18th Annual Trends and Issues in Logistics and Transportation

Drivers of Sustainable Supply Chain Management Practice

Synchronization

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The 2009 Drivers of Sustainable Supply Chain Management Practice

18th Annual Trends and Issues in Logistics and Transportation

Executive Summary

In response to the current economic conditions, many firms are taking actions that we believe are reactionary to the situation. While these changes may have an immediate impact, the concern is that they are not changes that will sustain the business in the long run. Experience has shown that during economic downturns firms often focus on cost reduction without consideration given to the long-term impact it may have on the business. Once the economy recovers these firms will not be in a position to take advantage of growth opportunities. This led us to ask, what are the drivers of sustainable transportation, logistics, and supply chain management practice? That is, what capabilities should firms be developing that will enable them to continue to advance in both good and bad economic times?

This year's annual study examines the trends and issues facing transportation, logistics and supply chain professionals during these unprecedented economic conditions. This examination enables us to provide an assessment of the current state of practice and to identify opportunities for improvement. More importantly, the study makes it possible for us to examine the five fundamental capabilities – optimization, synchronization, profitability, adaptability and velocity - that firms must develop in order to build sustainable supply chain management practices. The first report from the 2009 annual study provided an overview of the drivers, and the second report provided a detailed view of the "Optimization" driver. This report provides a more in-depth look at the next key driver, "Synchronization."

Supply chain synchronization helps manufacturers reduce time to market, decrease cost and manage inventory turns through the end-to-end coordination, organization and management of the supply chain. Perhaps no other organized group best depicts this ability than a school of fish that seem to effortlessly coordinate and harmonize their moves. Some of the key findings regarding the state of supply chain synchronization include:

- Supply chain visibility is not increasing at a rate to support the desired level of synchronized flows – including materials, finished goods, data and information and financials.
- North American (NA) companies tend to have better visibility of customers' point-of-sale (POS) data than European Economic Area (EEA) firms; EEA firms tend to have better visibility of finished goods inventory beyond their country's borders compared to NA firms.
- Communication, top management support and visibility of demand are the three most important criteria for successful collaboration for both NA and EEA firms.

A supply chain that does not have synchronization as part of its core capabilities will not win the competition of supply chain against supply chain. Winning involves the synchronization of global resources to create the most effective and efficient supply chain possible. We hope that this report will assist you in your efforts to develop this capability that is a fundamental building block to sustainable supply chain management practice.

Sincerely,

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Synchronization is the ability to coordinate, organize and manage end-to-end supply chain flows – products, services, information, and financials – in such a way that the supply chain functions as a single entity.

Sustainable Supply Chain Management Practice

Many of the changes that firms have made during this recession are not ones that will enable them to lead the competition when the economy rebounds. This is because they have not built supply chain management practices that will be sustainable in good times as well as bad. Our earlier report - Drivers of Sustainable Supply Chain Management Practice - presented five drivers that constitute the core of sustainable practice in supply chain management. These drivers – optimization, synchronization, profitability, adaptability, and velocity – comprise the engine that will fuel the firm's growth and success. They represent capabilities that will be difficult for the competition to emulate, and they are fundamental to creating a supply chain that will outpace the competition.

Why are these drivers so critical to successful supply chains? Perhaps it is the unique set of capabilities, both individually and collectively, that they represent.

Drivers of Sustainable Supply Chain Management Practice

Optimization is the alignment of global supply chain resources – both tangible and intangible, own or outsourced – to facilitate the success of supply chain members.

Synchronization is the ability to coordinate, organize and manage end-to-end supply chain flows – products, services, information, and financials - in such a way that the supply chain functions as a single entity.

Profitability is the result of creating value through supply chain activities. Asset performance, working capital, returns on investment for infrastructure, technology, and people, are some of the critical parts that create value in a global environment.

Adaptability is the degree to which respective supply chain members can change practices, processes and/or structures of systems and networks in response to unexpected events, their effects or impacts.

Velocity is the speed at which end-to-end flows occur in the supply chain. It encompasses speed-to-market for new product introduction and execution when conditions are rapidly changing.

The purpose of this report is to take a more in-depth look at the role and purpose of one of the drivers - synchronization - in creating the type of supply chain that is needed for the "new normal." This examination would not be complete, however, without an assessment of the current state of practice.

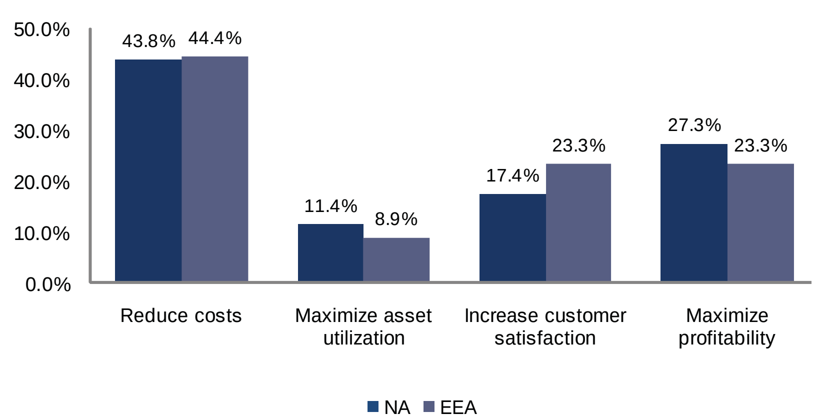
Challenges and Issues with The "New Normal"

