to manage inter-departmental collaboration (merchandising, inventory, supply chain, finance and store operations), order processes, delivery times, lead times, order quality, total landed cost, and supplier relationships. “The reduced complexities associated with more localized and tailored supply chain planning and execution will determine the future of supply chain logistics optimization objectives,” the executive said, “and we must synchronize more tightly than ever before.”

According to this retailer, supply chain logistics technology advancement must not be based on flawed or even simply yesterday’s business processes for any retailer, irrespective of size or volume. “Technology advancement in distribution, transportation, and overall logistics space has been limited and behind the merchandise and inventory planning and allocation areas,” said the executive of this variety product retailer. As an example, this executive stated that technology needs to change for the variable slotting process in the distribution centers and warehouses which need automation for balancing regular product picks for stores and those that require a delivery of different products every week. Additionally, the top three capabilities for supporting this retailer’s existing supply chain logistics model include:

- True optimization capabilities: driven by real-time customer demand and supply chain data analytics
- Standardized flexibility: reduce the limits and brackets on levels of flexibility for in-bound and out-bound logistics that is not event-based (i.e. advanced postponement strategies)
- Tighter connection with suppliers and partners in the areas of planning, order fill rates, on-time delivery, quality of delivery, flexible geographic delivery options, and a menu of services that ensure a flexible retailer-supplier relationship

Competitive Assessment

Aberdeen Group analyzed the aggregated metrics of surveyed companies to determine whether their performance ranked as Best-in-Class, Industry Average, or Laggard. In addition to having common performance levels, each class also shared characteristics in five key categories: (1) **process** (the approaches they take to execute daily operations); (2) **organization**

(corporate focus and collaboration among stakeholders); (3) **knowledge management** (contextualizing data and exposing it to key stakeholders); (4) **technology** (the selection of the appropriate tools and the effective deployment of those tools); and (5) **performance management** (the ability of the organization to measure its results to improve its business). These characteristics (identified in Table 3) serve as a guideline for best practices, and correlate directly with Best-in-Class performance across the key metrics.

Table 3: The Competitive Framework

	Best-in-Class	Average	Laggards
Process	Ability to support traditional distribution center shipments/fulfillment		
	85%	83%	59%
	Ability to delay final store quantity allocation until arrival of PO at DC		
	63%	42%	37%
Organization	Centralized planning authority for inbound (from suppliers) and outbound (to store/customer) logistics		
	74%	61%	60%
	Reporting structure in place to balance the needs of cross channel logistics/operations needs		
	59%	47%	46%
Knowledge	Ability to capture store and supply chain event data at SKU level		
	68%	54%	49%
	Ability to use store and supply chain execution events to integrate into the weekly S&OP plan		
	48%	40%	30%
Technology	Software/system capabilities:		
	<ul style="list-style-type: none"> ▪ 81% WMS-Warehouse Management Systems ▪ 46% Automate transmit/receive order level ship-to info and pre-label/ID item ▪ 44% Supply Chain Suite ▪ 42% Task Management software 	<ul style="list-style-type: none"> ▪ 69% WMS-Warehouse Management Systems ▪ 33% Automate transmit/receive order level ship-to info and pre-label/ID item ▪ 29% Supply Chain Suite ▪ 24% Task Management software 	<ul style="list-style-type: none"> ▪ 66% WMS-Warehouse Management Systems ▪ 27% Automate transmit/receive order level ship-to info and pre-label ID/item ▪ 29% Supply Chain Suite ▪ 14% Task Management software
	Hardware capabilities:		
	<ul style="list-style-type: none"> ▪ 68% Sortation ▪ 27% Speech/Voice 	<ul style="list-style-type: none"> ▪ 45% Sortation ▪ 15% Speech/Voice 	<ul style="list-style-type: none"> ▪ 43% Sortation ▪ 13% Speech/Voice

	Best-in-Class	Average	Laggards
Performance	Performance management capabilities:		
	<ul style="list-style-type: none"> ▪ 67% Standards for labor and task management ▪ 56% accountability metrics/SLAs for suppliers / trading partners / 3PLs 	<ul style="list-style-type: none"> ▪ 59% Standards for labor and task management ▪ 33% accountability metrics/SLAs for suppliers / trading partners / 3PLs 	<ul style="list-style-type: none"> ▪ 42% Standards for labor and task management ▪ 24% accountability metrics/SLAs for suppliers / trading partners / 3PLs

Source: Aberdeen Group, April 2010

Capabilities and Enablers

Based on the findings of the Competitive Framework and interviews with end users, Aberdeen’s analysis of the Best-in-Class reveals that process integration and system up-gradation related to upstream and downstream supply chain execution processes such as data visibility, workforce utilization, order management and fulfillment in the flow-thru DC, a direct-to-consumer online DC, or a traditional DC. The following sections will detail all process and systems related issues facing retailers.

