Aberdeen Group
A Harte-Hanks Company

International Transportation

Optimize Cost and Service in a Global Market

July 2010

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Executive Summary

A study of 181 supply chain organizations shows that dynamic supply chain optimization capabilities and near real-time visibility to detailed supply chain events are key requirements to thriving within the complex and shifting international transportation and global trade environment. This report examines how Best-in-Class companies have controlled costs and improved responsiveness, proving that they can be both cost competitive and resilient even during the severe shifts and disruptions of the current transportation and global trade marketplace. Our survey of 181 respondents includes enterprises of all sizes, with global and domestic transportation reach. In addition, the current study provides insight into best practices of Best-in-Class companies, which are achieving real-time control of execution and creating strategic, dynamic and cost-efficient transportation 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

Best-in-Class Performance

Best-in-Class companies (the top 20% of performers) have the mean performance value of the following transportation focused metrics:

- Transportation spend ratio: transportation costs divided by sales - 2.38%
- Transportation spending trend: change in transportation spend vs. prior year - improved 8.71%
- Shipment integrity: percent on-time and complete shipments - 97.2%

Competitive Maturity Assessment

Several common characteristics of Best-in-Class performance include:

- **Visibility and shared global metrics.** 74% of Best-in-Class companies have the visibility into local/global flows required to consolidate and optimize loads. They are also 39% more likely than others to sense and respond in near real-time to events across multiple channels.
- **Advanced dynamic optimization capabilities.** Best-in-Class companies are 2.5 times as likely as all others to utilize *unified mode shifting optimizations across LTL/TL and parcel* and they are 1.91times more likely to automate dynamic shipment consolidation when routing.

"This visibility plays a big role in our transportation services… it allows the company to handle each retailer or distributor in a vast supply chain network and to ensure visibility and traceability to item and landed cost on a customer by customer specific basis."

~ Tom Brissenden,
Director Logistics
Arvato Digital Service, Inc

Required Actions

Chapter Three details our recommendations for each maturity class. There are three key actions common to all companies. They should:

1. Collaborate with internal and external groups to gain visibility and share data the global inbound and outbound supply chain
2. Leverage current and future technologies/tools to automate and streamline transportation and global trade management processes
3. Employ near real-time dynamic optimization to enhance cost/service

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Chapter One: Benchmarking the Best-in-Class

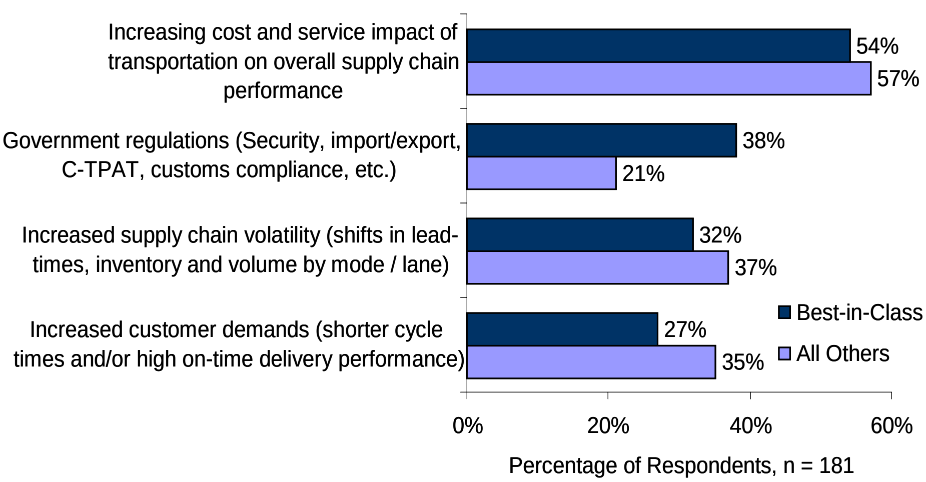
Business Context

In the October 2009 integrated transportation report (*Integrated Transportation Management: Improve Responsiveness with Real-Time Control of Execution*), transportation costs were found to have the highest impact on supply chain execution (cited by over 58% of respondents). With the down economy, enterprises across the globe are reducing the amount of capital they are willing to accept in inventory (in-transit included) and they are changing trade and sourcing locations to take advantage of preferential trade agreements and low cost country options. In this time of change within the international marketplace, this current benchmark report focuses on both the inbound and outbound transportation strategies that today's logistics leaders are using to improve end-to-end supply chain costs and their global transportation and trade processes.

Best-in-Class Results:

- √ **8.71**% transportation spend reduction over last year, compared to a 5.03% increase for Laggards
- √ **97.2**% of deliveries are on-time and complete versus 81% for Laggards
- √ **89**% reduced their transportation spend year-over-year, versus 51% of all others

Figure 1: Top Pressures Driving a Focus on Transportation Management



Source: Aberdeen Group, July 2010

Type of Organization

- √ **42%** Manufacturer / Supplier
- √ **28%** Distributor / Wholesaler, Retailer
- √ **18%** Carrier, freight forwarder, 3PL
- √ **9%** Broker, trading partner

Under pressure to compete and control the daily fluctuations in fuel cost, today's transportation executives are working to drive down the fundamental costs of doing business. At the same time, these executives are focusing their attention on long term strategy. Through primary research involving 181 companies, this Aberdeen Group Benchmark Report takes a look at the other pressures being faced by transportation organizations (they were asked to select the top two pressures), their plans for action, and the capabilities they feel are necessary for success in the future.

Among transportation executives, it's clear that the focus on improving the role of transportation in the supply chain (on average, over 54% of

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respondents cite increased awareness of the cost and service impact of transportation as a key pressure) continues to be the top pressure. We have been tracking this pressure since the launch of the June 2007 Aberdeen Group report, *Integrated Transportation Management: Best-in-Class Companies View the World Differently* and it has been the top pressure all three years (ranging from 54% to as high as 65%).

Consistent with the studies since 2007 and in the face of increased global volumes, cost alone cannot be the singular focus of today's transportation leaders. Once again, the logistics executive is faced with balancing competing pressures; both cost and service must be balanced in today's end-to-end supply chain.

Indeed, cost and service-based pressures are not only rising but must be balanced across external factors. Two of these external factors *increased government regulations* (at 21% to 38%) *and increased supply chain volatility* (at 32% to 37%) have gained prominence since last year's study where they were listed in the 15% to 20% range.

Such pressures are even more pronounced in global organizations (88% of companies are global with import or export volume; see sidebar) where an array of groups including government bodies, suppliers, carriers, trading partners, and internal departments are creating new levels of pressure to collaborate, communicate and integrate. As the global marketplace and international trade grows in scale and importance so too has the need for international transportation to transform and adapt. The growing global complexities and growing trade volumes are amplified by increased government regulations on cross border security and trade. Over 80% of the companies in this study have import and export trade volumes yet only 27% report that they have a formal Global trade Management (GTM) program. We will explore this growing issue in detail in our upcoming September report on Global Trade Management.

Customer demands for high delivery performance (27% to 35% in Figure 1) and the *increased demand for accurate delivery status and cost information* is driving the need to ensure shipment integrity and enhance internal/external communications across the entire supply chain. In the past, many organizations were blind to shipment details within the transportation pipeline. Inbound transportation is particularly troublesome since shipments are often in the hands of trading partners, carriers, or suppliers; severely limiting visibility. Along with demands for new levels of visibility, (45% of all respondents indicate they currently use supply chain visibility software; see Figure 5) there are new demands from other internal groups to have visibility into this information.

The key takeaway is that there is a minimum level of visibility, communication, and optimization that is required to balance all these competing pressures. As we shall see, this balance is critical. Today's leaders, more than ever, have mandates to reduce transportation spend while improving the frequency of delivery without diminishing the accuracy of shipments and customer service.

Global Reach

√ **92%** domestic shipping (intra-home country)

√ **85%** domestic receiving (intra-home country)

√ **88%** importing (receiving from other countries)

√ **85%** exporting (shipping across country borders)

Global Disparity

√ **88%** have import and/or export trade volumes

Yet only….

√ **24%** have the capability to include customs/duties in *landed cost* calculations

√ **27%** have a formal Global Trade Management (GTM) program

We will explore this growing issue in detail in our upcoming September report on Global Trade Management or GTM.