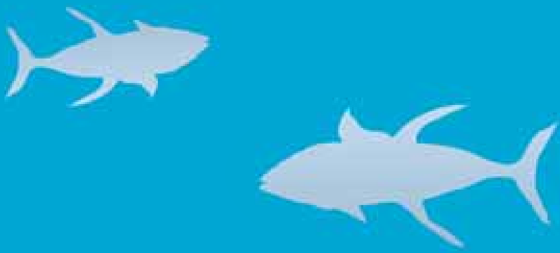
The recession has prompted many firms to consider how they can endure during these very difficult times. For many firms this has led to a relentless focus on reducing costs. There is an expectation that firms will be able to generate double digit savings on an annual basis and enhanced service in response to increasing customer requirements. The economic slide since 2008 has placed tremendous pressure on firms to become much more efficient and effective than ever before – with far fewer resources. It is somewhat uncommon, however, for firms to place a priority on increasing or achieving high levels of customer satisfaction before concentrating on achieving profitability. While customer satisfaction is a key component of the firm's success, there is also a great deal of pressure on the firm to achieve short- and long-term financial results. The ability of the firm to achieve the desired financial results depends to a certain extent on cost management.

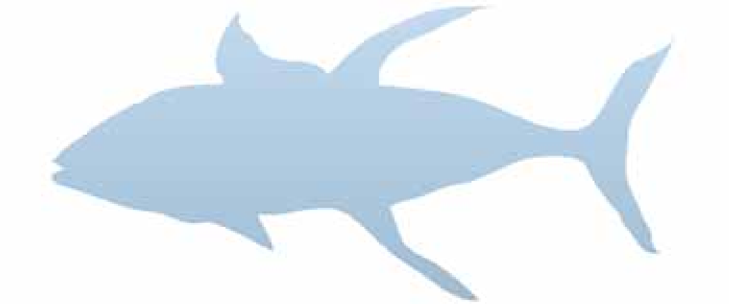
Data from our 2009 study on the trends and issues in logistics and supply chain management indicate that both North American (NA) and European Economic Area (EEA) companies are focusing their efforts on improving the efficiency of their organizations. The percentage of firms that cited reducing costs as their primary objective for 2009 has increased from the previous year for both NA and the EEA. The most dramatic shift occurred in the EEA where the number of firms that are focusing on reducing costs increased by 56.8 percent from 2008 to 2009. Before 2009, the primary objective for EEA firms was increasing customer satisfaction, followed closely by profit maximization and reducing costs.

In North America, however, the shift from focusing on increasing customer satisfaction to reducing costs occurred in 2006. Interestingly the percent of companies that concentrate on maximizing profit and asset utilization have remained fairly stable over time.

Shifting Corporate Objective during Tough Economic Times







Corporate Express Europe

How Corporate Express Europe realized improved supply chain visibility and replenishment processes?

Corporate Express is one of the world's leading suppliers of office products to businesses and institutions, serving as a one-stop shop for office essentials via its e-commerce and distribution businesses. The company was acquired by Staples in July 2008, resulting in the world's largest office products company, selling a wide range of office products, including supplies, technology, furniture and business services. The newly combined companies serve businesses of all sizes and consumers with 350 warehouses in 27 countries.

Global companies like Corporate Express typically operate as a series of independent, geographically dispersed divisions; often as a result of expanding their global presence and product portfolios through acquisitions and mergers. Corporate Express Europe, like its parent company, grew through a multitude of acquisitions that resulted in fragmented business systems as each acquired company maintained its own Enterprise Resource Planning (ERP) system and replenishment solutions. In order to optimize supply chain planning and business performance, Corporate Express Europe sought technology that would enable it to improve global supply chain visibility and agility by taking a synchronized, cross-functional and strategic approach.

"We recognized the need for a slick, uniform system to maintain and improve our customer service levels," explained Jan van Noord, project manager logistics, Corporate Express Europe. "With that understanding, our criteria consisted of finding a proven solution that could be rolled across Europe and serve the needs of every country, as well as integrated with our enterprise-wide ERP system."

"Six months after (the replenishment system) was implemented, our warehouse in France realized a 14 percent reduction in stock levels. There was also a 25 percent reduction in back-order lines due to better product availability. In addition, availability has increased at our U.K.-based warehouses - although volumes remain the same, our stock levels are more balanced across the business. It's now a lot easier to check the number of products for any particular country and, when required, move stock from one warehouse to another for improved availability across Europe."

-Jan van Noord, Project manager logistics, Corporate Express Europe

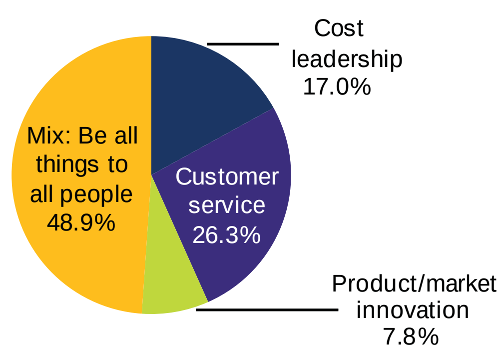
The data suggest that in times of economic hardship or uncertainty firms direct their efforts to efficiency much more so than in times of economic growth when effectiveness – or service – becomes more important.

That being said, the firm's objective must support the corporate business strategy in order to provide clear direction for the structure and alignment of resources. How does the focus on cost reduction support the business strategy? Although the largest proportion of study respondents reported that their objective is to reduce costs, other results show that only a small percentage of North American firms see themselves as cost leaders – 17 percent. Instead, most companies view their strategy as a hybrid one where they must "be all things to all people." That is to say that both cost and service form the basis for how the firm competes. Of the four strategic directions, this is one of the most difficult to successfully deploy. Why? It requires that customers and products be differentiated to a degree that distinct, and perhaps unique, service can be delivered in a cost effective manner.

The need to "be all things to all people" has been increasing since 2006 when it passed customer service as the top ranked strategy. The balance between cost and service means that tradeoffs must be carefully evaluated for each and every customer transaction.

