B2B Integration and Collaboration

Trading Partner Enablement for Multi-Enterprise Supply Chains

March 2010

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Aberdeen Group
A Harte-Hanks Company

Executive Summary

Aberdeen benchmarked the involvement of 130 companies regarding B2B integration and collaboration initiatives with a specific emphasis on their trading partner recruitment, enablement, ongoing maintenance, and performance measurement related activities. Seventy-four percent (74%) of respondents indicate that B2B integration and collaboration is a strategic initiative in their company. Thirty-seven percent (37%) of companies have increased their focus on B2B integration and collaboration during the recent recessionary economy in 2009 whereas 25% of companies have reduced their focus.

Best-in-Class Performance

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

- 97% of orders delivered to customers complete and on-time

- 95% of orders received from suppliers complete and on-time

- Average cash conversion cycle - 43 days

Competitive Maturity Assessment

Survey results show that the firms enjoying Best-in-Class performance shared several common characteristics. Specifically, they are:

- 5-times more likely than all other companies (Industry Average and Laggards combined) to indicate that trading community management has a mission critical impact to their organization

- 1.3-times more likely than all others to perform regular surveys of their supplier base to identify the extent of their involvement in B2B integration and collaboration

- 2.2-times more likely than all others to have the ability to measure supplier performance over a period of time

Required Actions

In addition to the specific recommendations in Chapter Three of this report, to achieve Best-in-Class performance, companies must:

- Create a collaborative network with key customers

- Establish the ability to measure supplier performance over a period of time

- Segment the trading partner base

- Expand the trading community to non-critical suppliers and customers

"In an environment with historically stable demand and a smaller number of key suppliers compared to other industries, it has been difficult to get the buy-in from supply chain stakeholders to deepen supply chain integration. Therefore, articulating the Return on Investment (ROI) on supply chain systems that enable supply chain integration has been a challenge. However, today we recognize that as a company with distributed operations, we need to constantly re-evaluate the requirements of our multi-enterprise supply chains and continue to develop and improve our supply chain processes, enabling us to deliver more value through the supply chain organization. This means moving towards a more integrated supply chain – both upstream and downstream."

~ Eamonn O'Brien, Vice-President, Operations, Europe, Sunrise Medical Limited

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Chapter One:
Benchmarking the Best-in-Class

Business Context

In today's cost-constrained business climate, companies are continuing their journey towards outsourced supply chains. In such a process outsourcing-intensive environment, it has become difficult for companies to stay informed and in control of every stage of their supply chains, as the responsibility had been spread throughout the network. B2B integration and collaboration with trading partners is an area of great interest for companies trying to manage their Demand-Supply Networks (see Aberdeen Group's March 2009 report, *Integrated Demand-Supply Networks: Five Steps to Gaining Visibility and Control*.

Aberdeen benchmarked the involvement of 130 companies regarding B2B integration and collaboration initiatives with a specific emphasis on their trading partner recruitment, enablement, on-going maintenance, and performance measurement related activities. Seventy-four percent (74%) of respondents indicate that B2B integration and collaboration is a strategic initiative in their company. Thirty-seven percent (37%) of companies have increased their focus on B2B integration and collaboration during the recent recessionary economy in 2009 whereas 25% of companies have reduced their focus.

Key Business Pressures

When asked about the key pressures they are facing with respect to B2B integration and collaboration, respondents identified the top three areas that are directly related to trading partner recruitment, enablement, on-going maintenance and performance measurement related activities (Figure 1):

- **Escalating customer service demand (48%).** Due to decreasing product lifecycles and proliferation of SKUs, the challenges being faced by retailers, distributors, and other elements of the demand network have increased. This has, in turn, resulted in the demand network wanting improved customer service in all respects - lead-times, pricing, product innovation, and sustainability. In order to keep up with the pace of changing customer demand, it is critical to have a trading partner community established. This will ensure that all changes in customer trends will be communicated rapidly to the next level in the demand-supply network (e.g., from retailer to CPG manufacturer)

- **Increased complexity of global business network (45%).** Due to the expansion of the supply chain on both the buy side and the sell side, complexity has risen in multiples and supply chain visibility has become a critical factor. One of the building blocks of establishing visibility across the entire demand-supply network is the ability to establish a flow of information at the interface points –

Fast Facts

√ Forty (40%) percent of respondents indicate that B2B Integration and Collaboration is a very strategic initiative for their company

√ Thirty-four (34%) percent indicate that it is a somewhat strategic initiative for their company
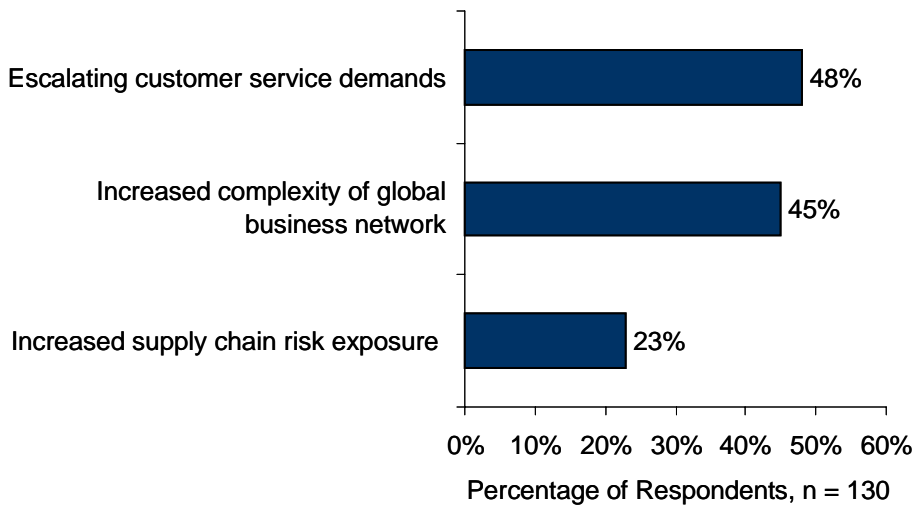
Nature of Respondents

√ Original manufacturer (35%)

√ Contract manufacturer (6%)

√ Brand manager (i.e. virtual manufacturer) (3%)

√ Distributor (7%)

√ Wholesaler (4%)

√ Retailer (3%)

√ Others (42%)

namely between trading partners. An efficient way to have flow of information is to create a pre-defined protocol of bi-directional communication.

