

Supply Chain Risk Management: Building a Resilient Global Supply Chain

July 2008

Executive Summary

Growing global operations are forcing companies to more pro-actively evaluate and address their supply chain risks. Companies are sourcing from and selling to more new regions, often adding new carriers, forwarders, logistics, and distribution partners to their network. At the same time, customers are continuously demanding improved service levels. As a result, most companies are finding that it's not easy being global. Over the past year, **58% of companies suffered financial losses** as a result of supply chain disruptions. This study shows that Best-in-Class firms have adopted a more holistic view of supply chain risks compared to lower-performing peers and have made more progress in improving their supply chain processes and infrastructure in order to be better positioned to foresee, spot, and respond to potential disruptions. As a result, they are much further ahead in building a resilient supply chain: **Best-in-Class companies are 55% more likely than Laggards to be at a proactive or resilient stage of Supply Chain Risk Management (SCRM).**

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

Aberdeen Group used four metrics to distinguish the SCRM practices of Best-in-Class companies: 1) percent of shipments from suppliers received complete and on time; 2) percent of shipments delivered to customers complete and on time; 3) change in the frequency of stock-out events in the past 18 months; and 4) change in variable distribution costs in the past 18 months.

Best-in-Class companies in this study are **twice as likely as all others to have no major impact** (financial or market share losses, or brand damage) as a result of supply chain disruption.

Required Actions

Chapter Three summarizes recommended actions for companies to improve SCRM, focused on:

- Re-defining the traditional passive approach to SCRM
- Establishing internal and external collaborative processes for SCRM
- Improving software capabilities for supply chain visibility, demand and inventory management
- Advance analysis of supply chain risk modeling and assessment matrices for improved SCRM decision making

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Chapter One: Benchmarking the Best-in-Class

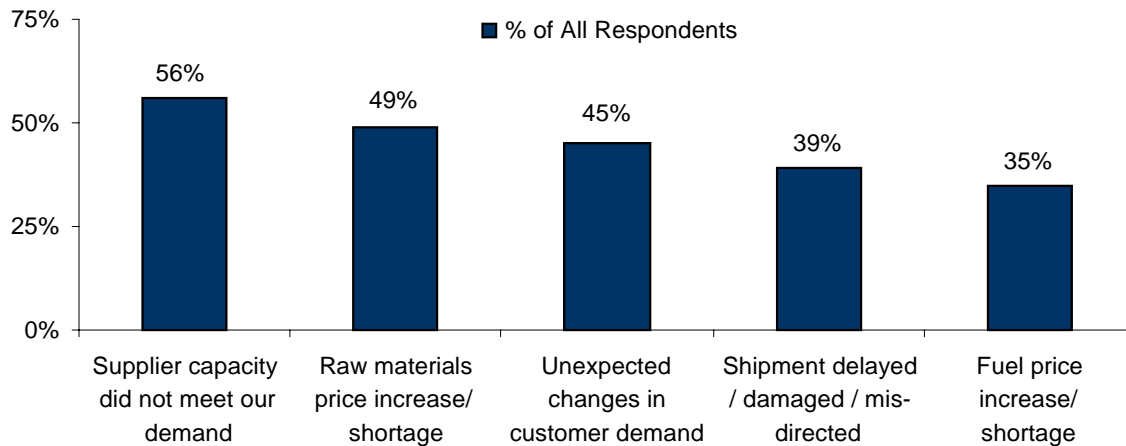
Business Context

Growing global operations are forcing companies to more pro-actively evaluate and address their supply chain risks. Companies are sourcing from and selling to more new regions, often adding new carriers, forwarders, logistics, and distribution partners to their network. At the same time, customers are continuously demanding improved service levels. As a result, most companies are finding that it's not easy being global: over the past 12 months, companies have reported a number of supply chain disruptions with upstream supply chain disruptions occurring most frequently, closely followed by the inability to effectively tackle unexpected demand fluctuations.

Fast Fact

- √ 21% of companies with proactive or resilient stages of SCRM indicated that a major supply chain disruption had originally driven them to improve SCRM

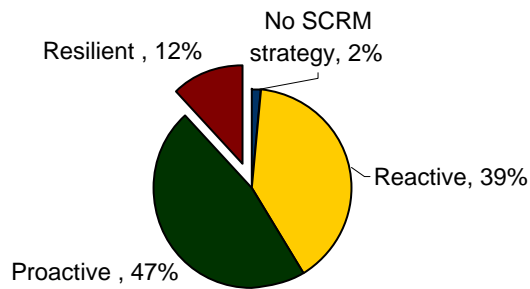
Figure 1: Supply Chain Disruption Events Occurring over the Past 12 Months



Source: Aberdeen Group, July 2008

As a result, **58% of study participants have suffered financial losses** from supply chain disruptions over the past year. This is no surprise, as most companies still have a long way to go in building a resilient global supply chain: only 12% of the 138 companies surveyed by Aberdeen Group on this topic have reported having a risk-resilient global supply chain (Figure 2).