Analysis of firms by revenue size revealed that large (greater than $3 billion) and medium-sized ($500 million - $3 billion) firms are much more focused on reducing costs than small-sized firms (less than $500 million). Small firms are placing more emphasis on increasing customer satisfaction.

Both Efficiency and Effectiveness Drive the Firm's Strategy - North America 2009



Why Synchronize The Supply Chain?

Synchronization enables companies to anticipate demand disruptions and anomalies in a timely manner in order to mitigate the infamous bullwhip effect. It helps firms move to a demand-driven environment that is better equipped to deal with uncertainty. Typically supply chain managers handle uncertainty through buffering – i.e., it maintains pools of inventory at multiple places in the supply chain. A synchronized supply chain operates by separating baseline demand from demand surges and then using strategic points in the supply chain for the placement and use of capacity and inventory.

Firms that aren't synchronized often find that they have higher costs than firms and supply chains that have some degree of synchronization in their supply chain. The higher costs can result from inefficiencies in everything from manufacturing change orders to expedited transportation costs. A cost that is not often known due to the lack of synchronization, however, is the total cost due to excess inventory carried by supply chain members in an attempt to cover their exposure to risk.

Simply recognizing that a firm is operating in a reactive mode does not guarantee that necessary changes will be made. That is, firms will not necessarily make the needed investment in improving synchronization unless organizational behavior, management processes and technological infrastructure issues are addressed. Changes to these areas will not happen unless management is convinced that doing otherwise would be detrimental to the wellbeing of the firm. To achieve the ideal state of synchronization, a firm must consider an even broader perspective. It is not just what is good for the firm, but rather what is best for the many members of the entire supply chain.

▶For small firms (<$500M in annual sales revenue) communication is significantly more important to successful collaboration than it is to medium-sized (annual sales revenue of $500M-$3B) or large-sized firms (>$3B in sales revenue).

For medium-sized firms, visibility of demand is significantly more important to their collaboration efforts.

Improving Supply Chain Responsiveness at a Leading European Grocery Retailer

How does a leading European Grocery Retailer with nearly 1000 stores and over 10 million SKU/Store combinations respond when the need to cater to rising consumer incomes, expectations and individualism translates into higher supply chain complexity and costs? The answer: Improve visibility and enhance collaboration between retail stores and central functions in order to replenish stores more efficiently while simultaneously lowering logistics costs.

Working with a leading edge supply chain consulting form, the retailer realized that the increasingly unpredictable nature of consumer behavior makes planning more and more difficult. So, more time is spent on planning but the results are less valuable because planning involves making assumptions about what will happen rather than reacting to what customers are actually doing. Consequently, the retailer determined that the only way to be responsive to increasing consumer demands was to build processes and define rules that required less day to day planning. According to the retailer's VP of Supply Chain: "Ten years ago we made a fundamental choice to no longer believe in the power of forecasting. We don't believe in the predictability of customer behavior. As the offer in products, information and services keeps growing forecasting is getting more difficult."

They quickly determined that this required development of a highly automated replenishment process with a single point of customer demand forecasting and centralized control management. "Now the supply chain is designed as a pull chain with input from customer behavior and forecasting models. The base for logistics is what the customer buys supported by other parameters around when do customers visit." says the retailer's VP of Supply Chain.

Decisions and store planning and forecasting needed to be much more reactive which required the availability of continuous, near real-time information. Traditional processes were typically built around batch processing cycles, usually one per day. Moving from a batch to a flow system (continuous operation and continuous decision making) facilitated individualized delivery schedules based on geography, transport costs, type of merchandise etc. Naturally, some batching still occurred in the process, such as deliveries to the distribution center from suppliers or the start of a new promotion but the emphasis is on continuous flow of information, with no artificial barriers to impede the reaction time.

To determine how much of a particular product to send to a particular store requires knowledge of the present and historic service levels as well as constraints of both the product and the store. Each item/store combination has a unique set of parameters. For some products, such as dry groceries, the parameter is simple- when one full case is sold, one new case is ordered. But for items like fresh produce, factors like the desire for freshness, an attractive presentation and the cost of shrinkage must all be taken into account before deciding on an order schedule. Predictive forecasting is only used for special situations such as promotions and events. Once the promotion is started, however, ordering is quickly adjusted to reflect actual consumer behavior in the store (e.g. real time POS data). According to the retailer's VP of Supply Chain "The replenishment process is now fully automated. We have a central control room where the switchboard is operated. Here we monitor the assortment behavior, the effect of the weather, the differences in revenues compared to that type of local store etc. It is all in one place and there is centrally integrated responsibility for all DCs, local stores etc. Local stores only have to focus on sales, their store (clean, products available) and customer attention. The central department decides what products come in, in what amounts and prescribes how to fill the store. The store just has to execute."

As a result of these enhancements to their planning and replenishment processes, the retailer was able to realize some substantial benefits including a 50% reduction in out of stocks. The amount of time employees spend on store processing has declined significantly and improved availability of goods, fewer leftovers and less time spent on ordering has translated into more time for employees to work directly with customers. In addition, supplier investigation into product availability also proved that availability increased 14% during promotions. Most importantly, however, the net result of creating a collaborative, automated, real-time event driven system is increased confidence that on any given day a customer who walks in to any one of the retailer's stores will leave satisfied.