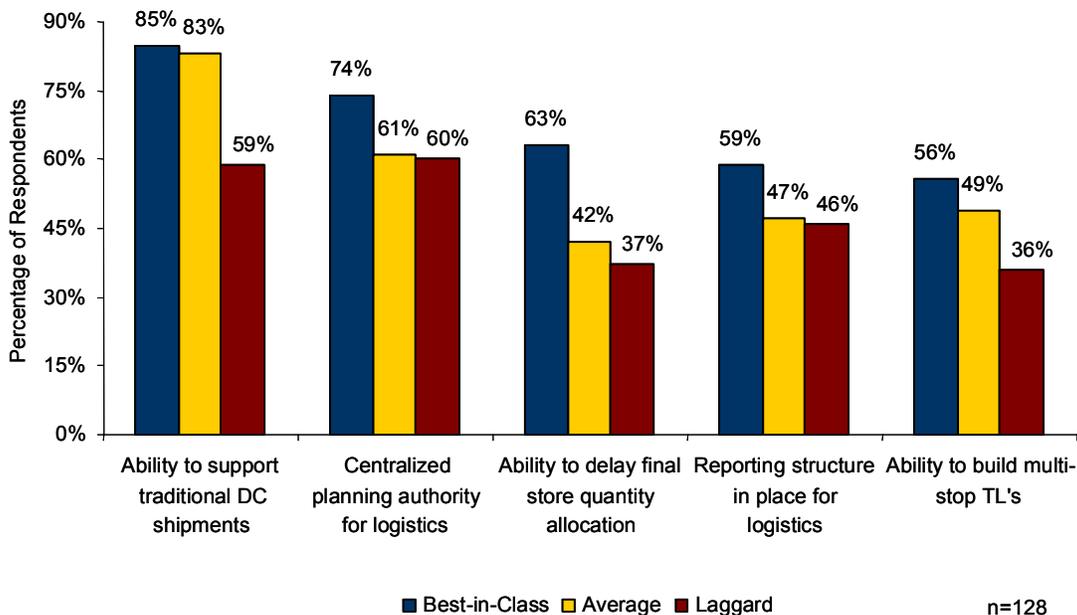
Process

Retailers, across the board, are demonstrating high levels of capability in support of the traditional distribution center model of fulfillment. Over 76% of all companies currently support this conventional and basic form of product distribution (see Figure 4, 85% of Best-in-Class companies utilize this model and they are 1.15 times as likely as Laggards to do so).

Having a basic capability to support this traditional DC model is one thing, but today's Best-in-Class retailers are going far beyond that. As illustrated in Figure 3, a variety of new and emerging distribution/logistics formats have emerged such as direct-to-store and direct-to-consumer (51% and 47% of all) and DC bypass or cross-dock (44% of all and 63% of 3PLs). These formats are routinely utilized by today's retailers.

Another emerging process trend, the *ability to increase or adjust the number of trading partners, 3PLs and LSP and/or supplier base*, is gaining new emphasis with 43% of Laggards and 56% of Best-in-Class (Figure 4) indicating that they have this capability in place.

Figure 4: Process and Organizational Capabilities



Source: Aberdeen Group, April 2010

Either directly or through alliance with their third party logistics service providers today's retailers are increasing the variety and usage of cross channel fulfillment models to address new shifting consumer needs: the growing volumes of online or cross-channel retail demand (see sidebar). Best-in-Class status requires that the retailers learn to embrace these new models without eroding overall cost or service objectives.

Organization

Little can be done to meet cross-channel demand without having the proper organization, planning authority or reporting structures in place. Here again the Best-in-Class companies are differentiating themselves (Table 3 and Figure 4) where they are:

- 26% more likely than all others to have *centralized planning authority for inbound (from suppliers) and outbound (to store/customer) logistics*
- 21% more likely than all others to have *reporting structures in place to balance the needs of cross channel logistics/operations needs*

Organizational changes have placed the authority and responsibility to delay allocations of inventory and to synchronize supply to end consumers based on last minute tailoring of allocations of inventory across these channels. Through advanced postponement strategies many companies interviewed are leveraging visibility systems and their enterprise, best-of-breed or 3PL service providers to fine-tune and adjust inventory to specific stores or customers. They have placed the authority to do so in the hands of supply chain planners. One large apparel retailer is relying on a 3PL to bypass the

Channel formats supported

- ✓ Brick and mortar only - 28%
- ✓ Other channels only - (16%)
- ✓ Brick and mortar and online only - (31%)
- ✓ Brick and mortar w online, and all other - (26%)

DC and to prepare break-bulk mixed SKU casepacks, tailoring quantities on a store-specific, last-minute demand basis from inbound containers that arrive in-port. Placing the authority in a supply chain planner to make such supply-demand inventory postponement decisions is yielding great results for this large retailer.