Figure 2: Current Level of Readiness to Supply Chain Disruptions



Source: Aberdeen Group, July 2008

Despite their high concern about the security and smooth operation of their supply chains, many companies are still at the early stages of thinking about Supply Chain Risk Management (SCRM). However, growing global operations and increasing market volatility, coupled with the recently publicized supply chain disruptions (and ensuing financial, brand, and customer losses) at major global companies are now drawing increased attention to this area from all parts of the organization. Currently, research study participants are citing the increased supply chain vulnerability as a result of growing global operations (58%) and the increasingly volatile global economy (55%) as the top two pressures for focusing on SCRM.

Companies with no current strategy or a reactive approach to addressing supply chain risks complain that there is either insufficient alignment of business objectives across their company to truly focus on avoiding risks (52%) or a lack of quality and timely data about supply chain transactions that would be needed to assess risks (55%). In addition, 30% indicate that their challenge is the lack of alignment of business objectives with their trading partners.

Gaps in Supply Chain Risk Management Increase Vulnerabilities

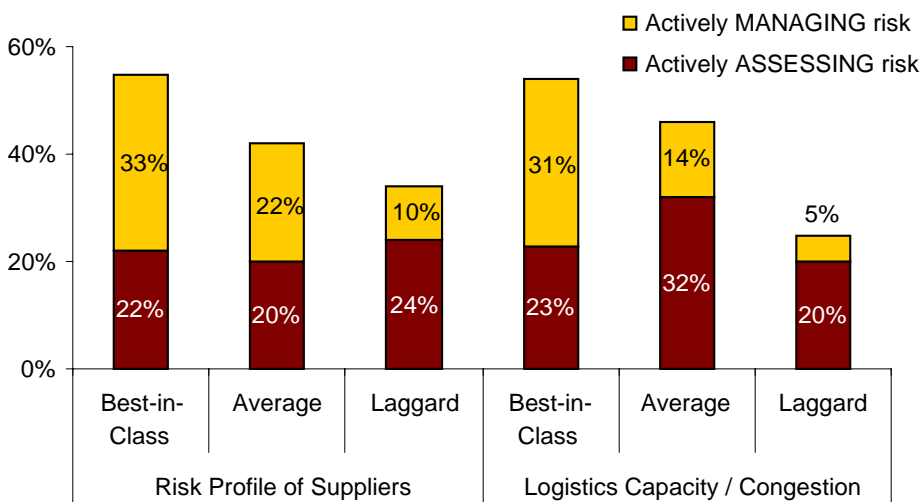
So what are the top supply chain risks companies are concerned about assessing and managing? The study investigated current activities across various supply chain risks and revealed that *less than one-third of companies are actively managing each individual risk*¹.

¹ The list of investigated risks included: import / export compliance risks, raw material shortages / price risks, demand fluctuations, product quality associated risks, financial risk (e.g. critical shortage of working capital to support operations), risk profile of suppliers and customers, currency volatility, non-environmental catastrophic events (damaged equipment, fire, infrastructure collapse), logistics capacity and congestion, supply chain security, and environmental disasters.

There are several supply chain risk areas in which Industry Average and Laggard companies are over-exposed, which adversely impacts their agility and flexibility in reacting to supply chain disruptions. Compared to Industry Average and Laggard companies, Best-in-Class companies are more likely to manage or at least assess the following risks:

- Logistics congestion and capacity - 43% more likely
- Risk profile of suppliers - 44% more likely
- Fuel price risk - 46% more likely
- Risk profile of a country - 36% more likely
- Non-environmental catastrophic events - 28% more likely

Figure 3: Best-in-Class Companies Are More Actively Assessing Supplier and Logistics Risks



Source: Aberdeen Group, July 2008

In addition to not paying enough attention to assessing risks in advance and not putting avoidance and recovery plans in place, Laggards are less likely to train employees on how to respond to supply chain disruptions if they do occur: whether in communicating delays to a customer, elevating a disruption to the appropriate senior staff, or placing a new urgent purchase order, **Best-in-Class companies are 80% more likely than Laggards to be training employees on disruption response procedures.**

The lack of attention to critical supply chain risks and poor internal training on disruption response procedures are making these companies more vulnerable. For example, although 99% of study participants have reported experiencing supply chain disruptions over the past 12 months, Best-in-Class companies in this study are twice as likely as all others to have no major impact (financial or market share losses, or brand damage) as a result of supply chain disruptions.

Case Study: Global Manufacturer Mitigates New Product Introduction Risk with Improved Operational Procedures

The Manager of Operations at this global manufacturer and distributor of computer network systems commented on its supply chain risk management process: “From the viewpoint of supply chain risk management, new product introductions receive the most attention at our company. Because 100% of our manufacturing process is outsourced, it is extremely important for us to have sound processes in place for selecting and on-boarding new international suppliers and preventing any potential quality or compliance issues.”