- **Increased supply chain risk exposure (23%).** An extension of the lack of visibility at the interface between an enterprise and their trading partners is the increased risk that is placed on all the parties. When unforeseen events occur, the interface points are where disruptions occur with the least ability to control the impact (for more information, refer to Aberdeen Group's July 2008 report, *Supply Chain Risk Management: Building a Resilient Global Supply Chain*). In such a situation, establishing the seamless flow of information between trading partners is critical.

Figure 1: Key Pressures Driving Companies to Focus on B2B Integration and Collaboration

Percentage of Respondents, n = 130

Source: Aberdeen Group, March 2010

"The lack of technology capability on the part of supply chain partners [has been our biggest challenge to improved business collaboration]."

~ Mid-size Industrial Equipment Manufacturer in Asia-Pacific

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: percentage of orders <u>delivered</u> complete and on-time to customers, percentage of orders <u>received</u> complete and on-time from suppliers, and the cash-to-cash conversion cycle (time from paying a supplier until receiving cash from a customer).

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	▪ 97% of orders delivered to customers complete and on-time ▪ 95% of orders received from suppliers complete and on-time ▪ Average cash conversion cycle - 43 days
Industry Average: Middle 50% of aggregate performance scorers	▪ 89% of orders delivered to customers complete and on-time ▪ 78% of orders received from suppliers complete and on-time ▪ Average cash conversion cycle - 51 days
Laggard: Bottom 30% of aggregate performance scorers	▪ 72% of orders delivered to customers complete and on-time ▪ 65% of orders received from suppliers complete and on-time ▪ Average cash conversion cycle - 78 days

Source: Aberdeen Group, March 2010

The Best-in-Class PACE Model

Table 2 indicates the set of competitive differentiators exhibited by Best-in-Class companies.

Table 2: The Best-in-Class PACE Framework

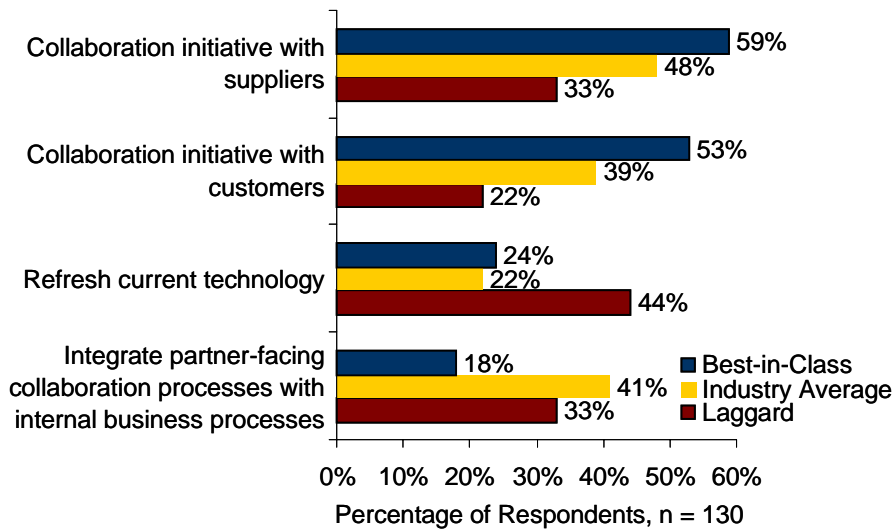| Pressures	Actions	Capabilities	Enablers
▪ Escalating customer service demands	▪ Collaboration initiative with suppliers to gain better visibility into supplier-side processes ▪ Collaboration initiative with customers to gain better visibility into customer-side processes	▪ Ability to electronically collaborate with a network of key customers ▪ Ability to perform Managed File Transfer (MFT) ▪ Ability to support unique business processes for selective product categories, customers or channels ▪ Ability to electronically collaborate with a core set of critical suppliers	▪ Managed File Transfer ▪ FAX conversion services ▪ Web forms ▪ Value Added Networks ▪ Managed B2B Outsourcing ▪ On-premise (licensed) commercial visibility system ▪ Forecast collaboration software

Source: Aberdeen Group, March 2010

Best-in-Class Strategies

The strategic actions that Best-in-Class companies are taking are quite differentiated from what the Industry Average and Laggard companies are doing.

Industry Average and Laggard companies are more focused on refreshing existing technology and integrating partner processes with internal processes (44% of Laggards indicate that they are refreshing current technology versus 22% of the Best-in-Class). In other words, these companies are still looking at B2B integration as a technology and integration initiative. On the other hand, Best-in-Class companies are looking to collaborate more with suppliers as well as customers to gain visibility (59% of Best-in-Class companies indicate that they are focused on collaboration initiatives with suppliers to gain better visibility into supplier-side processes).

Figure 2: Strategic Actions Differentiated Between the Best-in-Class, Average and Laggards

Percentage of Respondents, n = 130

Source: Aberdeen Group, March 2010

**Aberdeen Insights —
Challenges Faced in Execution: A Role Based Focus**

The survey respondents were asked to indicate their vantage point while taking the survey: whether they viewed trading partner management from a line of business, an IT-centric, or an executive management perspective. The following were the top two challenges identified by each of these roles with respect to executing the strategic actions that they were taking:

continued

**Aberdeen Insights —
Challenges Faced in Execution: A Role Based Focus**

Line of business:

- 39% - waiting for ERP solution provider to deliver required B2B integration solution

- 38% - lacking infrastructure or resources to support and sustain B2B integration initiatives

IT-centric:

- 45% - lack of awareness of value proposition of B2B integration

- 36% - over-reliance on off-line technologies (e.g., phone, fax, e-mail) as a chief communication and collaboration means with trading partners

Executive management:

- o 38% - technology solutions required to electronically enable B2B integration are too costly

- o 38% - lack of awareness of value proposition of B2B integration

What are the takeaways from the above data?

- o Line of business managers are frustrated by the lack of infrastructure support from their management as well as with their ERP provider to support their requirements.