It stands to reason that having a reporting structure capable of isolating and balancing demand changes across channel logistics needs would enhance a company's capability to deliver superior results when it comes to key operating metrics such as on-time and complete delivery and lower overall freight costs per unit.

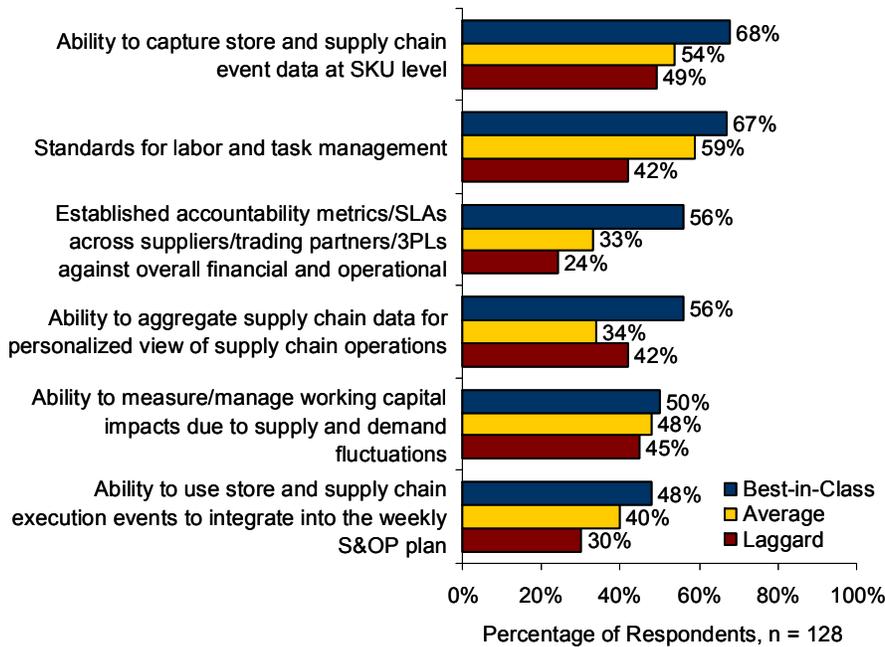
Knowledge Management

Knowledge management capabilities are important to capture retail store and SKU level data in order to support the growing and key strategic action of rationalizing SKUs and initiating cost-to-serve models (Figure 2). In this regard, Best-in-Class companies are 1.39 times as likely as Laggards and 1.26 times as likely as Industry Average companies to support this data capture requirement (Table 3 Knowledge and Figure 5).

Also, in support of financial and operational goals, having established accountability metrics becomes important as more companies rely on growing numbers of suppliers, trading partners and 3PL's (Note: Best-in-Class retailers are 2.33 times as likely as Laggards to have these metrics). Being able to have visibility and capture knowledge from demand-sensing at stores as well as order and product/cost flows across the multi-tiered end-to-end supply chain is a necessary first step in establishing service level agreements (SLAs - see Performance Management section below), monitoring and measuring compliance and insuring trading partner performance. In this study about 80% of retail industry supply chains have a global reach - only 20% are 'domestic only.' Multiple handoffs from manufacturers, suppliers/distributors, transportation and fulfillment 3PL providers, and other partners are growing in adoption and importance as retail logistics becomes more global and complex.

Few retailers are successful in balancing cross-channel logistics demands with overall financial and service goals without the ability to integrate supply chain events into an S&OP plan. Best-in-Class companies are 1.6 times as likely as Laggards to have at least a weekly capability (48% versus 30% respectively). It is important that companies seek to improve their capacity to incorporate retail logistics events into weekly or more frequent S&OP updates in the rapidly changing cross-channel retail operating environment (see related research: Aberdeen's September, 2009, [*The 21st Century Retail Supply Chain: Three Key Imperatives for Retailers*](#)).

Figure 5: Knowledge and Performance Capabilities



Source: Aberdeen Group, April 2010

Performance Management

Well over 50% of companies are using standards for labor management. With the number-two strategic goal being that of "introducing labor efficiencies through automation" (Figure 2), it is not surprising that Best-in-Class companies are 1.3 times as likely as all others to utilize standards for labor and task management (Figure 5). Labor costs have been shown to represent up to 37% of the operating budget for distribution center or fulfillment operations within the supply chain (see *Labor Management: Instill Accuracy, Efficiency, and Productivity in the Warehouse and Retail Store*, March 2010). As such, it is a top priority in retail logistics to optimize these costs through process improvement and the introduction of software and hardware technology solutions. Additionally cross-dock and DC bypass operating models require more robust task and labor management techniques (such as the last-minute break bulk operations highlighted in the Organization section). In the next section of this report we will see specific components of technology that leading companies are deploying to increase labor productivity and assist in monitoring labor efficiencies and performance throughout their operations at both the warehouse and store.