In addition to having separate departments dedicated to quality management and logistics management, to address product quality risks and delivery risks, the supply chain department has a risk management objective to address raw materials and component price increases, and manufacturing or environmental disasters. To mitigate these risks, the company has a set of Standard Operating Procedures (SOPs) in place for supplier selection and on-boarding. A stringent audit and qualification process must be followed and all new suppliers must complete detailed checklists, including providing information on the following:

- The supplier’s disaster recovery plan: What prevention and recovery mechanisms are in place?
- Are there plans in place to mitigate the rising costs of natural resources?
- The supplier’s ability to react to requested changes in manufacturing volumes: Can the supplier flexibly handle an increase or decrease in customer demand?

These SOPs have enabled the company to limit the impact of supply chain disruptions; the company is also evaluating how the current process maps can be improved to further mitigate risks. “We have conducted in-house analysis and modeling using spreadsheet-based models, which have been instrumental in identifying the highest vulnerability areas in our supply chain,” said the Manager of Operations.

In addition, the management is currently driving an initiative to put in place a new robust business continuity plan for the company: “This is a collaborative initiative in which many departments are participating, including supply chain, operations, logistics, sales, human resources etc.,” adds the Manager of Operations.

The Maturity Class Framework

This report aims to help companies with currently non-resilient supply chains better understand the capabilities that have helped Best-in-Class companies achieve improved SCRM. To define Best-in-Class, Industry

Average, and Laggard performers in this study, Aberdeen used four key performance indicators.

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

Definition of Maturity Class	Average Class Performance
Best-in-Class: Top 20% of aggregate performance scorers	<ul style="list-style-type: none"> ▪ 96% of orders delivered complete and on time ▪ 94% of orders received complete and on time ▪ 5% decrease in frequency of out-of-stock inventories ▪ 2% decrease in variable distribution costs
Industry Average: Middle 50% of aggregate performance scorers	<ul style="list-style-type: none"> ▪ 93% of orders delivered complete and on time ▪ 90% of orders received complete and on time ▪ No change in frequency of out-of-stock inventories ▪ 3% increase in variable distribution costs
Laggard: Bottom 30% of aggregate performance scorers	<ul style="list-style-type: none"> ▪ 81% of orders delivered complete and on time ▪ 77% of orders received complete and on time ▪ 3% increase in frequency of out-of-stock inventories ▪ 4% increase in variable distribution costs

Source: Aberdeen Group, July 2008

The Best-in-Class PACE Model

Using SCRM to achieve corporate goals requires a combination of strategic actions, organizational capabilities, and enabling technologies. Table 2 highlights pressures, actions, and capabilities reported by the Best-in-Class companies.

Table 2: The Best-in-Class PACE Framework

Pressures	Actions	Capabilities	Enablers
<ul style="list-style-type: none"> ▪ Growing global operations 	<ul style="list-style-type: none"> ▪ Improve supply chain data quality used for decision making ▪ Collaborate more effectively with supply chain partners to jointly manage supply chain risks ▪ Re-design the supply chain 	<ul style="list-style-type: none"> ▪ Supply chain organization driving supply chain risk initiative ▪ Manage and / or assess supplier risk, logistics congestion and capacity, and risk profile of country ▪ Role-based visibility views for other departments and external partners (e.g. customers) ▪ Supply chain risk assessment matrices 	<ul style="list-style-type: none"> ▪ Supply chain visibility software ▪ Order management software ▪ Inventory management software ▪ Demand management software

Source: Aberdeen Group, July 2008

Aberdeen Insights — Strategy

Companies plan to achieve SCRM improvement by implementing a data-driven, collaborative approach. Their actions are targeted at addressing both upstream (supplier and trading partner) and downstream (customer-related) challenges in the corporate supply chains. Companies are planning to take the following actions in the next 12 months in order to adopt a more pro-active supply chain risk management approach:

- Collaborate more effectively with supply chain partners to jointly manage supply chain risks - 59%
- Improve supply chain data quality used for decision making - 54%
- Re-design the supply chain - 34%
- Implement new software solutions - 27%

Risk assessment: companies should define their SCRM strategy and identify key supply chain risks and critical vulnerabilities.

On the supply chain planning side, the processes that need to include risk considerations include supply chain network design efforts, sales and operations planning, and inventory planning.

On the supply chain execution side, companies need to improve their logistics and transportation management capabilities, secure alternative third-party supply chain partners if needed, and ensure pro-active alerting process and response management for disruptions.

In addition, the enterprise risk management group (if it exists) needs to be fully aware of the potential impact of supply chain disruptions on corporate business performance, and incorporate supply chain risks into the corporate-wide risk management efforts.

Chapter Two: Benchmarking Requirements for Success

A sound SCRM strategy requires re-evaluation - and sometimes reengineering - of the current business processes and often calls for improved information technology infrastructure to enable event / milestone visibility and support for the planning and execution processes in the supply chain. Business intelligence tools (e.g. for statistical modeling and risk exposure assessment) also play a role in helping companies better understand and address risks.