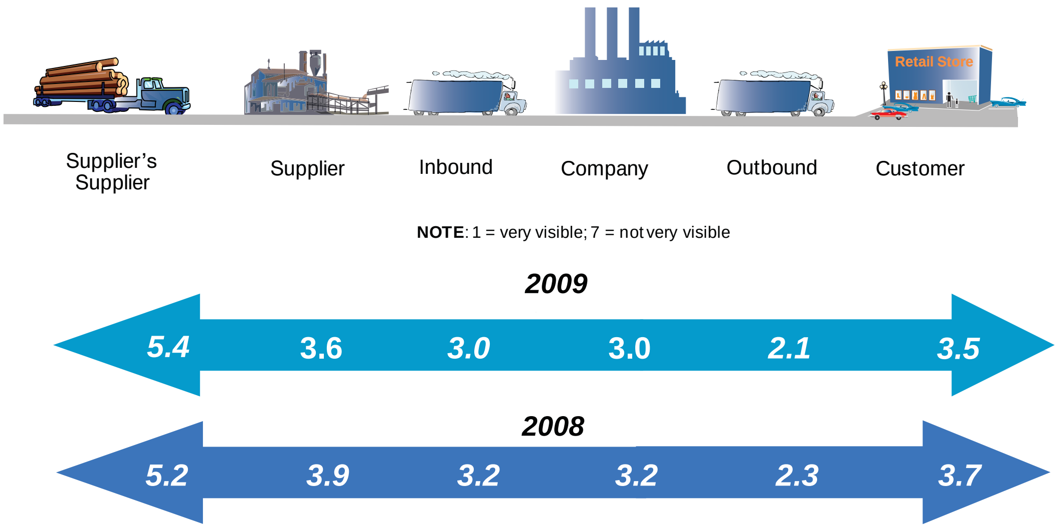
Defining Supply Chain Synchronization

Supply chain synchronization is the ability to coordinate, organize and manage end-to-end supply chain flows – including products, services, information and financials – in such a way that the supply chain functions as a single entity. In other words, it is a shared objective for supply chain members who are willing to work together to determine how best to perform the overall activities and tasks that are required to meet customer demand. Visibility and collaboration are two of the essential ingredients in the synchronization recipe. They play a significant role in managing demand uncertainties and positively impacting a firm's inventory positions and time to market. Each of these factors is discussed in the following sections.

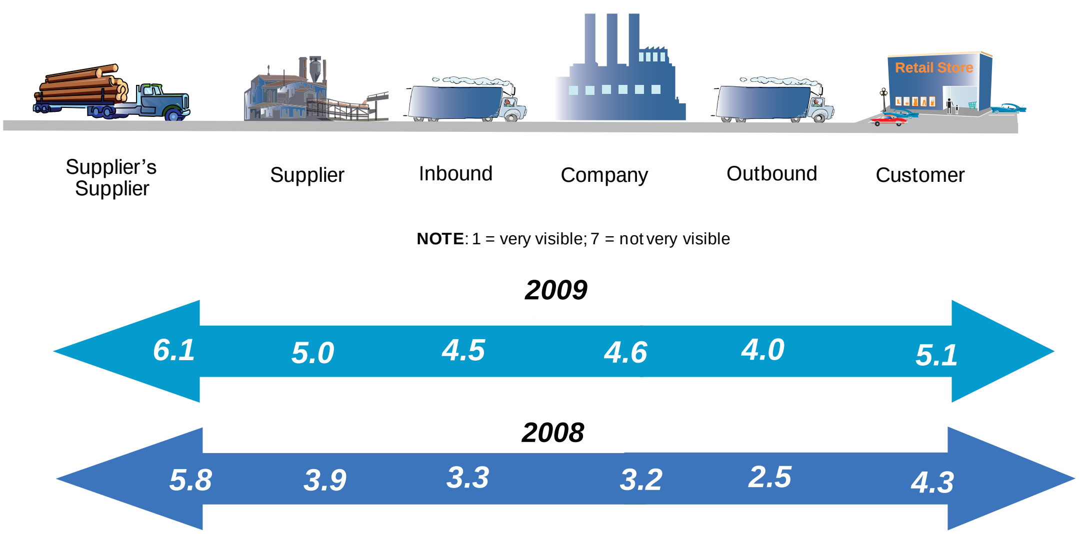
The Role of Visibility in a Synchronized Supply Chain

Visibility is the key to effective planning and efficient operations. It is more than just a tactical supply chain issue; it has profound strategic implications for the entire organization. Visibility enables all supply chain members to easily see and manage the end-to-end flow of products, services and information in real time or near real time as needed. True visibility is present when supply chain members can do this in concert across their existing technology platforms. Visibility involves seamless integration such that access to all types of information enables the supply chain to execute as if it were a single "virtual" entity. The type of information that is accessible ranges from inventory in transit or on hand, work in progress, as well as product availability all the way through to the status of an order.

Domestic Supply Chain Visibility Improving



International Supply Chain Visibility Getting Worse



Merck Serono

One Synchronized View of Demand Helps Merck Serono Increase Sales, Reduce Inventory and Enhance Service Levels

Merck Serono International S.A., the Geneva-based division of parent company Merck KGaA of Darmstadt, Germany, is a global pharmaceutical and biotechnology leader that is committed to bringing therapeutic innovations to patients. As an industry leader in biotechnology, Merck Serono is focused on developing specific treatments that provide beneficial therapeutic outcomes in the areas of oncology, neuro-degenerative diseases, fertility, endocrinology and cardio-metabolic care, as well as autoimmune and inflammatory diseases.

Even a successful, global corporation like Merck Serono is not immune to the ever increasing demands and expectations of being a leader in the highly competitive pharmaceutical and biotechnology research and development industry. Merck Serono's biggest challenge was the integration of two very different supply chains for traditional pharmaceuticals and biotechnology-based pharmaceuticals. The traditional pharmaceutical supply chain was locally driven with more of a pull concept – purchase orders from the affiliates to the manufacturing sites. The biotechnology supply chain was centrally managed with more of a push concept – automatic replenishments from the manufacturing sites to affiliates. During the time of integration, another challenge was to maintain and ensure high customer service levels that were aligned with Merck Serono's "no stock-out" philosophy. Additionally, Merck Serono needed to improve sales forecasting accuracy and manufacturing planning to drive production efficiency, as well as reduce inventories to release cash flow.