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The Maturity Class Framework

As indicated in our prior research, we have developed definitions of the four primary transportation system categories to establish a framework for this and future studies. The four categories are as follows:

1. **Domestic transportation** is transportation across all modes relative to shipments received (inbound volumes) or shipped (outbound volumes) by a company within its own home country only
2. **International transportation** is transportation across all modes relative to shipments received (inbound import volumes) or shipped (outbound export volumes) across country boundaries
3. **Fleet** is transportation involving dedicated or private carrier using fleets (either single or multi-stop truckloads) either owned or contracted for point-to-point routes
4. **Parcel** includes small package delivery to business facilities or end-consumers, and is typically focused on the first or last mile of item delivery

The definitions of these categories in both basic and advanced levels are defined in Appendix B. These definitions will hold throughout the data and the analysis that follows.

Aberdeen used three key performance criteria across global international transportation to distinguish the Best-in-Class from Industry Average and Laggard organizations. Respondents were ranked according to three key performance criteria:

- **Spend ratio:** measured as total transportation costs divided by sales
- **Spending trend**: measured as the percentage of total transportation spend versus the prior year, per unit handled
- **Shipment integrity**: measured as the percentage of transportation shipments that were on-time and for which all items were complete

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	▪ Spend ratio: 2.38% transportation cost as a percentage of sales ▪ Spending trend: 8.71% **decrease** in transportation spend versus the past year ▪ Shipment integrity: 97.2% of orders shipped on-time and complete

Definition of Maturity Class	Mean Class Performance
Industry Average: Middle 50% of aggregate performance scorers	▪ Spend ratio: 8.75% transportation cost as a percentage of sales ▪ Spending trend: 0.97% **increase** in transportation spend versus the past year ▪ Shipment integrity: 94.7% of orders shipped on-time and complete
Laggard: Bottom 30% of aggregate performance scorers	▪ Spend ratio: 16.35% transportation cost as a percentage of sales ▪ Spending trend: 5.03% **increase** in transportation spend versus the past year ▪ Shipment integrity: 87.3% of orders shipped on-time and complete

Source: Aberdeen Group, July 2010

Driven by the pressures to improve cost and service across transportation and to enhance visibility to cost and delivery status information (Figure 1), companies with both global and domestic breadth have embarked on aggressive cost and service initiatives.

Best-in-Class companies (the top 20% of performers) have been best at balancing the competing pressures and have the following key advantages, based on the above metrics:

- 89% of Best-in-Class companies reduced transportation spend. This group improved transportation spending by 8.71% year over year with many showing double digit reductions in freight rates. In fact, two companies reported reductions in the 30% plus range but only 56% of Industry Average and 40% of Laggard companies were able to reduce their company's transportation spend.
- Further evaluation of the **shipment integrity** metric reveals the following: for both Best-in-Class and Industry Average companies, the service level of "perfect orders" (complete and on-time) averaged over 95%. With an average shipment integrity metric of 87.3%, only 20% of the Laggard companies were able to deliver to meet or exceed the same 95% level - a perfect order at least 95 out of 100 times. In today's customer-centric supply chain, 87 out of 100 complete and on-time shipments is not business sustainable in most industry segments.

The Best-in-Class PACE Model

Using transportation management to achieve corporate goals requires 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
▪ Overall transportation costs relative to supply chain costs - 56%	▪ Renegotiate cost/service contracts with carriers, 3PLs, suppliers, and trading partners - 50% ▪ Rationalize the numbers of trading partners (ex. suppliers, carriers, forwarders, brokers) - 39% ▪ Develop event management capability to reroute shipments, rebalance SKUs / inventory in transit - 22% ▪ Increase B2B / EDI data exchange and electronic connectivity (with carriers, suppliers, and customers) - 19%	▪ Ability to respond in near real-time to events across multiple channels - 71% ▪ Customer service and Warehouse has visibility of outbound freight schedules for improved order promising - 71% ▪ Our staff is proficient in dynamically routing international shipments (vs. static, itinerary-based routing) - 66% ▪ Ability to make supplier-distribution network realignments (sourcing, mode, or routing shifts) - 66% ▪ Ability to support DC Bypass (orders pre-labeled and shipped straight to store, consumer, or via crossdock) - 66% ▪ Shared shipping schedules across our divisions / locations (e.g., backhauls, or closed-loop tours) - 63% ▪ Ability to redirect in-transit flows & orders to balance higher demands or inventory imbalances in-transit - 55% ▪ Ability to dynamically route international shipments (vs. static, itinerary-based routing) - 52%	▪ Data integration (EDI/VAN, portals, or B2B integrators) - 61% ▪ Domestic TMS for home country volume - 60% ▪ International TMS for import/export volume - 51% ▪ Event management software - 46% ▪ Parcel management software - 46% ▪ B2B collaboration software - 44% ▪ Contract Management Software - 39% ▪ Supply chain visibility software - 39% ▪ Global trade compliance management software (with import, export, and global trade functionality) - 39% ▪ Dynamic shipment optimization software - 38% ▪ Supply chain software package with transportation management capabilities - 37% ▪ Fleet management software - 35% ▪ Transportation management module from an ERP system - 33%

Source: Aberdeen Group, July 2010

Best-in-Class Strategies

It is important to note the differences and similarities between the strategic actions taken by the Best-in-Class and all other companies (Industry Average and Laggards combined). Companies were asked to select their top two actions (Figure 2).

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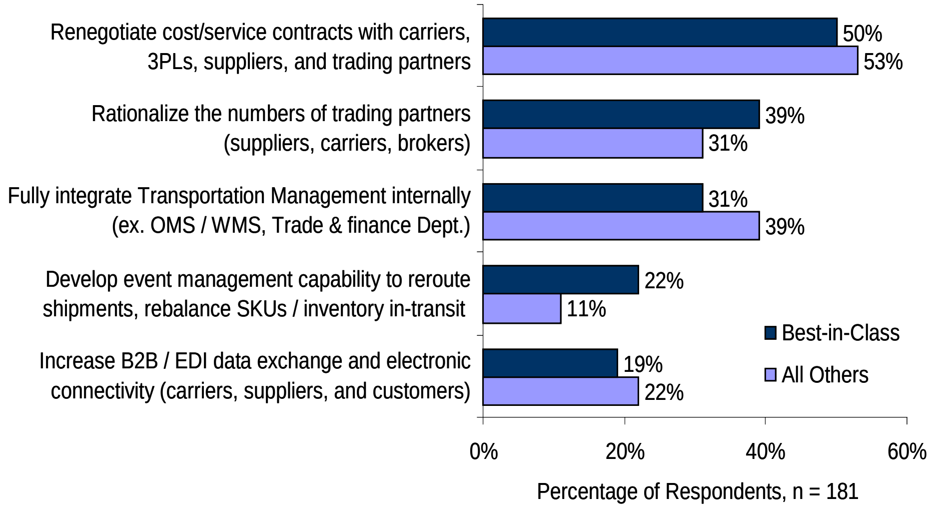
Figure 2: Top Actions to Improve Transportation



Source: Aberdeen Group, July 2010

During tough economic times, firms often need to take extreme measures and quick action. For the last several years, transportation contract renegotiations have been the top action. In fact, in last year's study of 180 companies we reported that the Best-in-Class were 1.48 times as likely as all others to renegotiate contracts with carriers (*Integrated Transportation Management: Improve Responsiveness with Real-Time Control of Execution*, October 2009).

Since most international and domestic transportation contracts are multi-year, it is no wonder then that Best-in-Class performance is markedly better than all others when it comes to controlling cost (spend ratio and spending trend). Currently, over 89% of the Best-in-Class leaders from this June survey reported decreasing transportation spend per unit handled versus last year. Other enterprises are now placing top priority on this goal as well with 53% of all others citing this as their top action (Figure 2).