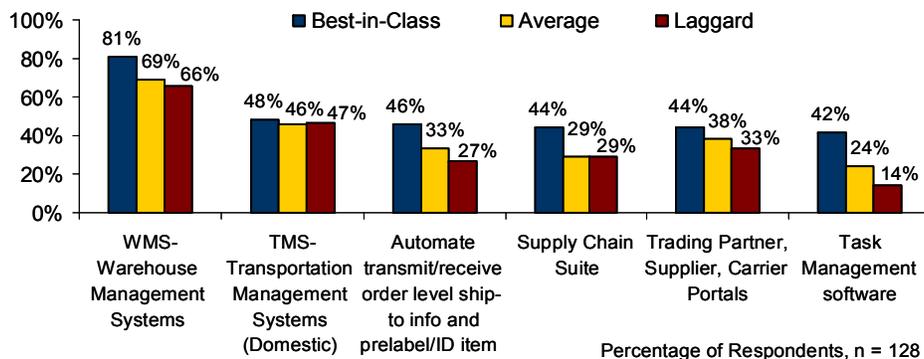
With each hand-off and tier in the network, lead-times, additional disruptions, and demand-supply fluctuations are introduced. With each channel and retail logistics format introduced, total overall and item level inventory balancing becomes a broader, more complicated problem. Best-in-Class companies are doing a better job than their peers in measuring and managing these challenges (Table 3 and Figure 5).

- The Best-in-Class are 1.2 times as likely as Laggards to be able to "measure/manage working capital impacts due to supply and demand fluctuations" in inventory
- The Best-in-Class are 2.3 times as likely as Laggards to have 'established accountability metrics/SLAs across suppliers/trading partners/3PLs against overall financial and operational performance'

Technology

As indicated earlier, most companies (76%) support fulfillment through a traditional DC model and a variety of new emerging logistics formats. Virtually the same number of companies (71%) have a WMS or warehouse management system in place today (at 81% Best-in-Class companies are 19% more likely than all others to have a WMS). The WMS is the backbone required for automating labor efficiencies and interleaving them with order level and item level picking and shipping requirements and several solutions providers bundle this capability into their WMS software. In other cases this labor management (LMS) or task management functionality can be bolted on through best-of-breed solutions (see [Labor Management: Instill Accuracy, Efficiency, and Productivity in the Warehouse and Retail Store](#), March 2010).

Figure 6: Technology Enablers Software



“We can drive down costs by leveraging WMS features better and continuously improve processes.”

~ Diane Garforth, Director Logistics at David's Bridal \$500M Retailer

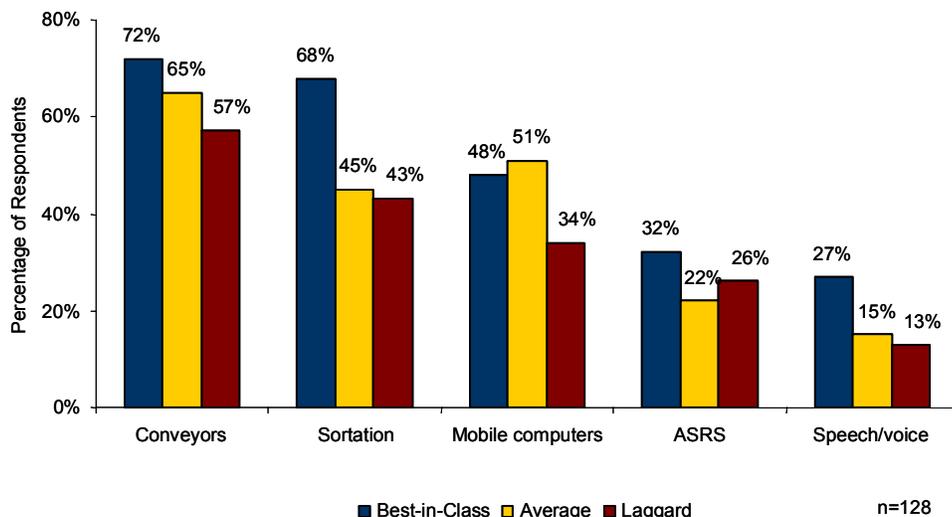
Source: Aberdeen Group, April 2010

Regardless of the specific approach a company utilizes to automate labor standards and task management it is a key element in achieving Best-in-Class status in the goal of "labor efficiency" throughout retail operations.

In addition to the software, there are complementary hardware components which can facilitate good task management and labor standards. Most notably mobile computers and speech/voice technology (Figure 7) are two enablers which allow dynamic picking and WMS or LMS interaction on a task specific real-time basis. These two technologies in particular are being used by Best-in-Class companies in conjunction with labor management systems to increase labor productivity in the retail supply chain. These same two hardware components have synergies with yet another item of software functionality and adoption; "technology to transmit/receive order

level ship-to information and to pre-label, tender and scan cartons for DC-bypass for direct to consumer fulfillment models" (46% of leading companies have this capability today versus 31% for all others). Again the ability to interface through technology real-time within each task of order picking and to provide real-time labeling and shipping status is giving rise to improved efficiencies in retail warehouse/store operations.