Fast Fact

√ Best-in-Class companies are almost 50% more likely than all others to have role-based visibility views for other departments and external trading partners

Competitive Assessment

Aberdeen Group analyzed the Best-in-Class, Industry Average, and Laggard companies across the following categories: (1) **process** (the approaches they take to execute daily operations); (2) **organization**; (3) **knowledge / information management**; (4) **information technology**; and (5) **performance management** process. Table 3 summarizes this analysis and aims to provide a guideline for best practices based on the Best-in-Class performance across the key metrics.

Table 3: The Competitive Framework

	Best-in-Class	Average	Laggards
Process	Proactive company response / root cause analysis triggered if 1% to 5% of the product has quality issues		
	83%	55%	49%
	Ability to collaborate with supply chain partners		
	70%	69%	52%
	Collaborating internally across our enterprise for supply chain risk management		
	69%	57%	45%
	Trade lane analysis		
	52%	49%	25%
Organization	Using supply chain risk assessment matrices		
	46%	38%	20%
	Supply chain organization driving supply chain risk management initiative		
	67%	37%	36%
Knowledge	Centralized supply chain management organization		
	81%	75%	60%
	Online (real-time) visibility into supply chain issues / disruptions		
	48%	46%	22%
	Role-based exception alerts		
	50%	45%	33%
Knowledge	Role-based visibility views for other departments and external partners (e.g. customers)		
	44%	34%	24%

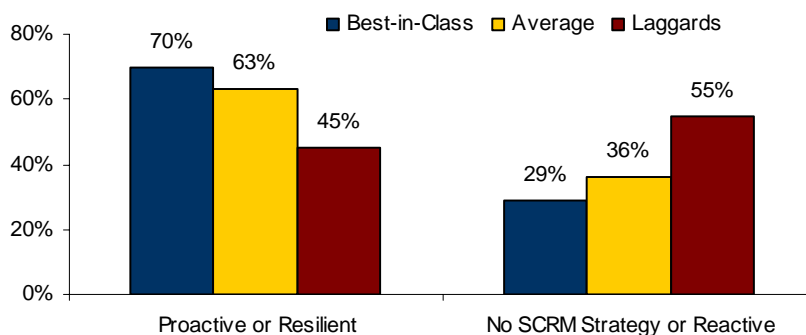
	Best-in-Class	Average	Laggards
Technology	Supply Chain Management (SCM) technology currently in use:		
	<ul style="list-style-type: none"> ▪ 79% inventory management software ▪ 72% order management software ▪ 56% demand management software ▪ 44% supply chain visibility software 	<ul style="list-style-type: none"> ▪ 65% inventory management software ▪ 58% order management software ▪ 53% demand management software ▪ 32% supply chain visibility software 	<ul style="list-style-type: none"> ▪ 56% inventory management software ▪ 50% order management software ▪ 34% demand management software ▪ 23% supply chain visibility software
Performance	Monitor the performance of the following trading partners at least monthly:		
	<ul style="list-style-type: none"> ▪ 37% suppliers ▪ 35% carriers 	<ul style="list-style-type: none"> ▪ 26% suppliers ▪ 22% carriers 	<ul style="list-style-type: none"> ▪ 22% suppliers ▪ 24% carriers

Source: Aberdeen Group, July 2008

Building a Resilient Global Supply Chain: The Best-in-Class Approach

As evident from this study, Best-in-Class organizations have adopted a more holistic view of supply chain risks compared to their lower-performing peers, and have made more progress in improving their supply chain processes in order to be better positioned to foresee, spot, and respond to potential disruptions. As a result, they are much further ahead in building a resilient supply chain.

Figure 4: Best-in-Class Supply Chains are More Resilient



Source: Aberdeen Group, July 2008

Process - Assessing and Managing Supply Chain Risks

As mentioned in Chapter One, Best-in-Class companies are more likely to assess and / or manage a variety of supply chain risks, including their much stronger focus on addressing upstream supplier risks and logistics capacity / congestion. Best-in-Class companies are also more likely to have a more structured approach to analyzing their risk exposure: for example, they are over twice as likely as Laggards to use supply chain risk assessment matrices. Although only 34% of all companies have developed such matrices,

an additional 36% are planning to adopt them in the future. Companies that already use risk assessment matrices to estimate their exposure to supply chain risks are almost twice as likely to be at the "pro-active" or "resilient" stage in their SCRM strategy.