The Best-in-Class are also much more likely to have improved and balanced service requirements while doing so. The ability of the Best-in-Class to sustain better service metrics (97.2% shipment integrity versus 87.3% for Laggards) is not due to a heightened focus on the integration initiatives and connectivity issues that make up the bulk of the Actions in Figure 2. This point is supported by the following:

- Best-in-Class companies (31%) placed less focus than all others (39%) in seeking to *fully integrate transportation management with internal functions*. There is, additionally, not much difference in focus when it comes to enhancing *connectivity* (B2B and EDI) where all groups fall within the range of 19% to 22%.
- In addition, as we shall see in the technology section, all groups have similar levels of technology adoption when it comes to automating the systems utilized to enable the various service, visibility and

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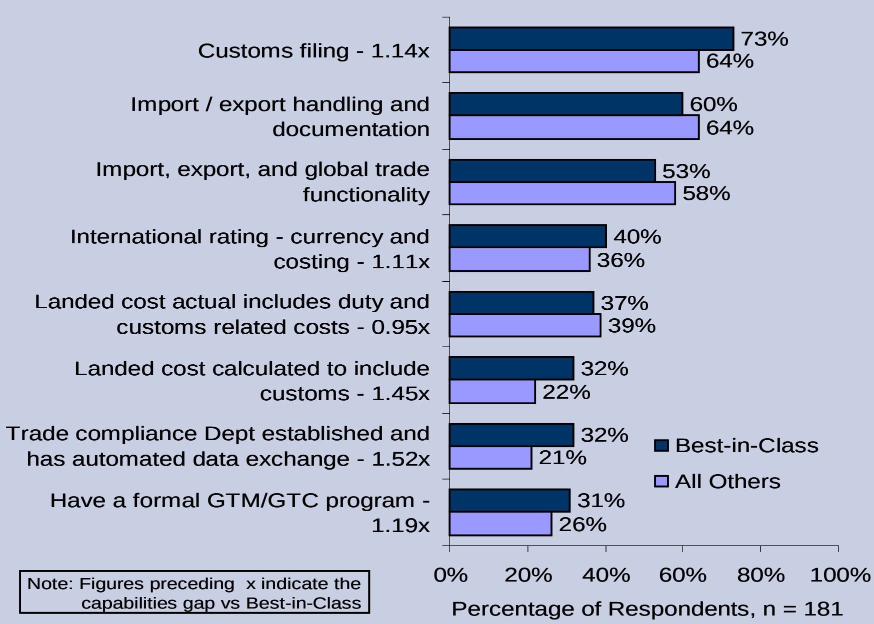
communication, and optimization initiatives companies have indicated as their actions above.

Overall, the focus on service and integration are similar between the Best-in-Class and all others, but the enterprise's ability to balance competing demands of cost versus service vary markedly in relation to the people, process and technology a given company has in place. This will be further discussed in Chapter Two.

Global Trade Management Strategies - Are you Complaint ?

Over 88% of the companies in this study have import and export trade volumes yet only 27% report that they have a formal Global trade Management (GTM) program. Today's global trade environment is clouded with an array of groups including government bodies, suppliers, carriers, trading partners, and internal departments that are demanding that companies remain compliant to new constraints and restrictions. These pressures are requiring companies to establish new automated functionality to connect, collaborate, communicate and integrate shipment and cost status (Figure 3) to new internal and external groups.

Figure 3 Automated GTM/GTM capabilities



Source: Aberdeen Group, July 2010

continued

Global Trade Management Strategies - Are you Complaint ?

Close to 70% of companies have solutions to automate "customs filings" with an additional 18% of remaining global companies filling in with manual solutions, or no solution at all. Even within the ranks of the Best-in-Class, which are 1.14-times as likely as all others to have customs filing, there is a 15% disparity with full filing compliance (73% from a base of 88%). More advanced features and capabilities quickly begin to diminish and only 32% of Best-in-Class (26% for all others) have a formal trade compliance department or a formal GTM/GTC program established. Companies of all classes are rushing to play catch-up in acquiring the tools and software that they need to address this large disparity between need and capability. Companies that are aware of their shortfall are clamoring to enhance or acquire additional capabilities and programs. With these findings in mind, we will explore this growing issue in detail in our upcoming September report on Global Trade Management.

Chapter Two: Benchmarking Requirements for Success

The right combination of people, process, and technology, and their level of adoption and integration will now be compared to the overall excellence an enterprise exhibits in its international transportation management. Through collaboration and internal and external integration, Best-in-Class companies have leveraged advanced supply chain visibility, global metrics and dynamic optimization tools to achieve near real-time control of execution.

Best-in-Class Results vs. Other Companies:

√ 1.74-times as likely to measure suppliers / carriers / 3PLs freight management performance monthly or more often

√ 1.36-times as likely to measure the company's own freight management performance monthly or more often

Outsourced Services for TMS

√ 13% to 20% off all companies seek to expand outsourced services for TMS

Beyond these levels:

√ 29% to 40% of all companies currently utilize outsourced or managed services for components of their transportation management solution

√ 28% to 39% of all companies currently outsource under a SaaS model for TMS components

Outsourced Transportation – Communication Driving Optimization

Founded in 1997, this food manufacturer is the largest egg product producer in North America. The company's product line includes egg products ranging from whole eggs to liquid eggs and powdered egg mixes along with a variety of potato products. Operations are conducted at nine production plants and four distribution sites throughout North America. The company has approximately 3,600 employees with revenue approaching $1.5 billion. With about 90% of their products shipping to points outside of North America, the company spends roughly $100M for international freight per year.

Recently, the Director of Transportation decided to take a look at the overall global transportation spend searching for ways to optimize its distribution network. The company decided to reduce its number of carriers and freight partners and to simplify its network. "Before we selected a primary Transportation Managed Services or TMS provider, it was fragmented and spread out in terms of total number of forwarders and their costs. We wanted to consolidate. Exporting to Europe and Asia and other regions has only grown more complex with both food and customs regulations to comply with so we decided to streamline as much as we could," said the Director of Transportation.

An overly complex distribution network was not the only issue that the company had to deal with to maintain steady growth. The slumping economy has prompted many shipping companies to cut back service greatly reducing the freight capacity available to the food and beverage industry. This reduced transportation capacity impacted both the company and the larger food and beverage industry in a number of ways, including rising transportation rates, more competition for open containers, and more variability in order fulfillment times. "Because there is uncertainty about container availability, the amount of variability and inconsistency in delivery time and shipment integrity has gone up. The competition for container slots has become a growing issue as well," continued the Director of Transportation.

continued

Outsourced Transportation – Communication Driving Optimization

The partnership with the TMS services provider combines the strengths of the established 3PL models with Software as a Service (SaaS) technology, business process outsourcing, global optimization, and consulting expertise. This unique combination of skills and services as able to complement the company's internal teams in the consolidation process and after deployment in the ongoing cost-service requirements of the overall global export operation.

To streamline the conversion, they did what a lot of top performing firms are doing – they decided to increase their level of communication throughout the organization and its stakeholders. "We decided that in the end it comes down to getting everyone, suppliers, customers, and employees on the same page. We began implementing more cross-function teams, increased the communication between our sales teams, the supply chain, and our clients," said the Director.

"Communications were the single largest challenge but once there was buy-in the overall project plan was quickly put in place and implemented at the company locations. The SaaS based deployment time was only a matter of months and the low cost of investment generated quick returns," continued the Director. "As customer expectations rise and trade volumes shift, we are happy with the consistency in both cost and service that our new collaborative TSM services solution provides in our global export challenge. The results have been an improved customer satisfaction and a steady growth in the bottom line."

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.