Figure 7: Technology Enablers - Hardware



Source: Aberdeen Group, April 2010

Conveyors, sortation and ASRS systems are some of the traditional technologies that companies with enough shipping volume (to offset or justify the heavier initial investment) can use to improve operations - as is illustrated by the leading companies which are anywhere from 10% to 30% more likely to use them.

**Aberdeen Insights —
TMS Technology and Global Trade Disparity**

The nature of the retail supply chain is becoming increasingly more global. As illustrated in Figure 7, 80% of the companies in our survey service global supply chains. However, the number of them having capabilities to support import and export operations is out of alignment with the level of adoption of international transportation (TMS) and Global Trade Management (GTM) systems.

continued

Formats supported

- ✓ Brick and mortar - 28%
- ✓ Other channels only - (16%)
- ✓ Brick and mortar and online only - (31%)
- ✓ Brick and mortar w online, and all other - (26%)

**Aberdeen Insights —
TMS Technology and Global Trade Disparity**

Figure 8: Majority of Respondents Service Global Retail Supply Chains



The Players by Classification:

Retailers

3PL serving retail:

- ✓ 3pl: warehousing provider
- ✓ 3pl: transportation provider
- ✓ Freight forwarder

Mfg/supplier/other:

- ✓ Suppliers to retail
- ✓ Mfg/wholesaler distributors
- ✓ Trading Partners

In Figure 6 it can be noted that 46% to 48% of all companies have a domestic TMS. However in a related response only 29% of all companies operating transportation within retail logistics are utilizing a "TMS with international, import and export, and global trade compliance capabilities" in place for inter-country shipments. Likewise in their *ability to handle import and export document and reporting requirements* about 50% of companies have a process in place today and another 30% note that they plan to acquire it in the future.

This 30% to 50% disparity in current process and automation is alarming. While some retailers are leveraging the resources of freight forwarders and 3PL providers for their international transportation needs this does not explain the disparity. Only 32% of 3PLs of freight forwarders in this survey indicate that they have international TMS and global trade capabilities in place today (the other 50% are relying on manual process to handle import/export document requirements).

Many options are available for acquiring this functionality from both solution providers and logistics service providers. It is important that all companies involved in global and inter-country retail shipments partner with others or acquire internal technology to address the import and export and global trade compliance disparity.

One form of relief for many retailers is the option to explore a growing number of SaaS or on-demand deployment models which are available in the marketplace today and for which the cost of investment is reduced.

Chapter Three: Required Actions

Whether a company is trying to move its performance in retail logistics from Laggard to Industry Average, or Industry Average to Best-in-Class, the following actions will help spur the necessary performance improvements:

Laggard Steps to Success

- **Accelerate adoption of warehouse management basic functionality.** Currently, only 59% of Laggard retailers have the ability to support traditional distribution center shipments / fulfillment. Best-in-Class companies are 1.15 times as likely as Laggards to have this basic capability and their performance on both cost and service metrics are correspondingly better across the board (Table 2). Thirty-seven percent (37%) of Laggard companies indicated that they desire to *introduce labor efficiencies through automation or process reengineering in our component of the retail supply chain*. In order to achieve this objective, upgrading the level of warehouse management functionality in both their process and technology needs to become an item of near-term urgency. While 21% of Laggard retailers are planning to upgrade their WMS systems within the next 12 months and another 13% of them plan to do so beyond 12 months, these companies would be encouraged to prioritize and accelerate the adoption and justification of basic warehouse management systems.
- **Plan to introduce labor management and task management software into operations.** When looking to upgrade basic warehouse management functionality Laggard companies need to consider the integration of labor management and task management software modules or functionality. Here again, Best-in-Class retailers are leading the way and are 1.6 times as likely as Laggards to utilize standards for labor and task management and 3-times as likely as Laggards to utilize task management software. Since many WMS/LMS systems and point solutions options are available but require tight synchronization between 1) process, 2) material handling systems, and 3) a basic WMS; it behooves these companies to streamline their processes and justify labor management components and task management in the early stages of any planned WMS system installs or upgrades. Our research has shown that it is typical for a retailer to improve labor productivity via anywhere from 20% to 30% through the integration of labor management.
- **Renegotiation of prices or alliances with 3PL/carriers and with suppliers and trading partners.** Only 17% of Laggard companies have selected price renegotiation as an action for their retail logistics strategy. However, Laggard companies are far behind

Best-in-Class Retailers are:

- √ **1.7-times** more likely than all other retailers to garner 96% or higher service-levels that not only confirm near-perfect shelf-level in-stock levels but also enhance opportunity for enabling long-term customer relationships and lifetime customer value
- √ **2-times** as likely as all other retailers to undertake stock-out exception management remedial measures at the store and the extended supply chain
- √ **1.5-times** more likely than all other retailers to establish SKU-level minimum and maximum quantity thresholds that assist in improved forecasting and automated replenishment

their peers when it comes to year-over-year reductions in transportation cost per unit handled. With an average increase in transportation cost/unit of 15% over 40% of Laggard companies had increases versus the prior year, while 65% of Best-in-Class companies were able to renegotiate reductions in their cost/unit. Our research reveals that savings of 20% to over 30% have been achieved during the last year. Laggard companies should be taking advantage of price reduction opportunities in renewed contract negotiations for freight.

Industry Average Steps to Success

- **Plan to interface mobile solutions and speech/voice technology with WMS/LMS systems.** When looking to upgrade basic warehouse management and labor/task management functionality Industry Average companies need to consider the integration of labor management and task management software with both mobility and speech/voice hardware technologies. Best-in-Class retailers are 1.5 times more likely to be using these two technologies in particular in conjunction with labor management systems to increase labor productivity in the retail supply chain. Since many WMS/LMS systems and point solutions options are available but require tight synchronization with technologies that are dependent on dynamic interaction on a task specific real-time basis; it behooves Industry Average companies to streamline their processes and justify interfacing with these real-time picking technologies in the early stages of any of planned WMS/LMS system installs or upgrades. As mentioned in the technology section, the ability to interface through technology real-time within each task of order picking, and to provide real-time labeling and shipping statuses is giving rise to improved efficiencies in retail warehouse / store operations and numerous case studies and examples make this fact clear.
- **Ability to delay final store quantity allocation until arrival of PO at the DC.** Currently, only 42% of Industry Average retailers indicate that they can react to this level of last minute supply-demand postpone. Best-in-Class retailers are 50% more likely to possess this capability. In today's multi-tier, cross-channel retail environment it is important that retailers remain agile and adaptive when it comes to inventory allocations. Retailers that are able to respond and adjust allocation quantities on a more dynamic basis are raising the high bar for their customers. Leading companies demonstrate superior results in 1) in-stock position (reduced frequency of out-of-stock) and 2) level of on-time and time and complete shipments. Industry Average companies should make sure they remain competitive in their fulfillment and postpone processes.
- **Establish accountability metrics for suppliers/trading partner, and 3PLs for elevating financial and operational**

"Our goal right now is to continue integrating our logistics model with our global distribution center located in Europe. In retail, we have a pretty well established direct-to-store delivery model with our freight forwarders. The objective is to reduce the burden on our Rhode Island-based distribution center. Our online fulfillment is being done from this DC as well. In 2010, we are looking to improve the integration between global distribution center and our DC here in the US to reduce logistics costs and reducing inventory in stores."

~ Robert Grant, VP-Supply Chain, Swarovski

performance. Currently, only a third of Industry Average retailers have developed performance management rules and metrics for their suppliers, trading partners, and 3PLs. As their cross-channel operations expand on a daily basis, Best-in-Class retailers are 1.7 times more likely to establish and enable accountability metrics for ensuring on-time delivery, reduced errors in in-bound transportation, lower total landed cost, and improved lead times. Our data shows that retailers that currently operate accountability metrics and hold their suppliers and partners responsible for effective inventory flow in the supply chain have attained 95% or higher service levels in their channels ensuring lower inventory holding costs, higher turns, and increased customer satisfaction. Industry Average retailers need to embrace data analytics-driven supply chain technologies. The simplest way to start is by gaining agreement with partners to establish order fill rates, on-time delivery, and other purchase order process consolidation metrics that can be fulfilled by both sides.

Best-in-Class Steps to Success

- **Increase focus on integrating demand signals with logistics forecasts and operations to reduce excess inventory.** Survey data shows that only 44% of Best-in-Class retailers possess the capability to seamlessly integrate product demand signal data with open to buy requirements, logistics forecasts, and logistics operations. This capability ensures that Best-in-Class companies can make near-real time decisions on revising in-bound and out-bound logistics, balance inventory requirements across channels as well as reduce supply chain risks. Best-in-Class companies must integrate demand signals, labor management, and replenishment needs so they do not face the burden of figuring out re-allocation of channel inventory which ultimately enhances the ability to increase inventory turns and working capital optimization. These companies can start by establishing a demand signal repository that can send SKU-level demand data updates, forecast variations, and real-time alerts for the reporting structure that manages day-to-day supply chain execution including VP of distribution, VP of supply Chain, directors, warehouse managers, and suppliers/trading partners/3PLs. Three examples come to the fore when it comes to the effective use of consumer demand management capabilities including Casey's General Stores (a 1500-store convenience chain), U.K.-based New Look, and Alex Lee's Lowes Foods Division (a 110-store grocery chain). All three companies have seen positive shelf-level inventory control and costs related benefits by adopting consumer demand response-based strategies.
- **Enable the use of store and supply chain execution event-level data into weekly S&OP plan for improving performance.** Our data denotes that currently 48% of Best-in-Class retailers use event-level supply chain execution data within