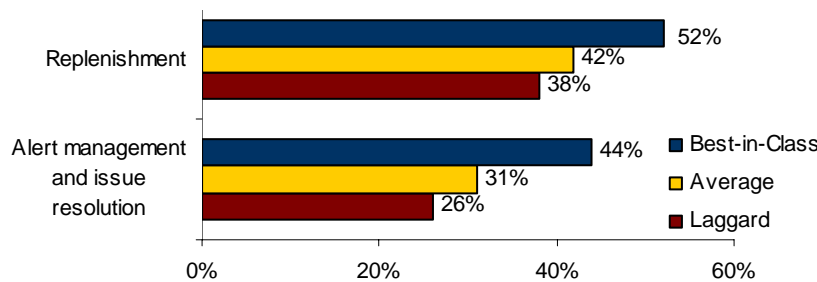
The Importance of Quality Data

The importance of accurate data in assessing supply chain risk exposure should not be underestimated. Best-in-Class firms are 50% more likely than Laggards to receive "mostly" or "extremely" accurate data from the third parties in their supply chains (about 60% of Best-in-Class reporting it versus about 40% of Laggards). Supply chain visibility can only be attained if the data is accurate and complete, so it is critical that any visibility initiatives (and software implementations) are supported by the data quality initiatives to ensure that the systems are analyzing correct information. For more information, refer to the December 2007 Aberdeen Research Brief which discusses the critical role of data quality in supply chain visibility projects: [Data Quality Can Make or Break Global Supply Chain Visibility Projects](#).

Process - Why Collaborate?

Companies collaborate with supply chain partners to various degrees across various supply chain processes, including inventory management (60%), visibility (56%), transportation (56%), and more. Figure 5 highlights two Best-in-Class differentiators in this area.

Figure 5: Best-in-Class Collaborate in Alert Management, Issue Resolution, and Replenishment



Source: Aberdeen Group, July 2008

Collaborative alert management and issue resolution are among the building blocks of effective Just-in-Time (JIT) inventory management. This survey shows that companies utilizing the JIT approach are most likely to collaboratively manage alerts and issue resolution (43%) and are also highly likely to collaborate in replenishment (57%). JIT and Lean supply chain strategies impose more demands on the companies' supply chains, driving them to become more active in managing supply chain risks.

Case Study - YMCA Increases Collaboration with Suppliers to Reduce Supply Chain Disruptions

YMCA of Greater St. Paul and Metropolitan Minneapolis (“YMCA”) offers member services to its 22 branch locations that range from fitness facilities, child care, to overnight camps. The company works with transportation, apparel, utilities, cleaning, chemicals, and food service distributors.

“My sourcing goal was to ensure our suppliers fit with our business culture. Our supply chain is an area of our organization we want to utilize to reduce costs and ensure 100% member satisfaction,” said Heidi Murphy, Procurement Director. “We needed to be working with proactive suppliers.”

As part of improving supply chain operations, Murphy spearheaded the establishment of a new Request for Proposal (RFP) process, aimed at increasing the level of supplier responsibility to better collaborate on disruption tracking and notification. During this new RFP process, Murphy identified two areas as key supplier differentiators:

- **Automated commodity reports.** In order to dynamically track any changes in price on goods, YMCA works with suppliers that are able to send detailed commodity reports. These reports detail the various factors that impact prices, such as weather or local economy. In September 2007, the organization worked with its transportation provider to benchmark and forecast oil prices, oil availability, and its impact on fuel cost. The decision was made to have the transportation provider purchase diesel futures contracts, which effectively reduced the cost impact of potential fuel charges changes by 30% through the end of 2008.
- **Recall reports.** As food represents a significant portion of the operations expense budget of its purchases, YMCA wanted to work with suppliers that could alert it proactively in the event of product recalls. It was important that the supplier could automatically send notification of a recall and the quantity of that item that had been delivered to the organization.

Since the time when Murphy identified the need to work with “proactive” suppliers, the company’s vendor base has changed slightly: as a result, the company has reduced risks related to product quality, variability in costs, and customer satisfaction.

Process - Responsiveness and Agility

Responding to Product Quality Issues

Best-in-Class companies are 57% more likely than all others to ensure a proactive response and root cause analysis if 1% to 5% of their product has quality issues. This is just one example of a pro-active approach to managing problems in the supply chain; for example, this may pinpoint a compliance problem with a supplier that may need to be resolved, or a supplier may need to be changed. Resolving potential quality issues early can help in avoiding potential losses from a product recall if a serious quality issue comes undetected.

Responding to Demand Fluctuations

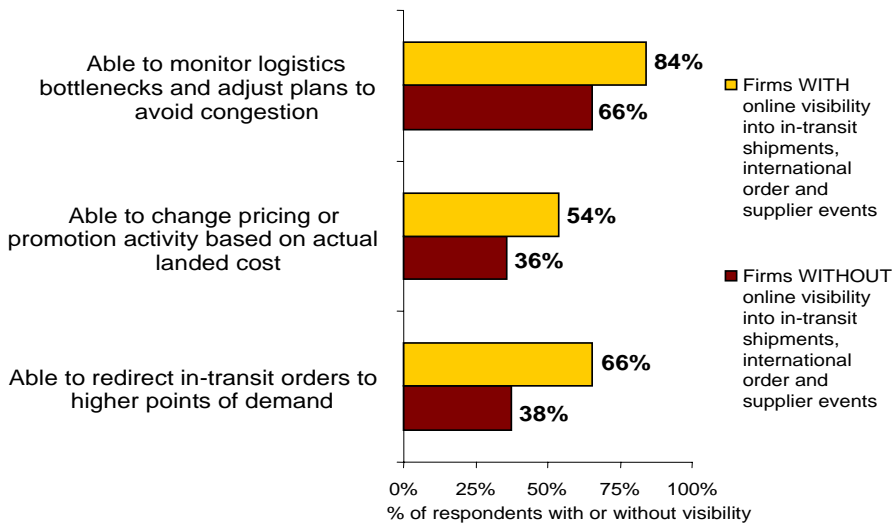
Best-in-Class companies are not only more willing to take action to address risks, they have also developed a more agile supply chain planning process and execution infrastructure that makes it possible for them to respond. An important indicator of their ability to adjust to changes in the supply chain, Best-in-Class companies are about **40% more likely than all others to be able to respond to a 20% increase or a 20% decrease in customer demand for their product within one month.**