- o IT does not know what the strategic value proposition of B2B integration is but realizes that off-line technologies do not suffice to enable trading communities.

- o Executive management thinks that the technology solutions are expensive and also does not know the value proposition of B2B integration.

Any solution that is being adopted should enable a role-based focus with respect to B2B integration.

Chapter Two will investigate the capabilities and enablers that are needed for companies to reach Best-in-Class status.

Chapter Two:
Benchmarking Requirements for Success

The focus of this chapter is to articulate why trading partner enablement is critical for mitigating the pressures and enabling the strategic actions identified in Chapter 1.

Case Study — Applied Micro Adopts Outsourced B2B Integration for Buy Side and Sell Side Processes

AppliedMicro is a provider of energy efficient computing and communications solutions for datacenter, telecom, enterprise and consumer applications. They are a fabless semiconductor company with a revenue of about $300 M. AppliedMicro's corporate headquarters are located in Sunnyvale, California. Their key focus is towards powering cloud computing applications.

Their products are shipped worldwide directly to OEM's and CM's and via distributors. On the supply side, they work with a variety of foundries and test and assembly subcontractors around the world to manufacture their products.

AppliedMicro faced B2B challenges on both the buy side as well as the sell side. On the supply side they face challenges of dealing with a large number of suppliers, and with most of them, there was not enough critical mass to set up traditional B2B connections. There was also significant volatility in terms of changes in the business. On the sell side, the product lifecycles were short and required a strong integration with the customers to identify customer trends and demand.

In addition, AppliedMicro wanted to reduce the cost and realized that the existing EDI VAN gateway would not yield enough coverage for the changing requirements. Their small IT staff would not be able to manage the multiple standards and the required connections cost effectively. In fact they had to adhere to multiple data formats such as RosettaNet, EDIFACT, dXML and protocols like AS2 that would have required a bigger investment and support structure.

AppliedMicro adopted a two pronged approach to solve these challenges. On the supply side, they went with a "Supply Side Order Management and AP automation" outsourcing solution. The outsourced AP automation solution resulted in the ability for smaller suppliers to simply email the invoice, ASN and other documents to the intermediary who then through OCR technology scanned the documents for further processing.

continued

Fast Facts

√ Best-in-Class companies are 2-times as likely as all others to be electronically collaborating with a core set of critical suppliers

√ Best-in-Class companies are 1.5-times as likely as all others to be electronically collaborating with a core set of critical customers

√ Best-in-Class companies are 1.2-times to 1.3-times as likely as all others to be electronically collaborating with non-critical suppliers or customers

Case Study — Applied Micro Adopts Outsourced B2B Integration for Buy Side and Sell Side Processes

This solution approach does not require any upfront setup, thus making it very cost efficient and reducing processing error rates and increasing throughput. All supplier documents can be stored paperless – in one document repository – no matter how they arrived at the company.

On the customer/distributor side, there is a lot more stability with economies of scale to implement end-to-end processes for sales order management and channel inventory management. The company went with a Trading Community Integration platform that provided a real-time front end to AppliedMicro. They also outsourced their integration process to this platform provider. This allowed AppliedMicro IT professionals to focus on the maintenance of their ERP system and interface with just one data format with their B2B provider. The platform provider also handled the supplier on-boarding and management.

The benefits gained include:

- This outsourced solution allowed the IT staff to focus more on R&D and strategic initiatives
- Lowered the transaction costs for both suppliers and customers
- Improved supplier and customer relationships
- Leveled the playing field for AppliedMicro and allowed them to compete with larger competitors

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 electronically collaborate with a network of key customers		
	56%	42%	33%
	Ability to electronically collaborate with a network of key suppliers		
	65%	45%	21%
Organization	Trading partner enablement is supported by senior management		
	53%	42%	33%
Knowledge	Line of Business is aware of the impact of manual methods of B2B integration on the performance of the organization		
	53%	33%	33%
Technology	B2B Integration and Collaboration Software in use (only a subset of technologies are shown here):		
	▪ FAX conversion services - 43% ▪ Value added network - 29% ▪ Teleconferencing / virtual meeting collaboration tools - 62%	▪ FAX conversion services - 20% ▪ Value added network - 19% ▪ Teleconferencing / virtual meeting collaboration tools - 51%	▪ FAX conversion services - 17% ▪ Value added network - 0% ▪ Teleconferencing / virtual meeting collaboration tools - 50%
Performance	Ability to measure supplier performance over a period of time		
	65%	45%	11%
	Ability to adhere to customer metrics requirements over a period of time		
	47%	36%	22%