To achieve its strategic business objectives, Merck Serono needed a highly precise sales forecast to pinpoint and predict consumer demand with the highest level of accuracy, effectively driving the distribution and the production of its manufacturing sites. Secondly, in order to optimize and reduce the stock levels at various distribution centers and production facilities, Merck Serono required a highly efficient distribution planning process. Additionally, increasing customer service levels with better product availability, from the delivery of raw materials to the final product, was one of the driving forces for the implementation of Merck Serono's tactical planning project to improve the efficiency of its supply chain and achieve one synchronized view of demand. Merck Serono's innate ability to combine its strong research and development initiatives with logistics and supply chain opportunities is a testament to this company's ongoing success. Key to Merck Serono's prescription for supply chain excellence was its proactive and adaptive approach to addressing supply chain challenges, as well as the company's strategies to expand its product offering into new specialist areas with significant unmet medical needs.

"As a recognized biotechnology leader, Merck Serono's expertise in research, development and production ensures absolutely high-quality manufacturing, a key success factor in the biopharmaceutical industry," said Didier Dayen head of supply chain process at Merck Serono.

"Implementing (advanced demand planning and fulfillment solutions provided by a leading demand chain software firm) provides Merck Serono with one synchronized view of demand. Having only one tool as a demand data repository in the entire company worldwide allows us to easily follow an aligned process across the organization. Additionally, having only one-application instance forces us to define clear rules in terms of forecast data availability and process. We now have timelines for data availability and for forecast submissions within the whole organization."

- Didier Dayen, head of supply chain process, Merck Serono

From a tactical perspective, visibility allows supply chain managers to see the flow of materials and orders and to better manage capacity and resources. Because supply chain managers are immediately alerted to when, where and why a problem or change will occur, visibility allows managers to respond in a manner that facilitates better, more proactive decision making rather than a last-minute reaction.

For logistics professionals, visibility is at the core of supply chain event management. It is the glue that binds the logistics and fulfillment processes from order to delivery, and is thought of as the enabler that maximizes a company's supply chain investments. It allows operational sparks to be extinguished before the firefighting even begins and enables managers to see opportunities that were not evident before.

Data from the 2009 study indicate that when it comes to domestic visibility, NA companies of all sizes tend to have "high" visibility in four areas: average customer's finished goods inventory; average customers order processing data/information; as well as their own firm's finished goods inventory at the plant and distribution center. The results also indicate that visibility from outbound to customer is improving. In 2007 it was 4.4 (On a scale ranging from 1 to 7, with 7 being the low score) and in 2009 it is 3.5.

The data presented do not show the various points that are used to calculate the aggregated visibility scores. When these individual points are examined the data indicates that there has also been a fair amount of improvement in visibility for the supplier's finished goods inventory as well as the supplier's inbound shipments, leading to a 16 percent and 17 percent improvement from 2008 to

2009, respectively. What is dismaying, however, is the lack of progress in improving domestic visibility into the extended supply chain. The score for supplier's supplier is relatively unchanged for the past several years.

Instead of posting gains, international visibility is headed in the opposite direction. This is the third consecutive year that the international visibility scores have declined. Much like domestic visibility, the upstream portion of the supply chain has the worst visibility. Perhaps the most unanticipated result was the loss of downstream visibility. The data indicate that visibility of customer information such as POS data and demand forecasts show a sizeable decline from 2008 to 2009. Even more concerning is the decline in visibility that occurred from 2008 to 2009 in outbound shipments from the firm. This loss of visibility may possibly be attributed to changes in service providers who themselves might have less capability in this area. This is a good example of how the quest for cost reduction in the short term can lead to a long-term strategic disadvantage.

A comparison of NA to EEA firms for 2009 shows that overall NA firms have significantly more visibility than EEA firms in the following areas:

- Customer demand forecasts;
- Firm's raw materials inventory;
- Order status information; and
- Supplier's supplier inbound shipments and finished goods inventory.

Relative to visibility beyond its country's borders, NA firms rated as high to moderately high their visibility into customer's POS data; this score was better compared to scores for EEA firms. On the other hand, EEA firms rated as high to moderately high their visibility of average finished goods inventory. Why do these differences matter? Today's supply chains are global entities that reach across vast distances and multiple time zones and languages. All of this reinforces the need to have real-time access to data and information that has no boundaries. The gap in visibility between NA and EEA firms suggests that there is still a significant amount of work that remains to be done before we have a seamless, end-to-end flow of data and information between these two important trading blocks.

Black & Decker Hardware and Home Improvement

With manufacturing and distribution facilities in the United States, Canada, Mexico and China, Black & Decker Hardware and Home Improvement (HHI) is challenged with managing both offshore and onshore supply chains where various products with complex product structures are produced, resulting in multi-site dependencies and lengthening lead times. With a downturn in the economy and the housing market and an increase in price for materials, Black & Decker HHI realized it needed to improve component manufacturing and inventory management to control operational costs. Additionally, the company needed to get a better view of consumer demand as soon as the products were coming off of the shelves.

Black & Decker HHI sought a consumer-centric planning system, that enable them to incorporate their major retail partners' point-of-sale (POS) data, which gave Black & Decker HHI the ability to predict and react to fluctuations in demand faster and more efficiently. The state-of-the-art supply chain technology allowed Black & Decker HHI to synchronize the flow of materials and resources for multi-stage and multi-site production needs. As a result, Black & Decker HHI's forecast accuracy has also improved by 19 percentage points and its finished goods inventory has decreased by 11.4 percent (against a 2.5 percent target).