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Table 3: The Competitive Framework

	Best-in-Class	Average	Laggards
Process	Use LTL/TL consolidation to maximize mode shifting		
	74%	69%	63%
	Ability to respond in near real-time to events across multiple channels		
	64%	44%	50%
	Ability to make supplier-distribution network realignments (sourcing, mode, or routing shifts)		
	56%	38%	52%
	Ability to redirect in-transit flows and orders to balance higher demands or inventory imbalances in-transit		
	56%	52%	52%
	Ability to dynamically route international shipments (vs. static, itinerary-based routing)		
	50%	36%	52%
	Continuous moves (preplanned, coordinated inbound and outbound loads with carriers and suppliers)		
	47%	36%	44%
Organization	Customer service visibility of outbound freight schedules for improved order promising		
	75%	65%	60%
	Our staff is proficient in dynamically routing international shipments (vs. static, itinerary-based routing)		
	67%	44%	54%
	Centralized planning with local execution		
	42%	39%	29%
	Planning and execution are centralized		
	33%	33%	31%
	Trade compliance Dept established and has automated data exchange		
	32%	22%	18%
Technology	**Software**		
	▪ Data integration (EDI/VAN, portals, or B2B integrators) - 61% ▪ International TMS for import/export volume - 51% ▪ Global trade compliance management software (import, export, GTM) - 39% ▪ 'Best of Breed' commercial solution - 39%	▪ Data integration (EDI/VAN, portals, or B2B integrators) - 57% ▪ International TMS for import/export volume - 47% ▪ Global trade compliance management software (import, export, GTM) - 36% ▪ 'Best of Breed' commercial solution - 38%	▪ Data integration (EDI/VAN, portals, or B2B integrators) - 62% ▪ International TMS for import/export volume - 53% ▪ Global trade compliance management software (import, export, GTM) - 42% ▪ 'Best of Breed' commercial solution - 19%

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	Best-in-Class	Average	Laggards
Technology (cont.)	**Automated Features and Functionality**		
	▪ Customs filing - 73% ▪ Detailed customer- and location-level shipping constraints - 70% ▪ Event management / alerts - 62% ▪ Unified TL-LTL-parcel optimization capabilities - 60% ▪ Zone skipping support - 60% ▪ Dynamic assessment for shipments to go via common carrier vs. private fleet - 43% ▪ Continuous optimization - across inbound and outbound freight in one planning process - 43% ▪ Total Landed Cost forecasting and tracking - 42% ▪ International rating - currency and costing - 40% ▪ Enhanced support for delivery time and multi-period transportation plans - 37%	▪ Customs filing - 63% ▪ Detailed customer- and location-level shipping constraints - 24% ▪ Event management / alerts - 40% ▪ Unified TL-LTL-parcel optimization capabilities - 27% ▪ Zone skipping support - 33% ▪ Dynamic assessment for shipments to go via common carrier vs. private fleet - 8% ▪ Continuous optimization - across inbound and outbound freight in one planning process - 21% ▪ Total Landed Cost forecasting and tracking - 42% ▪ International rating - currency and costing - 31% ▪ Enhanced support for delivery time and multi-period transportation plans - 26%	▪ Customs filing - 65% ▪ Detailed customer- and location-level shipping constraints - 39% ▪ Event management / alerts - 38% ▪ Unified TL-LTL-parcel optimization capabilities - 17% ▪ Zone skipping support - 17% ▪ Dynamic assessment for shipments to go via common carrier vs. private fleet - 7% ▪ Continuous optimization - across inbound and outbound freight in one planning process - 7% ▪ Total Landed Cost forecasting and tracking - 31% ▪ International rating - currency and costing - 45% ▪ Enhanced support for delivery time and multi-period transportation plans - 31%
Knowledge and Performance Management	Measure company's own transportation management performance monthly or more often		
	64%	50%	45%
	Measure suppliers / carriers / 3PLs transportation management performance monthly or more often		
	59%	35%	31%
	Shared shipping schedules across our divisions / locations (e.g., backhauls, or closed-loop tours)		
	59%	56%	60%

Source: Aberdeen Group, July 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 demonstrates the following capabilities and enablers in process, organization, knowledge, technology, and performance management.

Process

Based on the Findings in Table 3, the following sections include the planning and execution related process gaps that companies need to focus on.

Savings Start with Strategic Transportation Planning

When it comes to the planning process it is important to properly consider the correct transportation mode as regional shipments are planned and scheduled. At 74%, Best-in-Class companies have the capability to consolidate loads between less-than-truckload and truckload (LTL/TL). This means that they are 47% more likely than all others to secure the best advantaged freight rates on regional shipment consolidations.

Even if a company has the process in place to mode shift from LTL to TL it is equally important to consider opportunities to reduce empty miles on a return trip by looking at regional inbound loads to and from carriers and suppliers. With visibility to these load requirements it is best to evaluate and plan "continuous moves" so that freight cost savings can be derived from the reduction of empty miles. Here again the Best-in-Class (47%) are 20% more likely than all others to take strategic advantage of continuous moves. Both these capabilities on the planning side contribute to the significant advantage in cost improvement of 8.7% that leading companies displayed compared to the prior year. These two process capabilities can result in significant improvements in load utilization and reductions in carbon footprints. They are frequently showcased by enterprises in support of corporate global sustainability goals.

Savings End with Dynamic Transportation Optimization

While it is important to optimize transportation during the planning process it is equally important to support dynamic optimization during execution. The remaining items listed (Table 3) under process all define the level of ability that exists for dynamic execution of transportation. In each case from 45% to 64% of all companies have these capabilities. Each item is ranked below along with the comparative percentage of advantage (compared to all others) exemplified by Best-in-Class companies:

- Ability to respond in near real-time to events across multiple channels - 39% more likely
- Ability to make supplier-distribution network realignments (sourcing, mode, or routing shifts) - 27% more likely
- Ability to redirect in-transit flows and orders to balance higher demands or inventory imbalances in-transit - 19% more likely

Multi-channel Formats

√ **64**% shipping direct-to-consumer

√ **60**% shipping to or through a traditional DC

√ **45**% shipping through 3PL or e-fulfillment provider

√ **45**% shipping through a break-bulk facility (i.e. cross dock, DC flowthru facility to either store or end customer)

√ **44**% shipping direct-to-store

√ **35**% shipping through a free port, freeport zone, or transition point for customs

√ **15**% other capabilities

- Ability to dynamically route international shipments (versus static, itinerary-based routing) - 19% more likely
- Ability to support DC bypass (orders pre-labeled and shipped straight to store, consumer, or via crossdock) - 8% more likely

A multi-channel and multi-format logistics capability is a key strategic advantage that in some cases diminishes the capability of an enterprise to compete for new business. A list of usage by channel and format is ranked in the sidebar. It is important that enterprises upgrade the capabilities that they offer (either themselves or through 3PL or LSP providers) so that they remain flexible and competitive in the logistics formats they support.

The process capabilities and advantages explained above enhance the companies' ability to meet or beat cost and the service metrics (reducing transportation spend ratio and transportation spending trend while monitoring and delivering on shipment integrity goals).

The key takeaway is that Best-in-Class companies are more heavily embracing end-to-end process capabilities like more frequent and robust use of supply chain visibility and collaboration both internally and externally and both more advanced and near real-time deployment of dynamic transportation optimization in execution. These capabilities enhance the companies' ability to meet or beat cost and the service metrics (reducing transportation spend ratio and transportation spending trend while monitoring and delivering on shipment integrity goals).

Organization

Organizational alignment and internal collaboration and integration with other departments are the most important aspects of balanced performance to transportation management.

The Transportation Management Group has Centralized Planning

An effective organizational structure is the key to the success of any transportation initiative. Almost 70% of all companies are organized with centralized planning, with about half those with central planning (37%) executing those plans locally (and the other 33% executing centrally). However, while the Best-in-Class do not differ in the percentage with a central planning function, 42% of them are executing locally - 10% more than their peers. Having centralized planning allows for consistency in data sharing and dynamic optimization enterprise-wide. We shall see that having a global visibility to shipment events and costs and modes can facilitate optimization during execution (consolidated LTL/TL and continuous moves) as well as support renegotiation efforts focused on total buy programs. Having local execution allows for more responsive and direct accountability for execution to those closest to the customer. Having a vested interest and direct hand in customer facing activities such as shipment integrity builds ownership and commitment to excellence.

Inter-departmental Data Exchange

Sixty-one percent (61%) of all respondent companies have automated data exchange (orders/items, shipment status and cost) across the supply chain organization (Table 4). Relative to the 2009 levels, the number of companies automating this information-sharing with other departments has increased by double-digits and, likewise, the number of departments with which they share is also on the rise (Table 4 shows the eight additional departments that were included in this data exchange).

In related supply chain planning studies, Best-in-Class companies have demonstrated higher levels of alignment of supply chain tactics with the corporate goals of the C-level suite of organizations. In addition, Best-in-Class companies have demonstrated greater integration of adjacent departments like finance, procurement and sales into the S&OP processes.