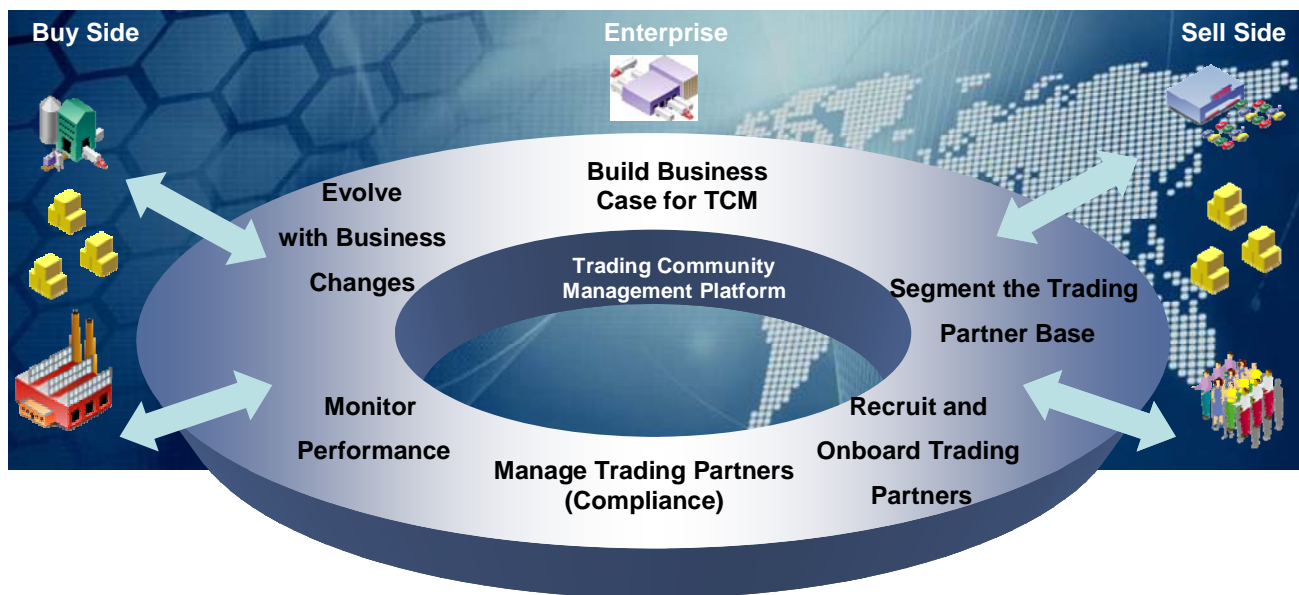Source: Aberdeen Group, March 2010

Capabilities and Enablers

Top performing companies have developed a range of capabilities that, when combined with the proper technology enablement, allow them to achieve improvements in business metrics such as cash-to-cash cycle time and customer service level. The following research findings describe the specific capabilities that must be enhanced or developed in order to achieve this result. For this section, a new term is introduced: Trading Community Management (TCM). This refers to a closed loop process that involves trading partner recruitment, trading partner enablement, trading partner on-boarding, and trading partner performance management. In this context, the trading community refers to both the demand network (retailers,

customers, VARs, resellers, distributors) and the supply network (systems suppliers, contract manufacturers, original design manufacturers).

The specific process areas that companies need to focus on with respect to trading community management are shown in Figure 3.

Figure 3: Process Steps Associated with Trading Community Management

Source: Aberdeen Group, March 2010

Process

The following are the process capability advantages that Best-in-Class companies have demonstrated across the TCM process:

1. **Building the business case for TCM.** This is the key step where upper management is provided a business case by the IT and/or the line of business organization (supply chain, procurement, and operations) for creating a trading community initiative.
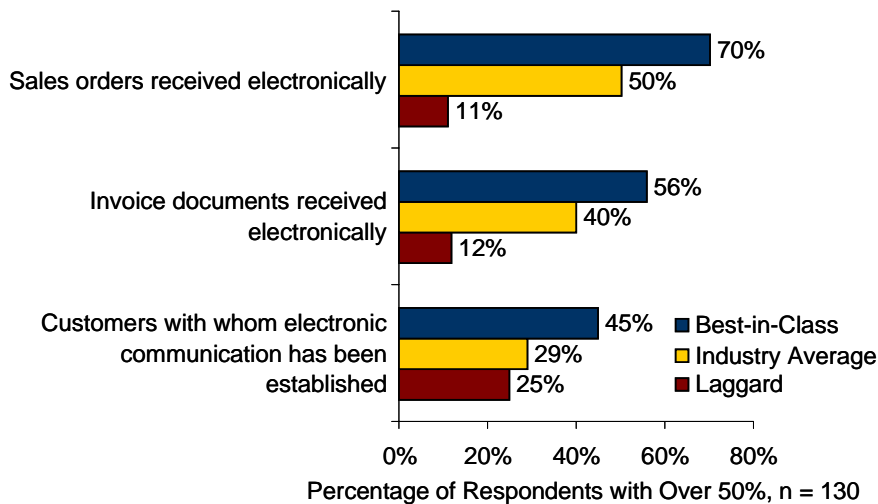
   Aberdeen research finds that Best-in-Class companies are 5-times more likely than all others to indicate that B2B integration and collaboration has a mission-critical impact on their organization. This implies that Best-in-Class companies have a better handle on the importance of building trading communities (both suppliers and customers).

   According to the Director of IT at a large CPG manufacturer, "As part of our business case development we went through an extensive process of documenting the business requirements from both an IT as well as line of business perspective, leveraged a consulting solution provider to help build an RFI document to be sent to platform solution providers, developed a milestone plan, and created a budget. We were clear from the get go that we will be open to multiple deployment options like managed services or SaaS."

2. **Segment the trading partner base.** Aberdeen research reveals that companies today are two-times more likely to on-board a critical trading partner as compared to a non-critical trading partner. This approach of focusing on the key suppliers may have worked in the past but in today's highly distributed demand-supply network environment, this approach is not viable. In fact, 49% of respondents indicate that for every week that a new trading partner is not fully enabled in the supply chain, there is a significant operational impact on the business. So how can companies integrate and build community with the entire set of trading partners? One of the crucial first steps is to segment the trading partner base across multiple tiers. Some of the approaches for segmenting the trading partner base are based on business document volume per trading partner, integration complexity, or percentage of spend with a supplier. However companies are quite immature in their ability to segment their trading partner base. In fact, 53% of all other category survey respondents did not conduct surveys of their supplier base to identify contact information as compared to 33% of Best-in-Class companies not doing so.
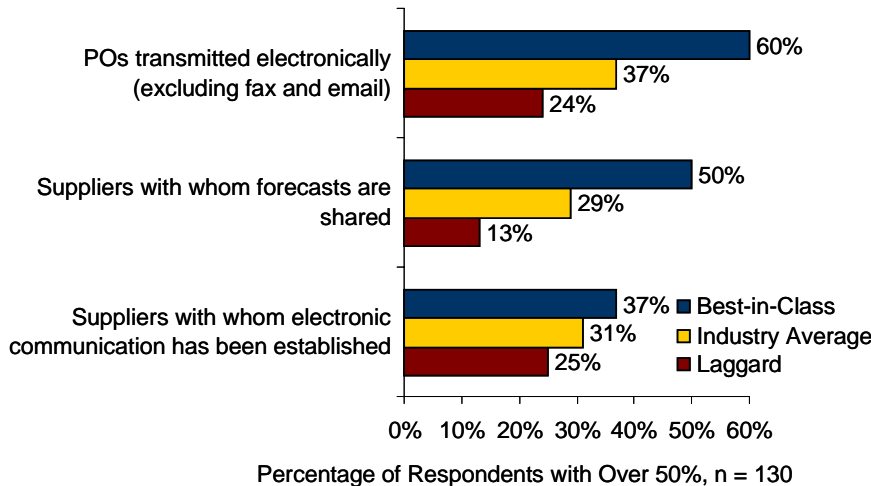
3. **Recruit and on-board trading partners.** Best-in-Class companies have established a higher percentage of their trading partners utilizing electronic methods of communication. For example: 70% of Best-in-Class companies receive sales orders (from customer to manufacturer) electronically from greater than 50% of their customer base (Figure 4). Similarly 60% of Best-in-Class companies have the POs transmitted electronically to greater than 50% of their supplier base (Figure 5).