Developing Logistics Agility

In order to achieve quicker response times to unexpected shipment or logistics disruptions, companies need to increase the agility of their global supply chains. Supply chain partner collaboration, visibility, and seamless execution are necessary for success in this endeavor.

A December 2007 Aberdeen Research Brief, [*Strength in Numbers: Collaboration is Crucial for Global Supply Chain Agility*](#), examines the impact of collaboration and visibility on supply chain agility. The analysis shows that when firms collaborate around visibility, transportation, replenishment, and alert management and resolution they are twice as likely to have visibility into international order, supplier, and in-transit shipment events. This visibility then enables various agility actions that better position a company to respond to supply chain disruptions. Figure 6 shows some examples of such an impact.

Figure 6: Examples of Dynamic Agility Enabled by Visibility



“Our key challenge right now is that we don't get enough information from our customers and almost none from our suppliers. All the great software in the world won't help if you don't work collaboratively with your partners.”

~ Tier-Two Aerospace and Defense Manufacturer

Source: Aberdeen Group, September 2007

Organizational Structure for Effective SCRM

In a Best-in-Class organization, the supply chain group is responsible for driving 63% of SCRM initiatives (not counting its involvement in cross-functional teams). This means that SCRM is as much a tactical undertaking as it is strategic. Although the supply chain organization is better positioned to direct tactical SCRM efforts, there needs to be more company-wide awareness of SCRM. Although 33% of companies indicated having a dedicated Enterprise Risk Management Department, only 3% indicated that this department was leading their SCRM initiatives. Corporate risk managers are not yet fully aware of the role and impact of the supply chain.

Organizations need to promote company-wide awareness of the impact of supply chain risks on the business as a whole. Having a globally centralized supply chain organization, with chief supply chain executives directly communicating with the top management, can certainly increase the level of awareness and understanding of the importance of mitigating global supply chain risks.

Knowledge Management - "Pro-Active Visibility"

Much has been said about the importance of supply chain visibility. This study argues that it is "pro-active" visibility that matters most in managing supply chain risks - i.e. when companies get the right information when it matters, from all critical internal stakeholders, as well as external supply chain partners (including suppliers, customers, carriers, logistics providers, agents, government etc). Best-in-Class and Industry Average companies in this study are over twice as likely as Laggards to have online (real-time) visibility into supply chain issues and disruptions. Collaborative, role-based alerts play an important role in how these companies manage their supply chains.

Establishing role-based visibility views for other departments and external trading partners is also a form of collaboration. **Best-in-Class companies are 46% more likely than all others to have this capability.**

Information Technology

The four software types more actively used by the Best-in-Class firms in this study address the core processes in supply chain management, creating the foundational infrastructure for effectively managing manufacturing and distribution processes:

1) **Inventory management software** helps companies optimize inventory routes, better allocate inventory, store inventory at the right level and quantity. This enables a company to reduce the frequency of out-of-stocks, improve order fulfillment rates and increase customer satisfaction. The April 2008 Benchmark Report provides an in-depth look at this area: [Technology Strategies for Closed Loop Inventory Management](#).

2) **Order management software** helps create a more seamless order entry and management process. An order management system could be helpful in processing orders faster when more products are needed in response to an unanticipated surge in demand. However, a number of other factors are also important in enabling companies to respond to a surge in demand faster (i.e. supplier production capacity, etc.)

3) **Demand management software.** With only 23% of companies reporting that they are actively managing the risk of customer demand fluctuations, and the growing global demand for raw materials causing shortages and price increases worldwide, it is not surprising that the most frequent supply chain disruption over the past year has been when supplier capacity did not meet the buyer's demand. In these circumstances, it is especially important to have sound capabilities for demand forecasting and management, in order to be able to anticipate and manage customer requirements most effectively. For more information on how to achieve excellence in demand management, see the November 2007 report [Demand Management in Discrete Industries: Order to Delivery Excellence](#), and the December 2006 report [Demand Management in Consumer Industries](#).

4) **Supply chain visibility software** plays a critical role in enabling companies to timely monitor and control their global supply chains, offering visibility into events, milestones, deviations, and disruptions in the supply chain and thus providing supply chain managers with information needed for operational decision making. **Companies using supply chain visibility software are 80% more likely to have online (real-time) visibility into supply chain issues and disruptions (57% versus 31%).** It is important for companies to have visibility into their supply chains to timely react to disruptions and ensure their minimal impact on the business.