Table 4: Automated Exchange of Transportation Data with Other Departments

Department	Oct 2009	June 2010		
	n=180 Totals	n=181 Totals	n=37 Best-in-Class	Best-in-Class vs. Others
Supply Chain	61%	61%	68%	+ 13%
Finance	49%	50%	59%	+ 23%
Warehousing	54%	47%	50%	+ 9%
Third-party partners (3PL, etc.)	43%	44%	44%	-
Sales	29%	35%	44%	+ 38%
Manufacturing	18%	28%	38%	+ 46%
Procurement	32%	38%	38%	-
Customer support	29%	36%	36%	-
Trade compliance	13%	23%	32%	+ 52%

Source: Aberdeen Group, July 2010

During this study, as part of the execution processes, 50% of responding companies reported data sharing with finance, and 35% reported sharing data with sales - the two most tightly integrated by the S&OP or integrated business planning process. With the level of connectivity increasing over time, organizations have greater visibility, by and with, the finance department (with corresponding tighter controls on cost) and closer integration with sales leading to gains in customer service. Best-in-Class organizations have widened the gap with their peers by +23% and +38% respectively.

Other areas of differentiation for the Best-in-Class are in trade compliance (32%) and manufacturing (38%) organizational interaction where they have widened the gap with their peers by +52% and +46% respectively.

Visibility and data connectivity are necessary requirements to feed the dynamic optimization process. And, indeed, they were identified in the process section as significant differentiators toward improving cost and service metrics in today's dynamic transportation environment. Referring to Table 3 in the organization section we find Best-in-Class companies are prepared to respond to such changes where they are 15% more likely than Industry Average and 25% more likely than Laggard companies to enable *customer service visibility of outbound freight schedules for improved order promising*. They are also more prepared organizationally to react to the visibility they gain having staffs that are 24% to 52% more likely to be "*proficient in dynamically routing international shipments (vs. static, itinerary-based routing)*" than the staffs of the Industry Average and Laggard companies respectively.

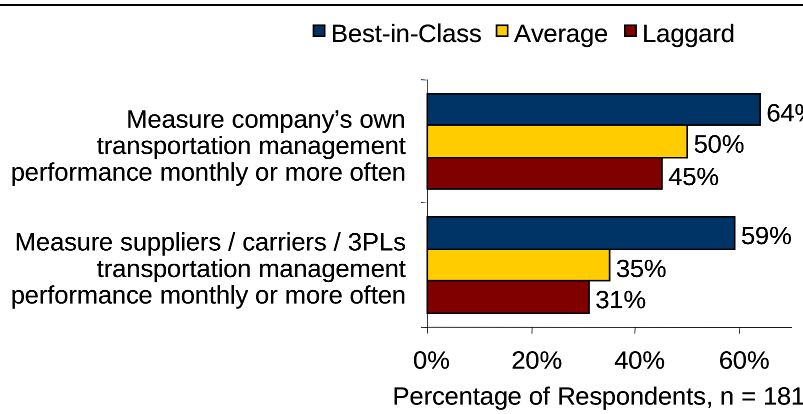
Knowledge / Performance Management

Today's leaders and Best-in-Class transportation managers are looking beyond basic process implementation and organization structure - they are making sure that performance sharing and measurement is a focus. In the process section, we highlighted the advantages of shared visibility to inbound and supplier shipping schedules for the opportunity to maximize load consolidation and closed loop tours. In Figure 2, we see that companies (31% to 39%) overall seek to "fully integrate" transportation management with other internal functions. How are they doing?

Table 4 introduced us to the data exchange capabilities that companies have now and their connectivity or alignment with internal departments. Figure 4 takes things a step further and shows the level of data sharing and measurement both across divisions and internal groups; and across external groups like carriers, 3PLs, and suppliers in their extended international supply chains.

> "At the moment planning is not connected to inbound receiving, but it's critical for our planners to be able to view incoming shipments. We began implementing a company-wide Enterprise Resource Planning (ERP) solution last year. Our visibility is becoming more consistent as data becomes more consistent. We also now have visibility into the requested delivery date and the committed supplier delivery date."
>
> ~ Sr. Logistics Director, Global Manufacturer

Figure 4: Performance Measures and Frequency



Source: Aberdeen Group, July 2010

For transportation leaders, the internal measurement performance gap is a very significant advancement (Best-in-Class executives are 1.3-times to 1.4-times as likely as all others to measure monthly or more often) when it comes to connecting and collaborating with their most important allies, their own teams, and divisions. Even though 56% to 60% of all maturity classes have nearly equal focus on s*hared shipping schedules across our divisions / locations* (Table 3, Knowledge Management), they are not at all equal when in comes to performance management. As we discovered earlier it takes more than shared data and visibility for an enterprise to maximize the opportunity to plan or execute load consolidation, backhauls and closed loop tours. The Best-in-Class companies have people, process, technology and, yes, superior performance management to their credit. They are using a combination of all these tools to seize strategic advantage and contribute to both cost/service and sustainability goals and they are widening the gap in overall performance.

Transportation Optimizer Allows 3PL to Secure New Business

This midsized 3PL, headquartered in Memphis Tennessee, is a full-service transportation and logistics management company (LSP). The company operates as a third party logistics provider (3PL) and executes transportation services for a variety of clients and ships a wide range of products; everything from food confections to building materials. In 2009, this 3PL had transportation spend of over $200 million. Today, the company operates more than 26 agent offices in the US and Canada.

During the recent economic downturn, many 3PLs were cutting cost wherever possible, and even reduced their workforce in an effort to reduce costs. But this 3PL took a different approach; they decided to invest in the business. They partnered with a best-of-breed Transportation Management Software (TMS) provider and implemented a full service software package that greatly enhanced their ability to monitor and manage large volume business both domestically and internationally. “With this new system, we now are able to provide full visibility, handle a lot more capacity, and we are able to stay efficient and cost effective,” said the Vice President of Logistics and Customer Care.

Using this system, the 3PL was able to move away from older tracking methods which were severely limiting its visibility, analytical, and customer service capabilities. The new system allows for more flexibility in handling clients of different size and maturity levels.

continued

“We recently landed a sizeable account that operates two large production facilities with over $25 million in freight spend. We couldn’t have landed this account without the ability to analyze current operations and compare to baseline; and simulate and tweak variables. This system was our ticket to the game – under our old system we could not have conducted the rigorous transportation consolidation analysis the client required…For us, not having a system like this in years past has been a large barrier of entry. In the end, the system streamlines our operations and allows us to highlight our real competitive advantage: our people."

~ Vice President of Logistics and Customer Care, Mid-sized 3PL

Transportation Optimizer Allows 3PL to Secure New Business

"Large companies are not required to use our system, they have their own systems and can use the various components of execution or optimization from our SaaS platform as they see fit. Some of the smaller clients have no internal capacity (or want to use our system without having the burden of hosting and maintaining the system). Either way, we are now able to handle these clients and remain both competitive and profitable," explained the Vice President.

The new system not only led to internal improvements, it allowed the 3PL to compete for larger accounts and compete with bigger 3PLs on a cost and services basis. "We recently landed a sizeable account that operates two large production facilities with over $25 million in freight spend. We couldn't have landed this account without the ability to analyze current operations and compare to baseline; and simulate and tweak variables. This system was our ticket to the game – under our old system we could not have conducted the rigorous transportation consolidation analysis the client required. Now that we are in the game; our skilled labor force and years of experience can really shine through. For us, not having a system like this in years past has been a large barrier of entry. In the end, the new system streamlines our operations and allows us to highlight our real competitive advantage: our people," the Vice President said.