Figure 4: Increased Recruitment of Customers into the Trading Community by Best-in-Class Companies

Source: Aberdeen Group, March 2010

Figure 5: Increased Recruitment of Suppliers into the Trading Community by Best-in-Class Companies

Percentage of Respondents with Over 50%, n = 130

Source: Aberdeen Group, March 2010

4. **Manage trading Partners.** Best-in-Class companies are 1.3-times more likely than all others to conduct post-on-boarding surveys of their already on-boarded supplier base to identify the extent of their involvement in B2B integration and collaboration. On-going monitoring of the usage of the solution by trading partners and ensuring that they are in compliance is critical. There could also be situations involving disputes between trading partners or between a trading partner and the organization. There should be workflows defined for how to resolve these disputes if they arise and identification of the chain of command on both sides.

5. **Monitor performance.** Once the trading partners are on-boarded it is critical to continuously monitor the performance based on operational and financial metrics and identify a resolution approach if the performance is not up to par.

    This is an area of differentiation, as Best-in-Class companies are 2.2-times more likely than all others to have the ability to measure supplier performance over a period of time.

6. **Evolve with business changes.** In today's dynamic business environment, processes must be nimble and should support changes rapidly. This is true for TCM as well. The precursor for the change in business processes (responsiveness being the ability to change the process rapidly) is the visibility into processes. Only 20% of even the Best-in-Class respondents indicate that they have adequate visibility into the status of business processes at their trading partners.

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Organization

Best-in-Class companies are 1.5-times more likely than all others to have senior management support their B2B integration and collaboration initiatives. However, 53% of respondents do not have top level management support and 70% of respondents do not have good alignment between the line of business and IT teams with respect to B2B integration and collaboration.

This is a critical point to consider since the top two challenges raised by line of business with respect to B2B integration and collaboration deal with the lack of commitment from both top management and IT towards this process.

Data and Knowledge Management

Best-in-Class companies are 1.7-times more likely than all others to make the line of business team aware of the impact of manual methods of collaboration with trading partners on the performance of the organization.

One of the reasons why manual methods fail is due to the dependence on external data to run even the internal processes like MRP, S&OP, etc. In fact 50% of respondents have indicated that between 30% and 60% of their ERP data comes from external sources. The top three sources of these external data are suppliers, customers, and 3PLs.

Thirty percent (30%) of Best-in-Class companies and 60% of all others rely solely on email, phone, and fax for collaboration with 90% or more of their suppliers. This results in processes that are not captured within the existing knowledgebase of companies. There is a necessity to evolve these from ad-hoc into standardized processes. Nineteen percent (19%) of Industry Average companies indicate that they are using virtual meetings/video conferencing facilities versus 25% of Best-in-Class companies for collaborating with 50% of more of their suppliers.

EDI Connectivity Enables JIT Manufacturing and Process Collaboration at a US Auto Manufacturing Plant

Mercedes-Benz U. S. International, Inc. (MBUSI) is a wholly owned subsidiary of Daimler AG, and is located in Alabama. The plant was built in 1994 through 1997 and serves the North American and world markets. It operates in a "build-to-order" environment.

From the inception of its operations, it was decided that electronic data communications were critical for the effective execution of the Just-in-Time (JIT) manufacturing practices adopted at the plant. The company engaged external consultants to develop the plant's technology strategy, and later adopted the consultants' recommendations to implement Electronic Data Interchange (EDI) and B2B connectivity technologies for working with suppliers and other partners, in addition to adopting an ERP solution.

continued

EDI Connectivity Enables JIT Manufacturing and Process Collaboration at a US Auto Manufacturing Plant

"We started out ordering direct materials (parts for building vehicles) using EDI for both releases and shipping notices immediately when we first started production in 1997. As a high-volume JIT manufacturer, we saw an automated supply chain as the only practicable way to run the business," says Bill Engelke, IT architect at MBUSI.

In 2005, MBUSI converted its older ERP system to a new one. At the same time, it started looking for a new EDI connectivity solution to replace the older system that was no longer supported. "Coincidentally, at the same time our sister plant in South Africa had just completed a detailed industry study of business integration packages, and had selected a certain third-party EDI vendor as its preferred choice. We reviewed its analysis and, since our plants were quite similar, decided that the same choice would also make sense for MBUSI," explains Engelke.

The new EDI solution went live in August 2005, exchanging EDI with direct material suppliers. Over several months, most of the direct material suppliers were gradually moved from the old EDI product to the new one. Today, all of the JIT suppliers are electronically connected to the plant. The approach of treating electronic connectivity as the critical backbone for operational execution has allowed MBUSI to not only effectively execute in a very fast-paced JIT manufacturing environment, but also make additional collaborative business processes more effective. "Since 2005, we have found many additional applications for our new EDI system," says Engelke. Two recent examples are:

1. **Optimizing the process of ordering service parts to be used by dealers for repair.** Utilizing the file transfer mechanism, MBUSI was able to get the data from the service parts ordering system and more easily send it to the network of parts suppliers. The service team now sends ERP formatted data to the new EDI system, which then sends the orders to suppliers through the VAN.

2. **Implementation of a new business process for steel offload.** MBUSI has several steel stamping partners. The corporate office in Germany negotiates specifications and price with steel producers, after which the steel stampers purchase steel from suppliers at the pre-negotiated price; MBUSI then makes payments to the suppliers. There are multiple transactions between these stakeholders, which require detailed communications. Using its new B2B EDI connectivity platform, MBUSI implemented EDI processes for seven key transactions involved in these interactions, including three-way matching for receipts. The process was set up in less than six months and replaced an older, less automated, more error-prone process that used to accompany these interactions in the past.