A September 2007 study of 225 companies with global supply chains for the Benchmark Report, [A View from Above: Global Supply Chain Visibility in a World Gone Flat](#), has also shown that it is important for companies to go beyond

On-premises, On-demand, or Managed Service?

On-premises deployment continues to be the primary deployment method for most categories of software solutions described in this study. Best-in-Class companies are altering the landscape slightly, as they have a higher adoption rate of on-demand visibility software. Best-in-Class companies are twice as likely as all others to be using on-demand supply chain visibility software - 24% versus 10% on average.

monitoring to analyzing their supply chain data, in order to optimize processes and reveal vulnerabilities.

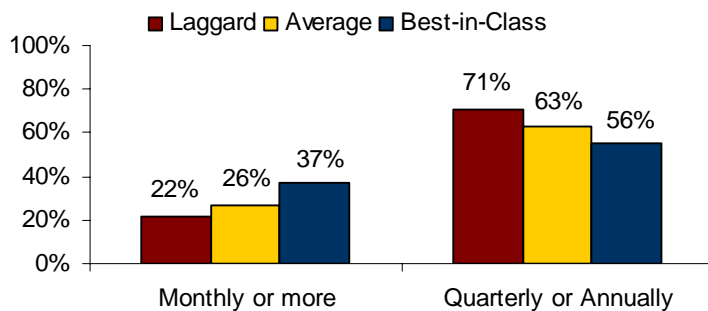
In the current study:

- **Best-in-Class companies are about twice as likely as Laggards to perform trade lane analysis and genealogy / traceability analysis at the item level**, which provides them with valuable information about their upstream supply chains. Item-level product traceability can play an important role in effectively managing product recalls, should a product quality problem occur.
- Best-in-Class and Industry Average firms are also more than twice as likely as Laggards to perform **statistical modeling of supply chain risks** (although only about one-third of them do it). Specialized software capabilities are required to help in this process. This analysis helps companies develop better SCRM strategies to address their biggest vulnerabilities.

Performance Management

Regularly measuring both their own and the trading partners' performance is necessary to building a resilient supply chain. Best-in-Class companies are 54% more likely to rate the performance of suppliers on a monthly or more frequent basis. Best-in-Class companies are collaborating more actively with suppliers, which helps them improve data quality and rate their suppliers more accurately and frequently.

Figure 7: Rating Supplier Performance



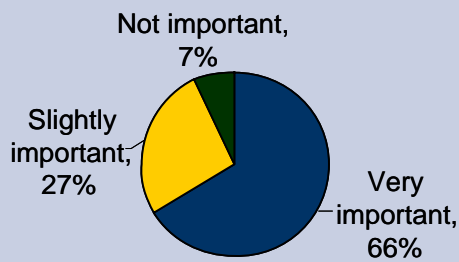
Source: Aberdeen Group, July 2008

Aberdeen Insights — Technology

Most companies recognize that information technology has to play a role in their SCRM strategy.

The role of information technology extends beyond reducing transaction processing costs and eliminating manual labor-intensive record keeping - its true value is in providing a company with a more visible and controllable way of managing supply chain operations.

Figure 8: How Important Is Information Technology for Your Firm's Supply Chain Risk Management?



Source: Aberdeen Group, July 2008

The capabilities described in this chapter - including visibility, collaboration, effective demand and inventory management, as well as shipment process, can all be made more efficient through streamlining and the right level of automation. This, in turn, strengthens a company's ability to avoid and respond to supply chain disruptions.

Chapter Three: Required Actions

Companies should consider the following strategies for enhancing their supply chain risk management:

Laggard Steps to Success

- **Begin thinking about supply chain risks.** Ninety-nine percent (99%) of this study's participants have experienced at least one supply chain disruption in the past 12 months, leading to financial losses (58%), lost market share (30%), and brand reputation damage (24%). Quantifying the damage from past disruptions and finding the biggest vulnerabilities should be the first step.
- **Evaluate your supply chain infrastructure.** During the evaluation, ask: are there processes and technologies in place to provide the necessary level of visibility, faster information exchange, and escalation of issues and disruptions? Effective supply chain management is a key to reducing exposure to supply chain risks: this includes the core internal processes of anticipating demand, planning operations, organizing delivery, and managing inventory. Improving integration and collaboration with trading partners can help optimize many supply chain processes. Increasing the use of inventory management, demand management, and supply chain visibility software can further optimize these processes, positioning the company to make better supply chain decisions.
- **Make your staff aware about the dangers of supply chain disruptions.** Train employees on disruption response procedures so that if it occurs, the impact can be minimized.