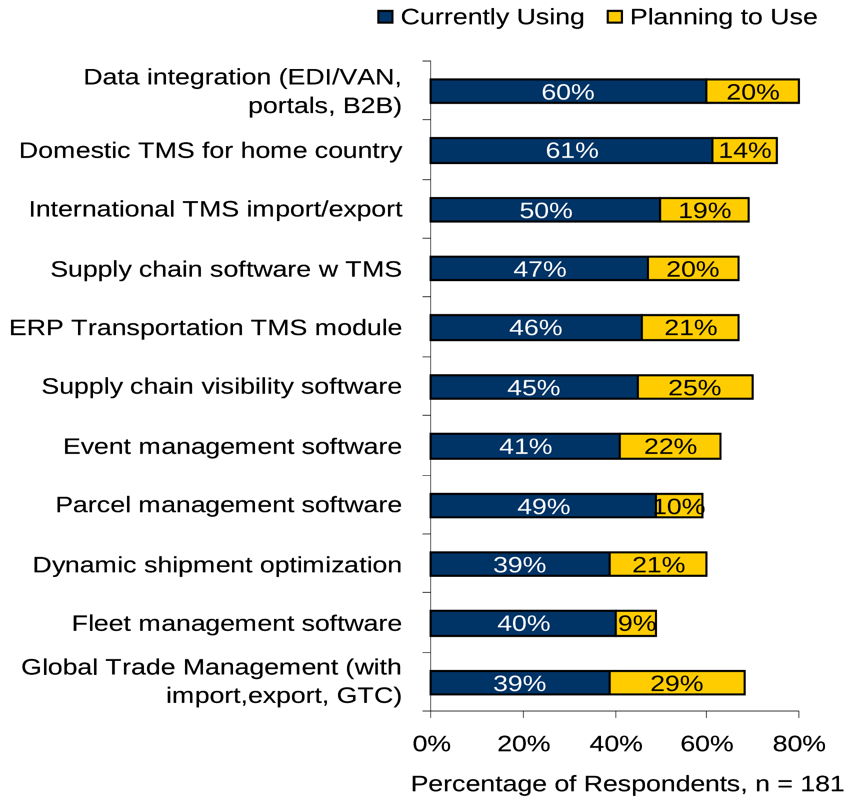
Technology

When it comes to bringing together best-practices in process improvements with the technology available in the market today, investment in transportation-related software has largely matured and is poised to match business need in virtually every aspect of international transportation. With the exception of global trade management software (see Strategy insight for GTM, Figure 3) which is under adopted by most companies the larger need for companies in each class is properly extending and utilizing the technology and features their existing software packages and tools provide- (more on this below).

Current utilization of technologies (the blue bars in Figures 5) range from a low of 40% (fleet and global trade compliance) to a high of 61% (domestic TMS and BI). Future or planned adoption figures (the gold bars) range from a low of 9% (fleet) to a high of 29% (global trade compliance). In each case the total overall usage following planned adoption on average will increase the existing installed customer base on each solution component by almost an additional 20% in the next 12 months and beyond.

The bigger story is in enhancements or extensions of functionality to software and tools already in use. Here nearly 50% of current users those illustrated by the blue bars, are planning enhancements. This implies that companies, many of which have made sizable investments in technology, plan to extend their investment or at least deploy untapped features in the software they have, resulting in an average overall 25% increase in usage, in the next 12 months and beyond.

Figure 5: Basic Transportation Software/Tools in use



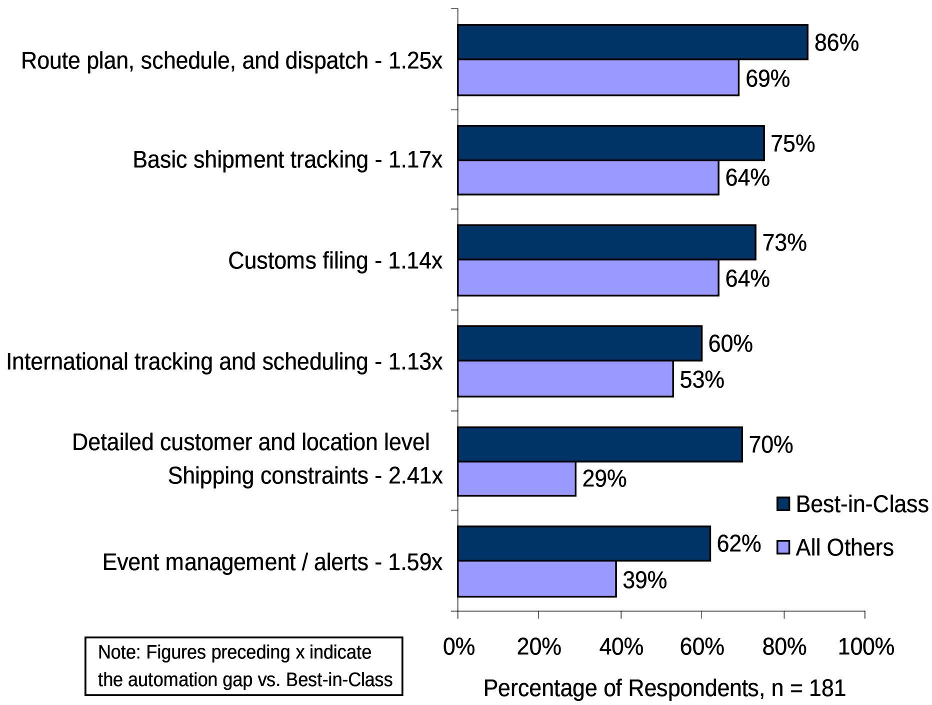
Source: Aberdeen Group, July 2010

Most of today's transportation managers are putting time and investment into automating all of their processes, from domestic and international TMS (tendering payment electronically, sharing shipping schedules, routing and scheduling) to fleet and parcel. A doubling of focus into the next levels of the capabilities means investigating advanced solutions for larger end-to-end supply chain integrations with farther reaching levels of capabilities to do these functions and much more. Examples here include fuller investments in event management software, dynamic optimization software and global trade compliance software (where planned investments and enhancements extend current usage by from 30% to 50%).

It should be noted that while the Best-in-Class are leveraging and balancing cost and service, they do not show greater levels of adoption over other companies when it comes to technologies deployed or in planned adoption. This implies that technology by itself is incomplete without other differentiators; first, you must have good processes, people with process knowledge, and visibility. Automating a bad process does not improve performance. Likewise, you cannot execute or optimize in an agile and responsive fashion in the absence of clear visibility.

Once the core process capability is in place, automating a holistic and balanced process is critical for success. Those that have been able to capitalize on technology to extend and advance key processes under dynamic optimization and real-time execution underscore the point. The following two figures will illustrate areas where the Best-in-Class are leveraging the technologies they have in common with the other classes in order to optimize process and performance.

Figure 6: Automating Basic Transportation Events

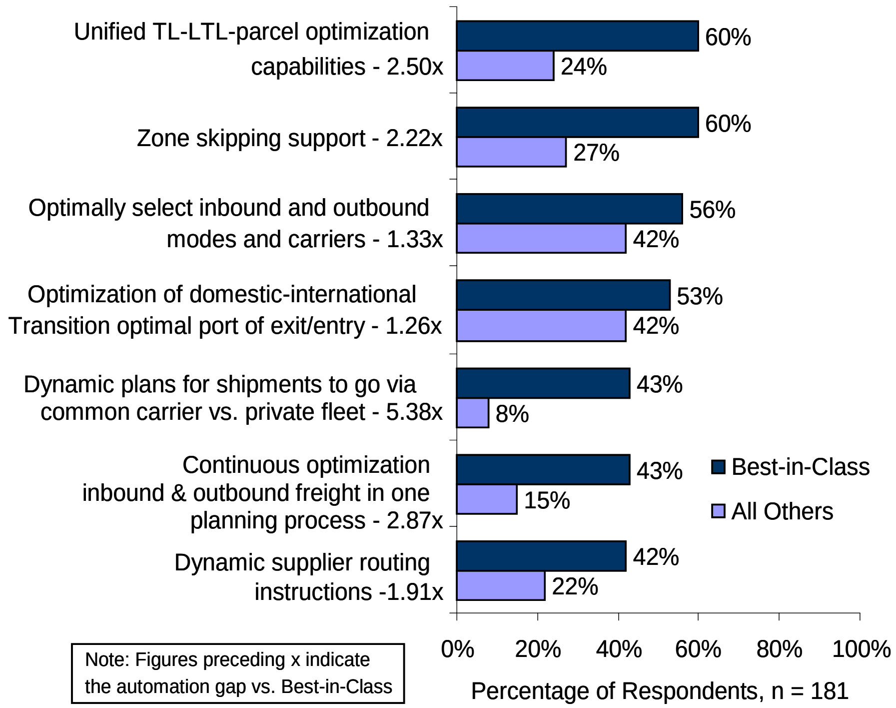


Source: Aberdeen Group, July 2010

As illustrated in Figure 6, survey results show that the firms enjoying Best-in-Class performance are much better at automating basic tasks and standard features in their transportation solution - they are getting much more value from the technologies they have than their peers . Indeed, the findings above indicate they are anywhere from 1.13-times to 2.41-times as likely as all others to automate basic daily tasks and high volume features. Industry Average and Laggard companies should evaluate the hidden features of their software and tools so that they can close the performance gap with these industry leaders.