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EDI Connectivity Enables JIT Manufacturing and Process Collaboration at a US Auto Manufacturing Plant

The next stage MBUSI is looking to move towards in using its B2B system is getting deeper upstream inventory visibility. Engelke explained, "When a customer orders a car, we want to be able to cite a 100% reliable (but at the same time quickest) projected delivery date. To do this, we need to be able to validate when we will get the parts, especially the low volume ones. We want to be able to foresee potential shortages or surpluses of inventory. There is recognition in the business that the next phase in improving our supply network management is to better match supplier capabilities with forecast demand."

Engelke explained the business value of electronic B2B integration, "We did not adopt the B2B system for cost savings or cost avoidances - it is seen as a critical operational necessity, like buying electricity. Since implementation, however, the flexibility, reliability, and user-friendliness of the system have allowed us to implement a number of additional processes, some of which are complex. In each case, the work and difficulty of implementing the process using the new EDI system has been small in comparison to the process itself."

Performance Management

This is an area of differentiation, as Best-in-Class companies are:

- 2.2-times more likely than all others to have the ability to measure supplier performance over a period of time
- 1.7-times more likely than all others to have the ability to adhere to customer metrics requirements over a period of time

Previous Aberdeen research studies have shown that Best-in-Class companies are more likely to use internal dashboards to measure supply chain performance, and external scorecards to measure their supply chain partners' performance (see Aberdeen's February 2010 report, *Supply Chain Intelligence: Adopt Role-Based Operational Business Intelligence and Improve Visibility*). Scorecards help companies formalize the evaluation of supply chain partners' performance in order to improve the supplier and services provider selection process, potentially adopt performance-based incentive programs, and improve overall supply chain partner relationships.
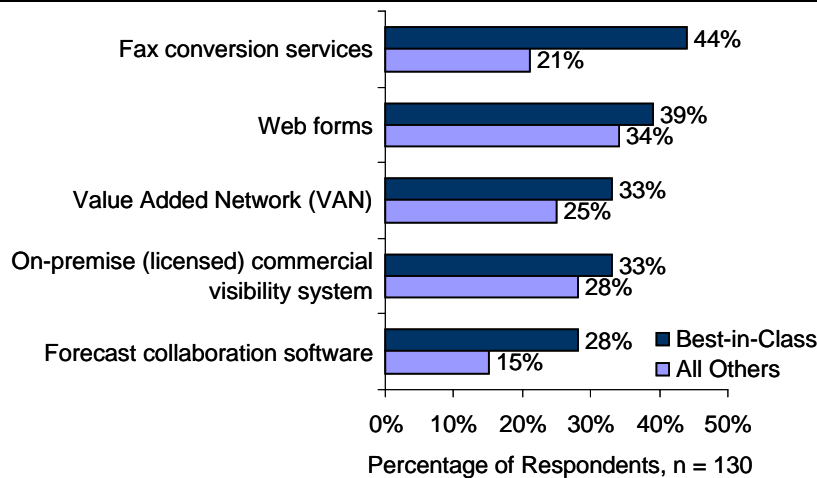
Technology

Figure 6 shows the differentiation of the Best-in-Class companies with respect to B2B integration and collaboration. Each of the technology enablers mentioned plays a specific role in TCM:

- **Fax conversion services** - this helps in on-boarding smaller trading partners, as they are able to utilize a low-cost method of communication, while the back-end conversion provides the recipient with usable data.
- **Web forms** - another helpful means for on-boarding smaller partners, as web-based forms allow for direct data entry and

exchange of ASNs, invoices, etc., without the use of expense of establishing EDI connections.

- **Forecast collaboration** - by basing forecasts on the larger data set of multiple organizations, this allows for greater accuracy and provides an improved ability to determine optimal inventory levels.
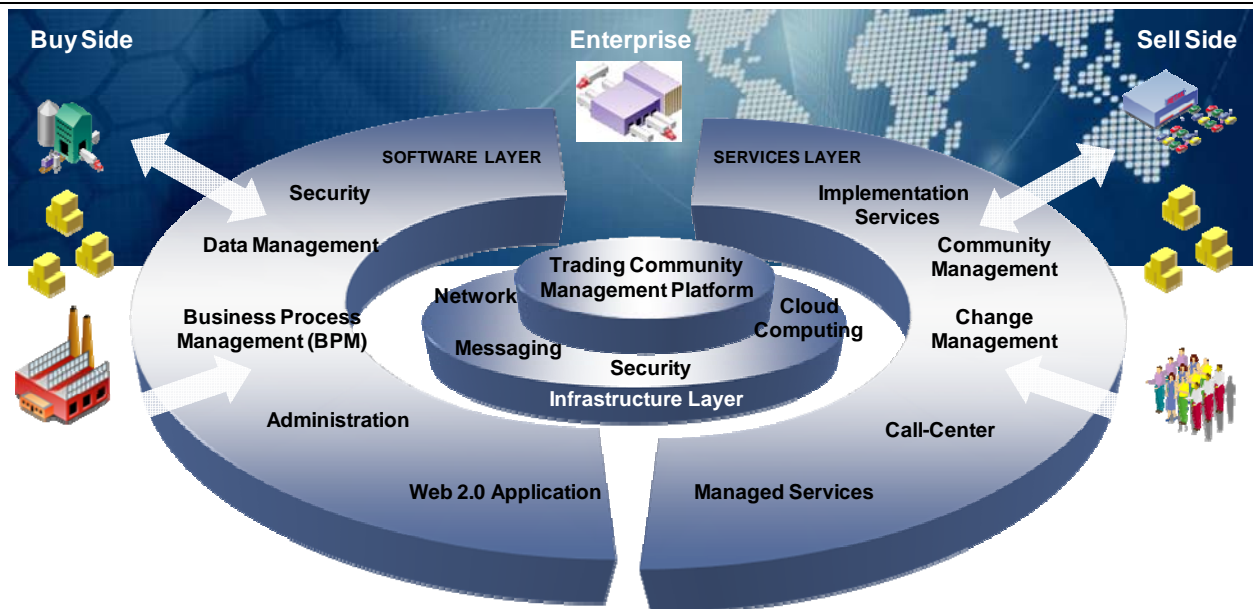
Figure 6: Technology Enablers for Best-in-Class versus All Others

Percentage of Respondents, n = 130

Source: Aberdeen Group, March 2010

In order to enable the steps associated with Figure 3, there is a need for a TCM platform solution (Figure 7) that enables the above areas. The TCM platform solutions should also enable effective **enabling of personal interaction and direct human collaboration** in the supply chain (e.g., in managing collaborative workflows and resolving supply chain disruptions).