the weekly S&OP plan. This event-level data is accessed by retail supply chain executives and directors so that adjustments can be made for improving specific in-bound and out-bound distribution and logistics execution areas such as labor utilization in the DCs, task management, receiving, pick accuracy at the DC, out-of-stock recovery time, cash-to-cash cycle time, lead time variability from international locations, among several other areas that are critical to total landed cost and on-time delivery. Best-in-Class retailers that use near real-time event-level data must continue to expand the utilization of supply chain data integration processes so that they can automate transmit/receive order level ship-to information and other supply network events.

- **Balance cross-channel and store-based logistics operations needs.** Currently, 48% of Best-in-Class retailers can support shipping and fulfillment for online and call center orders using a direct-to-consumer/or store delivery model. Moreover, 52% of Best-in-Class retailers possess the ability to support DC bypass (orders pre-labeled and shipped straight to store or consumer or via crossdock). Aberdeen's January, 2009, [Optimize Customer Fulfillment for Improving Cross-Channel Operations](#) benchmark report cited that merchandise availability (69%) and order efficiency (64%) are the top two strategies of the Best-in-Class when it comes to integrating disparate channels. Therefore, more Best-in-Class retailers must consider reviewing and upgrading their in-bound and out-bound processes, DC models, direct-to-store or consumer, and cross-docking processes. These retailers can then potentially reduce cost per unit or order handled, increased same-day shipping rate, reduce labor cost to sales, and overall improvement in fulfillment rates.

Aberdeen Insights — Summary

The advent of e-commerce, and e-fulfillment, on top of the traditional challenges of the brick-and-mortar retailer, has led to business upheaval, successes, and some failures. The supply chain and management structures are rapidly transforming in retail to address the customer need for cross-channel purchase experience. Aberdeen's September, 2009 report, [The 21st Century Retail Supply Chain: Three Key Imperatives for Retailers](#), denoted that Best-in-Class retailers are focusing on cross-channel supply chain needs by addressing multi-warehouse inventory flow processes and enablers in the areas of in-bound product movements and visibility for all internal and external extended supply chain stakeholders in the multi-tier multi-channel supply chain.

continued

Aberdeen Insights — Summary

The retail sector traditionally has been lagging in terms of supply chain execution, however some new trends are dramatically changing this situation, namely:

- Emergence of direct import models from global destinations
- Rising transportation costs resulting in a pressure towards margins for retailers
- Rise in customers demanding improved customer service and reduced out of stocks
- Dramatically reduced product life cycles due to a rise in global competition
- Rapid expansion in low-cost but sometimes risky international product sourcing locations
- The need for renewable and sustainable resources within the supply chain

Cross-channel retailing involves a combination of brick-and-mortar locations, web, catalog, and mobile requires integrated visibility, as customers are no longer accepting the website of a retailer to be different from the brick and mortar operations when it comes to the order to delivery process. While new logistic formats and partnerships are growing (see Strategy Insight) the goal is to ensure all players are involved in a unified manner to make certain that products reach the right place at the right time, whether it is the retailer's store, or flow-thru DC, a direct-to-consumer online DC, or a traditional DC. This study concludes with three recommendations to elevate excellence in today's retail supply chain. Companies should:

- Align their import/export and global trade capabilities to meet the need of their growing global supply chains
- Increase the judicious selection of logistics partners and capabilities to support cross-channel synergies
- Upgrade system and capabilities to support dynamic order / item / inventory quantity allocations and last-minute fulfillment processes

Appendix A: Research Methodology

Between March and April 2010, Aberdeen examined the use, the experiences, and the intentions of more than 128 enterprises using retail logistics in a diverse set of companies shipping within the extended retail supply chain.

Aberdeen supplemented this online survey effort with interviews with select survey respondents, gathering additional information on retail logistics strategies, experiences, and results.