As illustrated in Figures 7, survey results show that the firms enjoying Best-in-Class performance shared several common characteristics, including on-the-fly decision-making and near real-time visibility with the optimization of execution within their processes.

Figure 7: Automating key Optimization Events



Source: Aberdeen Group, July 2010

The focus of survey respondents (with the largest relative planned adoption) is on gaining visibility and extending features and processes to more dynamically plan and react to the numerous supply chain events of today's global supply chain. Those that have been able to capitalize on technology to extend and advance key processes in real-time and involve more groups internally and externally are positioned to better leverage automation of these processes. Automation and exception management allows the organization to cut time and resource requirements from any process and leads to shorter transaction times and cost savings. But integration and data visibility is not enough, companies must build out dynamic optimization capabilities (like those additional areas listed in the sidebar) if they ever expect to take advantage of load consolidations, zone skipping, and dynamic hub optimization during planning or to be effective in real-time control of execution.

In general terms, regardless of class, such focus can improve on-time delivery, reduce expediting costs, and reduce transportation spend year-over-year. Best-in-Class companies have been able to effect double digit freight rate reductions while meeting service requirements at the highest levels even though confronted with a shifting global international market.

Best-in-Class Optimization Enablers vs. All Others

The Best-in-Class are:

√ **1.91**x as likely to automate Dynamic supplier routing instructions

√ **1.86**x as likely to automate Zone skipping for parcel

√ **1.59**x as likely to automate Spot bid capability

√ **1.43**x as likely to automate Country skipping support

√ **1.14**x as likely to automate Suppliers and inbound carriers' information exchange

√ **1.14**x as likely to automate Support for dynamic hub optimization

√ **1.11**x as likely to automate Total Landed Cost forecasting and tracking

√ **1.11**x as likely to automate International rating - currency and costing

√ **1.08**x as likely to automate Optimization tools to effect near real-time control

Note: Figures preceding x indicate the automation gap of Best-in-Class

Taking Optimization and Technology to the Next Level

No one ever said that technology or systems can solve every problem. To the contrary, it is one's ability to streamline and optimize transportation processes and building integration to the border organization that is more critical to operational success than the technology one puts into play. These points are illustrated by the following Best-in-Class differentiators:

- **Dynamic execution**. The Best-in-Class are 1.26 times as likely as all others to *develop event management capability to reroute shipments, rebalance SKUs / inventory in transit* (22% vs. 11%)
- **Optimization.** The Best-in-Class are 1.25 times as likely as all others to *rationalize the numbers of trading partners, suppliers, carriers, forwarders, brokers* (39% vs. 31%)

Today's transportation organizations are being affected on all sides by rising costs and shifting requirements. Doing business in this global economy is creating new challenges for all classes of transportation managers from Laggard to Best-in-Class. They all have similar levels of technology in place for transportation, however they are being challenged to extend beyond the basics of transportation. For both domestic and international transportation, leading companies are beginning to create and extend automated processes to address advanced capabilities like dynamic optimization and the daily use of BI tools to measure results and communicate and collaborate on a near real-time basis. They're relying on solution providers to give them more flexibility and better visibility and carriers and trading partners to provide accurate and timely information. They need help from the solution providers that can provide insight into new functionality and applications (or more importantly to uncover those features that are hidden under the hood within the software and tools a company has deployed).

Today's leaders are pressed on all sides to make decisions more quickly than the old manual systems can provide. Visibility to historical performance, real-time costs, simulated changes, pipeline inventory and GTM/GTC constraints are important for each and every shipment in the global marketplace. On a positive front, interconnected systems like ERPs, B2B gateways, and SaaS platforms are there to extend data and workflow across both global and internal supply chain networks. All these steps in proper combination are allowing for more cost-effective integrated, and, yes, optimized supply chains.

Technology alone is not enough; combining process best-practice, flexible technology, and dynamic optimization can not only solve the problem, but prevent other problems in the overall end-to-end supply chain. That should be the goal for today's solution providers and practitioners.

Chapter Three:
Required Actions

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

Best-in-Class Capabilities:

√ 2.6 times as likely as all others to develop event management capability to reroute shipments, rebalance SKUs / inventory in transit (22% vs. 11%)

√ 1.25 times as likely as all others to rationalize the numbers of trading partners, suppliers, carriers, forwarders, brokers (39% vs. 31%)

Laggard Steps to Success

- **Gain visibility across operations - knows where you are.** When it comes to data sharing and measuring performance, Laggard companies are far behind. Only 38% of Laggards have automated event management / alerts and , hence, close to 60% of them are running blind. Indeed, only 10% indicate that they are measuring internal management performance on a weekly or more frequent basis. Only 16% measure suppliers this frequently. It is difficult to update strategies and plans without current data and continuous moves and mode shifting cannot be planned without shared visibility to data.
- **Shipment integrity is paramount** for both Best-in-Class and Industry Average companies - the service level of "perfect orders" (complete and on-time) averaged over 96%, whereas the average Laggard company was able to deliver a perfect order only 87% of the time. Yet Laggard companies have virtually the same technology enablers as Industry Average and Best-in-Class companies. Don't drop the ball on service. Look at your process and your disciplines first and how they differ from the Best-in-Class, then transform through automation and service excellence during execution.
- **Map out processes first.** Overall the Laggard company is behind in key processes fundamentals. They cannot execute or optimize what they cannot plan. If you are following the first two steps, gaining visibility across operations and improving shipment integrity, now you can proceed to the next step. Learn from the examples of the Best-in-Class, streamline your transportation process to incorporate actionable approaches to the service and cost areas where you are deficient and begin to build out you capabilities to optimize more globally (50% of Laggard companies execute locally only).

Industry Average Steps to Success

- **Continue to utilize technology for automation and visibility.** Because most Industry Average companies have mature levels of investment in technology and solutions (like TMS solutions) they have taken the first steps into automating processes to help with the planning and then the dynamic execution of transportation decisions. As we stated in the technology section, the Best-in-Class are several times as likely to use these advanced Supply Chain Visibility and capabilities or to leverage dynamic optimization tools. This will enhance your ability to make supplier-distribution network realignments (sourcing, mode, or routing shifts) where only 38% have this ability today vs. 57% of the Best-in-Class. Utilizing tools and technology to automate processes and create greater collaboration and visibility can go a long way to helping tighten control and deter the rising costs of transportation as these organizations drive for success.

- **Plan for investment.** It's difficult for any organization to recommend or implement changes, specifically ones that may require technology adoption and integration, without an effective ROI analysis. The largest group of respondents (at 50%) may have the greatest difficulty in getting approvals to invest since on some metrics they are approaching Best-in-Class status (shipment integrity for instance). Load consolidations and LT/TL modes shifting are key areas of benefit that your company should build into its cost benefit analysis - leading companies are 2.5 times as likely to have this capability. These are examples where the Best-in-Class are performing dynamic optimization and reaping performance benefits. Remember to: look to performance gaps between Best-in-Class to identify savings areas and their magnitude; get outside the box to identify savings in upstream or down stream organizations; and baseline a current and future state in a formal ROI model. If the ROI is compelling, management approvals can follow.

"Communications were the single largest challenge but once there was buy-in the overall project plan was quickly put in place and implemented at the company locations. The SaaS based deployment time was only a matter of months and the low cost of investment generated quick returns…As customer expectations rise and trade volumes shift, we are happy with the consistency in both cost and service that our new collaborative TSM services solution provides in our global export challenge. The results have been an improved customer satisfaction and a steady growth in the bottom line."