Figure 7: Technology Components Required to Enable Trading Community Management

Source: Aberdeen Group, March 2010

Recently, many supply chain collaboration solution providers have begun adding enhanced inter-personal collaboration and community management tools to their platforms, allowing people to exchange messages, files, store logs of their interactions and create user profiles reflecting their roles in their companies. These solutions leverage the pre-connected networks of suppliers, customers and other partners, and aim to improve routine process collaboration and exception management / issue resolution for the participating platform users.

An interesting development recently has been an emergence of several new solutions that utilize the idea of social networking (similar to Twitter, Facebook and LinkedIn) in the supply chain context. Network-based community management solutions present the next step in the evolution of collaborative supply chain network solutions, enabling business users to add a new dimension to their collaborative supply chain processes.

The roll out of trading communities by definition requires a service based approach given the need for recruitment of hundreds of trading partners, integration with multiple disparate data sources. The logical extension is the managed services approach which is where the running of the trading community itself on an on-going basis is outsourced to a third-party provider in addition to the initial implementation effort.

In the next chapter, we will explore how Laggards, Average and Best-in-Class companies can improve their TCM processes.

Aberdeen Insights — Managed Services as a Deployment Option

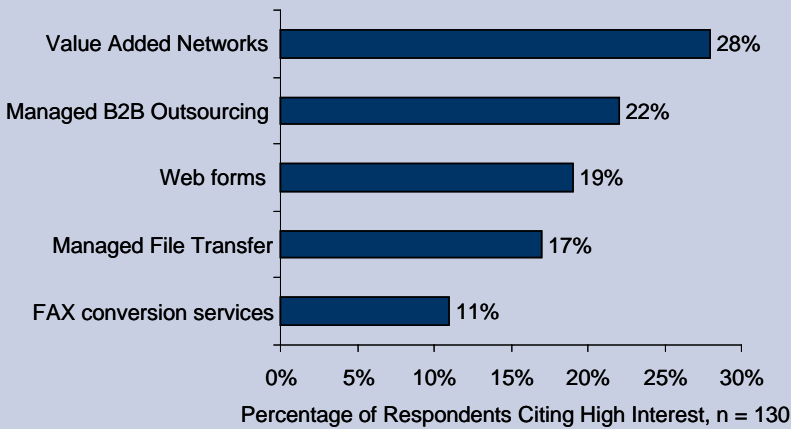Companies have four options when deciding to implement a TCM solution:

1. Build in-house

2. License and deploy on-premise software and manage process internally

3. License and deploy on-premise software and allow solution provider to manage the process (managed services)

4. Implement SaaS solution and allow solution provider to manage the process (managed services)

About 20% of respondents have indicated a high interest in pursuing option 4. Figure 8 indicates the interest in companies in pursuing Integration as a Service (IAAS) based approaches.

continued

Aberdeen Insights — Managed Services as a Deployment Option

Figure 8: Managed Services Per Integration Approach

Integration Approach	Percentage
Value Added Networks	28%
Managed B2B Outsourcing	22%
Web forms	19%
Managed File Transfer	17%
FAX conversion services	11%

Percentage of Respondents Citing High Interest, n = 130

Source: Aberdeen Group, March 2010

Improvements in cloud computing related technologies are driving the TCO for solution providers significantly lower, however the end user base has not totally warmed up to this deployment approach within the supply chain realm. End users should note that the IT organization respondents want to try out new approaches. The percentage of respondents with high interest in managed services increases to 30% within the IT community. The reason for this is clear. The top three activities that the IT division performs in relation to TCM are:

- 80% - Internal / application / process mapping
- 68% - Partner enablement
- 63% - Handling end user requests for EDI (or other translation) data

Of these three, application / process mapping and the handling of end-user requests are fairly mundane activities that are good candidates for outsourcing to a third-party. It is likely these tasks that are the source of attention for those IT organizations showing a high interest in managed services.

Chapter Three:
Required Actions

Companies should consider the following recommendations aimed for improving their TCM capabilities:

Laggard Steps to Success

- **Create collaborative network with key customers.** Thirty-three percent (33%) of Laggards indicate the ability to collaborate with a network of key customers versus 56% of Best-in-Class companies. Companies should segment their customer base according to revenue and identify the top list of customers to set up a trading community network with. Key process areas should be identified such as order management collaboration, inventory management collaboration and forecast collaboration after which these collaborative processes should be implemented.

- **Create collaborative network with key suppliers.** Twenty-one percent (21%) of Laggards indicate having the ability to collaborate with a network of key suppliers versus 65% of Best-in-Class companies. The supplier base should be segmented based on criterion such as spend volumes and the key suppliers identified. Procurement and in-bound logistics are examples of areas where collaborative processes can be implemented on the supplier side.

- **Create the ability to measure supplier performance over a period of time.** Eleven percent (11%) of Laggards indicate having the ability to measure supplier performance over a period of time versus 65% of Best-in-Class companies. "We are currently developing an enhanced measurement system for our suppliers, based on fill rates and on time delivery metrics. As a manufacturer, we get measured on this by our own end customers, so we want to hold our suppliers accountable for the same goals," says a director at a US-based manufacturer of consumer durable goods. This manufacturer sets a good example to follow.

Industry Average Steps to Success

- **Segment the trading partner base.** Seventy percent (70%) of Best-in-Class companies receive sales orders electronically from 50% or more of their customers versus 50% of Industry Average companies. In addition 41% of Industry Average companies indicate that their top challenge with respect to B2B integration and collaboration is over-reliance on off-line technologies (e.g., phone, fax, e-mail) as a chief communication and collaboration means with trading partners. Segmenting the trading partner base into tiers will help Industry Average companies to prioritize their trading community enablement initiative. Key criterion that should be adopted are: business document trading volume per trading partner,

onboarding and integrating complexity, partner's in-house integration capability.