Industry Average Steps to Success

- **Adopt "pro-active visibility."** Enable role-based supply chain visibility and alerting within your organization, as well as extend it to external supply chain partners. Work on improving the quality of data received from the third parties.
- **Assess and manage more supply chain risks.** Starting with the assessment of critical supplier performance and logistics vulnerabilities, continue to evaluate exposure to other risks, notably demand fluctuations, and potential inefficiencies in the supply chain infrastructure that can increase your supply chain's vulnerability. Work on developing supply chain risk assessment matrices by incorporating factors that impact your supply chain in order to formalize decision making in SCRM.
- **Rate supplier performance at least monthly.** Communicate the results of supplier performance evaluation to them at least once

Fast Fact

√ 99% of this study's participants have experienced at least one supply chain disruption in the past 12 months

per quarter: Best-in-Class companies are 20% more likely than the Industry Average (and 40% more likely than Laggards) to do so.

- **Collaborate.** Enhancing collaboration with supply chain partners enables your company to not only get better data and get alerted faster of any impending issues, it also ensures a more effective response and resolution should a disruption occur.

Best-in-Class Steps to Success

- **Continue expanding the number of actively assessed and managed supply chain risks.** There are still many gaps in SCRM even among the Best-in-Class companies.
- **Use advanced data analysis, supply chain risk decision matrices, and statistical modeling to institute a more data-driven approach to strategic SCRM.** Identify key vulnerabilities and the worst case and best case scenarios of the potential disruption impact. Develop and regularly revise response and recovery plans, establish relationships with potential back-up carriers and suppliers.
- **Consider other applicable ways of hedging from the impact of non-controllable risks** that go beyond supply chain strategies - e.g. hedging the potential currency exposure or a likely terrorist attack in a volatile market.

Aberdeen Insights — Summary

Supply chain risk management is gaining importance for global companies. It incorporates not only tactical decision making in response to disruptions, but also forward-looking assessment of the potential impact of risk events such as manufacturing disruptions, supplier non-performance, logistics or transportation related disruptions, unanticipated changes in demand, political instability or potential financial market or exchange rate fluctuations. To mitigate financial and other negative impacts on their business, companies need to improve their strategic supply chain planning, network design and execution processes, in order to ensure that their response times to disruptions are quick and that their supply chain networks are flexible and agile enough to adequately adjust if a risk event occurs.

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Appendix A: Research Methodology

In May to June 2008, Aberdeen Group examined supply chain risk management practices and priorities of 138 companies. The online survey was supplemented with interviews with select survey respondents.

Responding enterprises included the following:

- *Job title / function:* 12% - C-level or VP, 25% - Director, 39% - Manager, 24% - other
- *Industry:* Pharmaceutical manufacturing – 11%, aerospace and defense, health / medical / dental devices, general manufacturing – 10% each, automotive, consumer electronics, industrial equipment manufacturing – 9% each; retail, computer packaged goods – 7% each
- *Geography:* Study participants were headquartered in: North America (Includes USA, Canada, Mexico) - 63%, Europe, Middle East, Africa - 24%, Asia/Pacific - 10%, South / Central America and Caribbean - 3%
- *Company size:* 49% - large enterprises (annual revenues above US \$1 billion); 39% - mid-size (annual revenues between \$50 million and \$1 billion); 12% - small businesses (annual revenues of \$50 million or less).

Study Focus

Aberdeen's [research study in September 2007 of 225 companies with global supply chains](#) found that 60% of them did not have a formal process for addressing their supply chain's resiliency to risk-related events, despite being highly concerned about it. The growing global supply chain complexity is forcing companies to re-evaluate their supply chain risk management capabilities. In the latest research study, Aberdeen Group investigates what Best-in-Class organizations are focusing on to mitigate supply chain risks and which strategies and technologies are the most effective.

Table 4: The PACE Framework Key

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

Source: Aberdeen Group, July 2008

Table 5: The Competitive Framework Key

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

Source: Aberdeen Group, July 2008

Table 6: The Relationship Between PACE and the Competitive Framework

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

Source: Aberdeen Group, July 2008

Appendix B: Related Aberdeen Research

Related Aberdeen research publications include:

- [Sales and Operations Planning: Aligning Business Goals with Supply Chain Tactics](#); June 2008
- [Technology Strategies for Closed Loop Inventory Management](#); April 2008
- [Global Trade Compliance Priorities in 2008](#); March 2008
- [Supply Chain Innovator's Technology Footprint 2008](#); March 2008
- [The Supply Chain Executive's Strategic Agenda 2008](#); November 2007
- [Demand Management in Discrete Industries: Order to Delivery Excellence](#); November 2007
- [A View from Above: Global Supply Chain Visibility in a World Gone Flat](#); September 2007
- [The Responsive Supply Chain: Managing Market Events in the Consumer Goods Industry](#); July 2007

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

Authors: Viktoriya Sadlovska, Research Analyst, Supply Chain Finance / Global Trade (viktoriya.sadlovksa@aberdeen.com)

Melissa Spinks, Research Associate, Supply Chain Management (melissa.spinks@aberdeen.com)

Robert Shecterle, VP / Group Director - Supply Chain, Global Supply Management, Retail (robert.shecterle@aberdeen.com)

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