"We can now compare forecasts, shipment history, as well as POS and order history for any of our SKUs at any given time. At the end of 2007 this resulted in a 10 percent improvement in forecast accuracy. The forecast development cycle time used to take five days and now it takes only two days, allowing our planners to focus on other variations," said Scott Strickland, vice president of information systems, Black & Decker HHI.

In conclusion, Black & Decker HHI's supply chain operations remain highly flexible and continue to deliver cost-cutting initiatives, inventory reductions and productivity improvements despite the economic downturn and increased price for materials.

Improving Supply Chain Visibility: Where Will Firms Expend their Effort in the Next Year?

The growing importance of visibility into the supply chain in order to enable greater efficiency and effectiveness has propelled firms to invest in improving this capability. When it comes to investing in visibility improvements, the study results indicate that firms will be primarily expending efforts to improve visibility with their customers. The exception is large firms whose primary focus will be improving domestic visibility with their suppliers. This effort will hopefully improve the ability to "see" upstream flows in the supply chain.

From an effort standpoint, EEA firms of all sizes mirror their NA counterparts in that improvements to visibility will be focused on customers – both domestically and internationally. Also, NA firms will be expending significantly more effort on increasing visibility with international suppliers and service providers as compared to their EEA counterparts.

How Far Can You See? Order Visibility for North American Firms

In addition to measuring the level of visibility between supply chain members, the study also examined the extent to which firms can see a current order. The data show that firms have the greatest visibility of an order when it is in transit; approximately 41 percent of all companies. These same firms also have about the same degree of visibility of finished goods inventory commitment and the scheduling of production when the required levels of finished goods are not available. As expected, fewer firms (18.5 percent) have visibility into the commitment of raw materials for their specific order.

For large firms, order visibility is better than for small- to medium-sized firms. Some 44.8 percent of the firms in this category reported that they have visibility into orders in transit. When analyzed by size of firm, the data indicates that more large firms are able to see the commitment of finished goods inventory for their order – 53.7 percent. From this point, however, the percentage of all firms – including large size ones - that have visibility into an order further upstream declines steadily. Only 35.8 percent of large-sized firms have visibility into the production schedule, and 23.9 percent have a view of the commitment of raw materials for an order.

What the data does not reveal, however, is the disjointed nature of data and information visibility. A lack of visibility can occur as product moves from one supply chain partner to another. In most cases, shipment tracking data does not carryover between transportation providers. Often multi-modal moves such as ship to rail and/or rail to truck lack data connectivity. If a problem occurs, the consignor and the consignee often don't know until after the fact. This is the situation for billions of dollars in global inventory. The data needed to efficiently and effectively manage the flow is not available. This results in reactionary actions rather than anticipating problems. The inability to recognize and respond to events causes costs to rise higher than necessary. What is lost are key opportunities to find alternate solutions that enable the supply chain to be flexible and responsive to changing conditions.

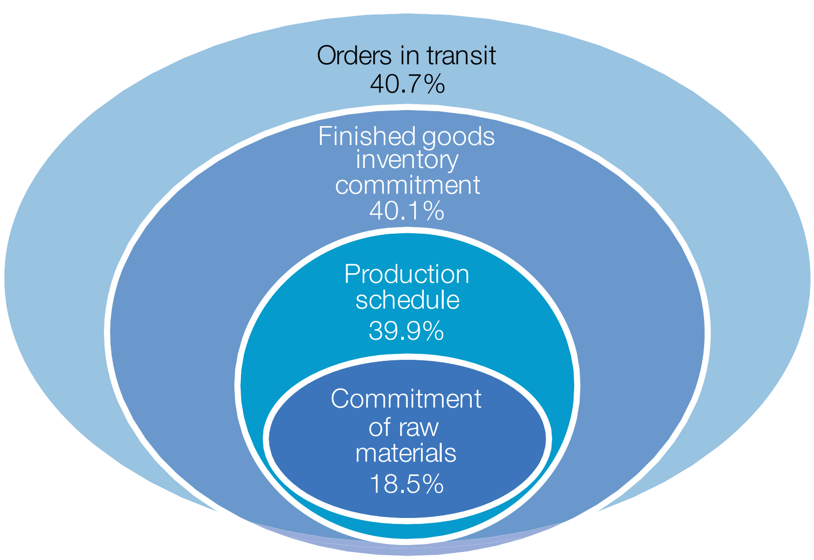
The Role of Collaboration in a Synchronized Supply Chain

Synchronized, coordinated flows of materials, services and financials depend on the willingness and ability of partners to share information and knowledge flows that are generated both upstream and downstream in the supply chain. Because there are simply not enough resources or time to collaborate with every supply chain partner, it is necessary to identify the critical and/or key trading and service partners. For suppliers, this involves the assessment and evaluation of the need for collaboration with second-, third-, and perhaps fourth-tier suppliers. In many cases the "customer" is not the final consumer, and the same assessment and evaluation should be done if customer tiers exist.

Improving Supply Chain Visibility: Where Will Firms Expend their Effort in the Next Year?

	Large Firms >$3 billion annual sales	Medium Firms $500M - $3 billion annual sales	Small Firms <$500 million annual sales
Domestic	Suppliers	Customers	Customers
International	Customers	Customers	Customers

How Far Can You See? Order Visibility for North American Firms



The data indicates that EEA firms are much more willing to share information about demand for their products than NA firms. As a result, EEA firms appear to be more collaborative in terms of managing demand. There were also differences between the two regions in the ranking of important factors for successful collaboration. The data shows that NA firms ranked communication, top-management support and visibility of demand as the top three factors for successful collaboration.