~ Director of Transportation, Large Food Manufacturer

Best-in-Class Steps to Success

- **Embrace GTM process solutions.** Over 40% of Best-in-Class companies are aware that their solutions will not meet the needs of their business for GTM/GTM in the future. They are planning to enhance or adopt new functionalities in the next 12 months and beyond. The rising costs and changing landscape of transportation management requires companies to make strategic decisions more rapidly and to transform. The systems they use must also provide new levels of visibility and dynamic optimization to help execute on new strategies. Out-of-the box isn't enough. Best-in-Class companies should work with their TMS or GTM solution providers to offset the cost of new functionality and needs, by working with them to bring more flexibility to the market and by leveraging the functionality they already have, or that is hidden in an existing application. By partnering with solution providers a company can extend functionality and enhance performance
- **Global visibility and dynamic optimization is on the move.** Between 41% and 50% of Best-in-Class companies have attributed benefits to visibility (shipment status and landed cost) within their supply chains, and about the same percent have achieved reduced freight costs through improved shipment optimization and shipment

consolidations. Best-in-Class Companies are connected to both other departments internally and externally, but there are always new suppliers, trading partners and customers to serve. To be truly effective and remain Best-in-Class, companies must provide an enhanced level of visibility, at a minimum, and extend it to other areas such as inbound transportation. While outbound schedules often change and it's important for workflow and resource balancing to have those schedules visible, it's also important for inbound delivery schedules. Inventory in the pipeline and in-transit is as important as inventory in the warehouse. From an inbound to outbound perspective across the global supply chain visibility with dynamic optimization of execution is not going away. Supply chain excellence requires that leaders both meet and embrace it.

Collaboration: The Key to Transformation

The current advantaged freight rates that most companies have secured during the down economy will not last. It is up to the Supply Chain Executive to find process and automation opportunities and to build on the tools they have in-house and through outsourcing alliances to sustain their cost and service - or to improve them. These strategies will continue to separate the Best-in-Class from the rest of the pack because understanding all aspects of integration and optimization is the key to process improvement and transformation.

After years of manual processes and documentation, companies are coming to grips with the resources, time, and costs associated with trying to track and analyze shipments and process them effectively with agility and precision. The global shifts in trade volumes and sourcing/mode routing options are impacting contracts and negotiations that once seemed stable on a yearly basis. The global economy and the global supply chain have intersected; and it is no longer acceptable to wait for fair weather to combat costs and stay competitive.

Today's leaders must begin to embrace communications and collaboration because there are so many groups and connection points in the multi-tier end-to-end supply chain. Transportation leaders will not try to do things alone, they will communicate and collaborate to uncover the right combination of people and technology to support process improvements. Optimization will be complete when all these partners and linkage points are integrated. Collaboration and communication are the tools needed to transform and dynamically optimize transportation activities across the end to end supply network.

Appendix A:
Research Methodology

Between September and July 2010, Aberdeen examined the use, the experiences, and the intentions of 181 enterprises using transportation management solutions in a diverse set of enterprises.

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

Responding enterprises included the following:

- *Job title:* The research sample included respondents with the following job titles: CEO / President / EVP / SVP (9%), VP (6%); Director (19%); Manager (40%); Engineer/staff (13%); and other (13%).
- *Department / function:* The research sample included respondents from the following departments or functions: procurement, supply chain, or logistics manager (74%); sales and marketing staff (9%); Operations and Finance Staff (7%); senior management (6%); and IT manager or staff (4%).
- *Industry:* The research sample included respondents from: Retail and Apparel (11%); Transportation and Logistics (10%); Wholesale Distribution (9%); Industrial Manufacturing (10%); Food and Beverage (6%); Consumer Packaged Goods (CPG) (6%); and Automotive (6%).
- *Geography:* The majority of respondents (69%) were from North America; Europe (19%) Asia-Pacific region (9%) and other (3%).
- *Company size:* Twenty-one percent (21%) of respondents were from very large enterprises (annual revenues above US $5 billion); 25% of respondents were from large enterprises (annual revenues from US $1 billion to US $5 billion); 32% were from midsize enterprises (annual revenues between $50 million and $1 billion); and 22% of respondents were from small businesses (annual revenues of $50 million or less).
- *Headcount:* Thirty percent (30%) of respondents were from very large enterprises (headcount greater than 10,001 employees); 21% of respondents were from large enterprises (headcount between 2,501-10,000 employees); 32% were from midsize enterprises (headcount between 101 and 2,501 employees); and 17% of respondents were from small businesses (headcount between 1 and 100 employees).

Study Focus

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

√ The degree to which TMS is deployed in their operations and the financial implications of the technology

√ The structure and effectiveness of existing TMS implementations

√ Current and planned use of TMS and related technologies to aid operational and promotional activities

√ The benefits, if any, that have been derived from transportation management initiatives

The study aimed to identify emerging best practices for technology usage and process improvement in transportation organizations, and to provide a framework by which readers could assess their own management capabilities.

Aberdeen Group
A Harte-Hanks Company

Table 5: The PACE Framework Key

Overview
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: **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) **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) **Capabilities —** the business process competencies required to execute corporate strategy (e.g., skilled people, brand, market positioning, viable products / services, ecosystem partners, financing) **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)

Source: Aberdeen Group, July 2010

Table 6: The Competitive Framework Key

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

Source: Aberdeen Group, July 2010

Table 7: The Relationship Between PACE and the Competitive Framework

PACE and the Competitive Framework – How They Interact
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.

Source: Aberdeen Group, July 2010

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Appendix B: Definitions: Four Categories of Transportation

Domestic TMS functionality includes the ability to rate and route shipments, optimally select inbound and outbound modes and carriers, tender shipments, and support basic shipment consolidation, multi-stop routes, order splitting, and freight audit.

Advanced functionality can include such aspects as: (1) WMS-OMS interoperability, dock appointment scheduling, transportation procurement and payment, (2) fully integrated advanced shipment visibility with near real-time control, including advanced scorecarding, event management and analytics, (3) carrier and trading partner collaboration (either embedded or assessable via EDI) to support inbound supplier portals with shipping instructions and statuses, common carrier-private fleet coordination, and multi-shipper continuous move inbound-outbound interactions, and (4) delivery constraint and dynamic shipment costing to include automated support for dynamic hub optimization, multi-origin to multi-destination routing and consolidation, multi-leg and multi-mode optimization, zone skipping, dynamic supplier routing instructions, and enhanced support for delivery time and multi-period transportation plans and schedules subject to lane and mode capacity and item inventory availability.

Basic international TMS functionality includes support for ocean or air procurement, contract management, allocation management, rating, execution, and freight audit in addition to the capabilities that exist in a domestic TMS.

Advanced international TMS functionality can include bid optimization, multi-leg and multi-mode optimization, dynamic shipment costing, etc. in addition to the capabilities that exist in a domestic TMS.

Basic fleet routing functionality includes route planning, scheduling, and dispatch.

Advanced fleet routing functionality can include detailed street-level planning and scheduling, constraint-based appointment self-scheduling, continuous optimization, drop and hook optimization, strategic fleet design and territory planning, mobile applications, automated vehicle location, asset and driver management, and service level optimization.

Basic parcel functionality includes parcel rating, carrier selection, and manifesting from multiple providers.

Advanced parcel functionality includes zone skipping support, country skipping support, enterprise-wide parcel shipment solutions, detailed customer- and location-level shipping constraints, and unified TL/LTL-parcel shipment optimization capabilities

Appendix C: Related Aberdeen Research

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

- Integrated Transportation Management: Improve Responsiveness with Real-Time Control of Execution, October 2009
- Transportation Procurement and Payment: Gain Control over Spend, February 2010
- The International Transportation Management Benchmark Report; October, 2007
- Achieving Closed-Loop Transportation Spend Management; January, 2008
- Tending the Fleet: Paving New Roads with Effective Fleet Management September, 2008
- The Secret SaaS: On-Demand Supply Chain Management; December, 2008
- No Excuses! Why Optimizing Transportation Management is Within the Reach of Every Company; July, 2008

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

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