Responding enterprises included the following:

- *Job title:* The research sample included respondents with the following job titles: C-level/ SVP/VP (26%); Director (21%); Manager (26%); and Other (27%).
- *Department / function:* The research sample included respondents from the following departments or functions: Logistics/Supply Chain (55%); Corp. Management and Sales (18%); IT and Finance (7%); Operations and Procurement (18%); and Other (2%).
- *Industry:* The research sample included respondents from Retail and Wholesale (38%); Consumer Goods (17%); Transportation and Logistics (13%); and other related industries (32%).
- *Geography:* The majority of respondents (72%) were from North America. Remaining respondents were from the Asia-Pacific region (13%); Europe (10%); and 5% other
- *Company size:* Sixteen percent (16%) of respondents were from very large enterprises (annual revenues above US \$5 billion); 32% were from upper midsize enterprises (annual revenues between \$500 million and \$1 Billion); 27% were from lower midsize enterprises (annual revenues between \$50 million and \$500 million); and 25% of respondents were from small businesses (annual revenues of \$50 million or less).
- *Headcount:* Twenty-eight percent (28%) of respondents were from very large enterprises (headcount greater than 10,000 employees); 26% were from upper midsize enterprises (headcount between 1,001 and 10,000 employees); 16% were from lower midsize enterprises (headcount between 251 and 1,000 employees); and 30% of respondents were from small businesses (headcount between 1 and 250 employees).

Study Focus

Responding executives completed an online survey that included questions designed to determine the following:

- √ The degree to which retail logistics is deployed in their retail operations and the financial implications of the technology
- √ The structure and effectiveness of existing retail logistics implementations
- √ Current and planned use of retail logistics to aid operational and promotional activities
- √ The benefits, if any, that have been derived from retail logistics initiatives

The study aimed to identify emerging best practices for Retail Logistics usage by Retailers, their Suppliers, Trading Partners and Service providers, and to provide a framework by which readers could assess the effectiveness of their extended retail supply chains

Table 4: The PACE Framework Key

Overview
<p>Aberdeen applies a methodology to benchmark research that evaluates the business pressures, actions, capabilities, and enablers (PACE) that indicate corporate behavior in specific business processes. These terms are defined as follows:</p> <p>Pressures — external forces that impact an organization’s market position, competitiveness, or business operations (e.g., economic, political and regulatory, technology, changing customer preferences, competitive)</p> <p>Actions — the strategic approaches that an organization takes in response to industry pressures (e.g., align the corporate business model to leverage industry opportunities, such as product / service strategy, target markets, financial strategy, go-to-market, and sales strategy)</p> <p>Capabilities — the business process competencies required to execute corporate strategy (e.g., skilled people, brand, market positioning, viable products / services, ecosystem partners, financing)</p> <p>Enablers — the key functionality of technology solutions required to support the organization’s enabling business practices (e.g., development platform, applications, network connectivity, user interface, training and support, partner interfaces, data cleansing, and management)</p>

Source: Aberdeen Group, April 2010

Table 5: The Competitive Framework Key

Overview	
<p>The Aberdeen Competitive Framework defines enterprises as falling into one of the following three levels of practices and performance:</p> <p>Best-in-Class (20%) — Practices that are the best currently being employed and are significantly superior to the Industry Average, and result in the top industry performance.</p> <p>Industry Average (50%) — Practices that represent the average or norm, and result in average industry performance.</p> <p>Laggards (30%) — Practices that are significantly behind the average of the industry, and result in below average performance.</p>	<p>In the following categories:</p> <p>Process — What is the scope of process standardization? What is the efficiency and effectiveness of this process?</p> <p>Organization — How is your company currently organized to manage and optimize this particular process?</p> <p>Knowledge — What visibility do you have into key data and intelligence required to manage this process?</p> <p>Technology — What level of automation have you used to support this process? How is this automation integrated and aligned?</p> <p>Performance — What do you measure? How frequently? What’s your actual performance?</p>

Source: Aberdeen Group, April 2010

Table 6: The Relationship Between PACE and the Competitive Framework

PACE and the Competitive Framework – How They Interact
<p>Aberdeen research indicates that companies that identify the most influential pressures and take the most transformational and effective actions are most likely to achieve superior performance. The level of competitive performance that a company achieves is strongly determined by the PACE choices that they make and how well they execute those decisions.</p>

Source: Aberdeen Group, April 2010

Appendix B: Related Aberdeen Research

Related Aberdeen research that forms a companion or reference to this report includes:

- *Inventory Optimization: Retail Strategies to Eliminate Retail Stock-Out and Over-Stock*; May 2009
- *Integrated Demand-Supply Networks: Five Steps to Gaining Visibility and Control*; March 2009
- *Process Collaboration in Multi-Enterprise Supply Chains*; August 2008
- *The 21st Century Retail Supply Chain: Three Key Imperatives for Retailers*; September 2009
- *Warehouse Operations: Increase Responsiveness through Automation*; July 2009
- *On-Time and Under Budget: Maximizing Profits with Efficient Warehouse Management*; December 2009
- *Integrated Transportation Management: Improve Responsiveness with Real-Time Control of Execution*; October 2009
- *Supply Chain Visibility Excellence: Reduce Pipeline Inventory and Landed Cost*, December 2009
- *Labor Management: Instill Accuracy, Efficiency, and Productivity in the Warehouse and Retail Store*, March 2010

Information on these and any other Aberdeen publications can be found at www.aberdeen.com.

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