EEA firms concur with NA firms that communication is indeed the most important criteria for successful collaboration. While EEA firms also agree that top management support and visibility of demand are critical to collaboration, visibility of demand is more important than top-management support for EEA firms. Beyond this point, the ranking of other factors varies in importance. It is interesting to note that EEA firms place a higher level of importance on the use of collaboration software tools than do NA companies. When analyzed by size of firm, the data shows that communication is significantly more important to successful collaboration for small firms compared to other firms. For medium firms, visibility of demand is significantly more important to their collaboration efforts than firms of other size firms. While large firms also ranked communication as the most important factor for successful collaboration, they have taken this to a much more strategic level. Large size firms have implemented EDI messaging with their trading partners and service providers at a significantly greater rate than firms of other sizes. This group also improved integration of information systems with external supply chain partners significantly more often than medium- or small-sized firms.

Programs such as Vendor Managed Inventory (VMI), Continuous Replenishment Programs (CRP) and Collaborative Planning, Forecasting and Replenishment (CPFR) are examples of collaboration efforts among supply chain members. These programs depend heavily on the integration of three components – processes, people and technology. The collaborative relationships facilitate the alignment and subsequent integration of internal and external components that make possible the flow of information and the subsequent synchronized flow of materials and goods.

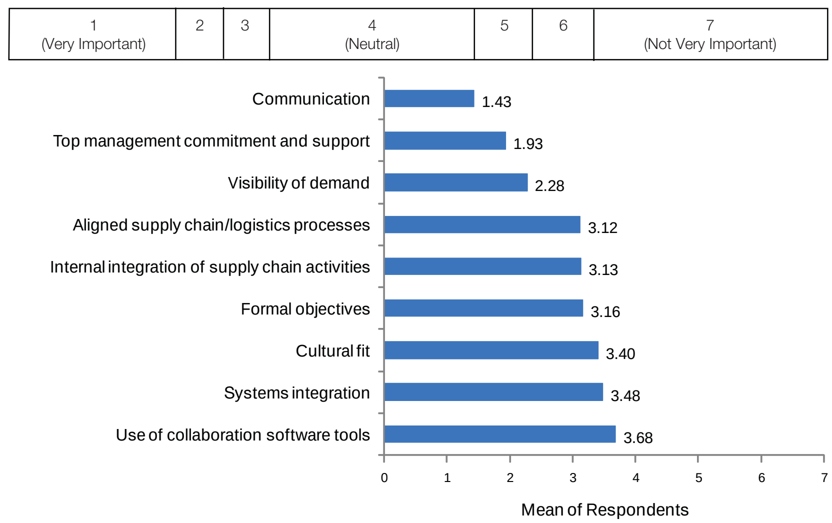
▶EEA firms concur with NA firms that communication is indeed the most important criteria for successful collaboration.

Sustainable Supply Chain Management Practice through Synchronization

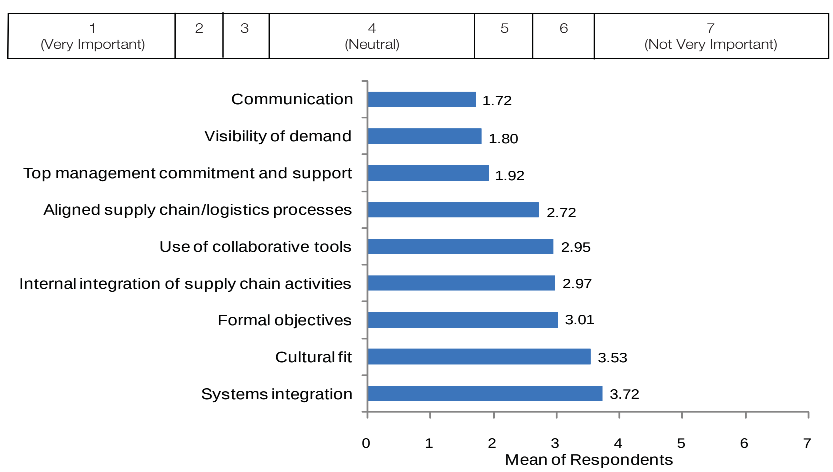
Companies that optimize their supply chain networks often do not realize that unless they also synchronize the flows they will not be able to reap maximum efficiency and effectiveness benefits. Synchronization of flows – including materials, finished goods, information and data and financials – are critical to becoming a demand driven supply chain. This report examined two elements that form the core of synchronization – visibility and collaboration. Operations cannot effectively handle uncertainty of demand, meet increasing customer-service requirements and control costs with little or no visibility of what is happening upstream and downstream.

Visibility is the doorway to a broader supply chain horizon. This horizon is characterized by suppliers that have access to better demand signals that enable them to efficiently utilize their capacity and other resources. It also includes customers who receive more information on their inventory status, both at rest and in motion. Customers expect a company to anticipate their needs and develop solutions to address them – at no additional cost. This combination of efficiency and effectiveness can be achieved through visibility. Visibility involves people, processes, technology and information flows, which make it an inherently complex issue. The study results indicate that a great deal of work remains to be done in this area to achieve the desired end state of

Collaboration with a Typical Customer for NA Firms



Collaboration with a Typical Customer for EEA Firms



seamless, end-to-end visibility of data and information between supply chain members.

In addition to visibility, firms also realize that collaboration is necessary for achieving synchronized supply chain flows. An analysis of data from the study shows that high performers relative to market share, return on assets, overall product quality, overall competitive position and overall customer-service levels are significantly different in that they share capacity forecasts with their carriers or other service providers. As noted earlier, communication is considered the most critical factor in successful collaboration. Without communication, a supply chain will not be able to efficiently or effectively handle the same supply chain challenges that make visibility so important, which include uncertainty of demand, increasing customer-service demands and control of costs.