- **Create accountability for the supplier base.** Forty-five percent (45%) of Industry Average companies have the ability to measure supplier performance over a period of time versus 65% of Best-in-Class companies. Measuring brings accountability into the process. Create a shared list of metrics that include factors such as on-time delivery of products, sustainability, quality, defects, etc. For a director at a US-based consumer durable goods manufacturer, having accountability for supplier metrics translates into being able to meet customers' needs. "At this time, our best opportunities for improvement are on the inbound side, namely, in getting more visibility into our suppliers' production capacity," says the director. "We have good visibility after the product has left a foreign port, but would like to have more insight into our suppliers' subcontractors and what is happening in their incoming supply chains. We believe that higher visibility is partly contributing to lower lead time variability, reduced inventory, shorter lead times, increased fill rates, and other supply chain operational improvements."

"The recession has increased outsourcing of business processes in general; and our company has started getting more data and more complex data from customers - which requires us to scale our B2B infrastructure horizontally and vertically. Additionally, we are seeing more 'international' (multi-byte) B2B from Asian and European partners which also requires us to support a wider variety of B2B."

~ Director of IT at Large Electronics Manufacturer

Best-in-Class Steps to Success

- **Expand the trading community to non-critical suppliers and customers.** Thirty-seven percent (37%) of Best-in-Class companies indicate that they have established electronic communication with greater than 50% of their suppliers. Hence there is a significant opportunity to improve recruitment efforts and on-board additional partners. Take for example the director at a large agricultural testing manufacturer; "The most challenging aspect in building an integrated collaborative supply chain for us has been the initial approach and educating partners on the benefits of lean and end-to-end supply chain management strategies, which are still alien to many companies, particularly smaller suppliers. To overcome this, we continue our efforts to educate potential and existing supply chain partners on the value of the collaborative approach."

- **Implement outsourced B2B trading community management wherever applicable.** Only 14% of Best-in-Class companies indicate that they are adopting an outsourced approach for implementing trading partner enablement solutions. In these Best-in-Class companies, 77% of IT respondents state that their primary job is to handle process and application mapping. If some of these mundane tasks can be outsourced, then the IT organization can focus on more value added activities such as R&D and innovation. To ease internal IT requirements, look for B2B solution providers that have an existing community of trading partners that you could plug into.

In future research studies in the area of trading community management, we will explore the usage of cloud computing and managed services by enterprises and their impact on business value.

Aberdeen Insights — Selection Criterion for a Trading Community Management Platform Solution

The following are key selection criterion based on which a trading platform community management solution should be selected:

- **Deployment models supported**: From SaaS to on-premise

- **Partner enablement tools supported:** EDI, XML, Web forms, accounting package adapters, direct connections, and many more

- **Standards support:** The solution needs to support multiple standards including EDI (ANSI or EDIFACT), Internet EDI, AS2, RosettaNet, and EAN-UCC XML

- **Global capability:** The solution provider needs to provide 24x7 technical support around the world and support change management, billing, trouble shooting and dispute resolution

- **Process performance:** The solution needs to constantly monitor the performance of processes and identify exception conditions if they occur

- **Risk management:** There should be disaster recovery support and highly redundant data center capabilities

- **Process support:** There should be support for key supply chain processes like forecast collaboration and replenishment, invoice reconciliation and automation collaboration, transportation management collaboration, and global inventory visibility

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Appendix A:
Research Methodology

Between February and March 2010, Aberdeen examined the use, the experiences, and the intentions of 130 enterprises involved in B2B integration and collaboration with a specific emphasis on trading community management in a diverse set of enterprises.

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

Responding enterprises included the following:

- Job title: The research sample included respondents with the following job titles: C-Level executive (CEO, CFO, CTO, CIO) (14%); VP/General Manager (12%); Director (20%); Manager (27%); staff (10%); other titles (17%).

- Functional responsibility: The research sample included respondents with the following functional areas of responsibility: logistics/supply chain (33%); operations/procurement (16%); IT/BPM (18%); sales and marketing (8%); corporate management (8%); other areas (17%).

- Industry: The research sample included respondents from the four major industry segments - Process, Consumer, Discrete and High-tech/electronics. Key demographics are:

  o **Discrete (10%):** Aerospace/Defense/Automotive (5%), Industrial Product Manufacturing/Industrial Equipment Manufacturing (5%)

  o **Consumer (28%):** Apparel (3%), Consumer Durable Goods/ Consumer Electronics (4%), Consumer Packaged Goods (7%), Food/Beverage (5%), Retail (2%), Wholesale/Distribution (7%)

  o **Process (16%):** Chemicals (3%), Metals and metal products/ Mining/oil/gas (5%), Paper/lumber/timber (5%), Pharmaceutical manufacturing (3%)

  o **High-tech/electronics (21%):** Health/medical/dental devices or services (6%); high-technology/Computer equipment and peripherals (8%), telecommunication equipment (9%)

  o **Transportation/Logistics (25%)**

- Company size: Forty percent (40%) of respondents were from large enterprises (annual revenues above US $1 billion); 24% were from midsize enterprises (annual revenues between $50 million and $1 billion); and 36% of respondents were from small businesses (annual revenues of $50 million or less).

Table 4: 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, March 2010

Table 5: 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, March 2010

Table 6: 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, March 2010

Appendix B:
Related Aberdeen Research

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

- *Supply Chain Intelligence: Adopt Role-Based Operational Business Intelligence and Improve Visibility;* Feb 2010

- *Multi-enterprise Manufacturing: The Role of Visibility and Collaboration in Driving Responsiveness;* July 2009

- *2009 Supply Chain Summit: Managing Integrated Demand-Supply Networks*; May 2009

- *Integrated Demand-Supply Networks: Five Steps to Gaining Visibility and Control;* March 2009

- *The Secret SaaS: On-Demand Supply Chain Management;* December 2008

- *Beyond Visibility: Driving Supply Chain Responsiveness;* September 2008

- *Process Collaboration in Multi-Enterprise Supply Chains;* August 2008

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

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