Collaboration is needed to increase the degree of real-time information sharing, particularly on a global basis. It reduces the complexity in information sharing and coordination as the number of supply chain members increases. More importantly, collaboration can increase the reliability of planning and facilitate the execution of "optimized" plans. Why is this important? Most firms have distribution, sales and/or marketing centers outside of their home markets. Global supply chains create much higher information demands than domestic movements. Enabling the exchange of information on a real-time, seamless basis is a challenge for logistics and supply chain managers not used to dealing with this level of complexity.

Last, but not least, collaboration is just good business sense. Supply chain members that align their planning and execution processes and capabilities are able to collaborate to make the right decisions based on high integrity and highly visible information. This enables each supply chain member to execute the first time and every time at the highest degree of efficiency possible based on optimized plans.

The bottom line is this: firms that have made progress in synchronizing their supply chains have realized significant benefits that include:

- Reduced order cycle times
- Lower inventory levels
- Increased order fill rates that ultimately result in higher in-stock levels at stores
- Lower transportation costs
- Improved customer-service and satisfaction levels
- Better management of exception events
- Improved cash-to-cash cycles

The return on investment for achieving a synchronized supply chain is substantial. Now is the time to make the needed investment in visibility and collaboration capabilities that will enable your firm to be a part of the coordinated, harmonized flows in the supply chain. Waiting until the economy rebounds will yield the competitive advantage to those that heeded the call to implement synchronization now. In essence, only a disciplined supply chain management practice will sustain leading firms during all economic times.

For More Research on Sustainable Supply Chain Management Practice

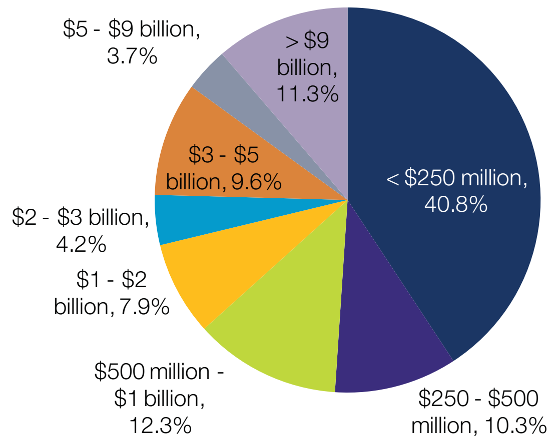
This year's annual study examined a variety of issues and trends ranging from supply chain mega trends to transportation management techniques and approaches. We are taking a different approach in the dissemination of the study results this year. An earlier report – The Drivers of Sustainable Supply Chain Management Practice - presented an overview of the fundamental capabilities that firms must develop in order to build sustainable supply chain management practices. This report is the first in a series of five that provides a detailed examination of a specific driver.

Who Participated in this Research?

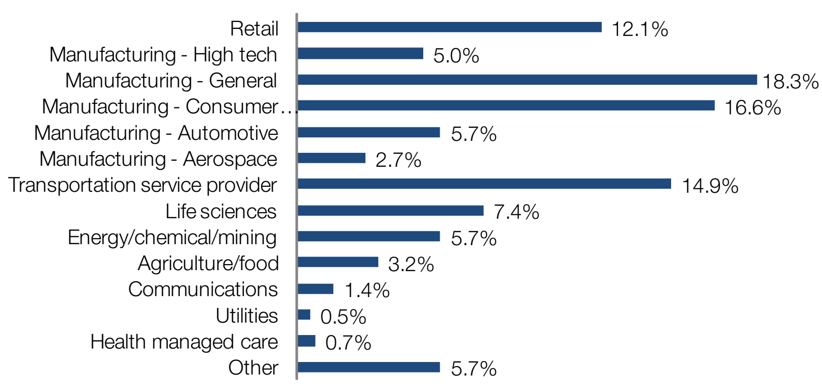
This year 830 individuals across the globe participated in the study. Aggregated as a profile group, 63.4 percent of the companies that responded to the survey have annual revenues under $1 billion, while those with annual sales of $1 billion to $3 billion accounted for 12.1 percent of the sample. Those firms with sales greater than $3 billion accounted for 24.6 percent. The latter group has been defined as the Masters of Logistics.

More than 14 industry sectors from energy/chemical/mining to retailing participated in this year's study with the core group of participants in the manufacturing sector (48.3 percent). Consumer products and general manufacturing represented the largest sub-sectors of this group (18.3 and 16.6 percent, respectively). The next largest sector that participated in this year's study is retail, accounting for 12.1 percent of the total participants.

Annual Sales Revenue of Study Respondents



Study Participants by Industry Sector



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More information is available at www.capgemini.com.

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JDA® Software Group, Inc. (NASDAQ: JDAS) is the world's leading supply chain solutions provider, helping companies optimize operations and improve profitability. JDA drives business efficiency for its global customer base of more than 5,800 retailers, manufacturers, wholesaler-distributors and services industries companies through deep domain expertise and innovative solutions. JDA's combination of unmatched services, together with its integrated yet modular solutions for merchandising, supply chain planning and execution and revenue management, leverage the strong heritage and knowledge capital of market leaders including Manugistics, E3, Intactix and Arthur. For further information, please visit http://www.jda.com.

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Georgia Southern University is a growing nationally recognized logistics program located in Statesboro, Georgia. The University is a major teaching and research institution and offers undergraduate and Ph.D. degrees in logistics and supply chain management. The faculty publishes in a wide range of topics and is invited to speak at events across the globe. The Southern Center for Intermodal Transportation offers a wide range of research services and resides in the College of Business.

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The internationally recognized logistics program at The University of Tennessee, Knoxville, is one of the most comprehensive and contemporary programs in the nation. The faculty publishes widely on topics of current industry concern and explores future trends through research and studies.

For further information, please visit http://mlt.bus.utk.edu

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