Supply Chain Resilience
How Can You Transcend Vulnerability In Your Supply Chain to Gain Competitive Advantage?

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Substantial fuel price increases, coupled with increases in driver pay, may prompt many executives to consider a change in the number of North American distribution centers they use. Here’s an analysis that can help you to evaluate where your firm stands.

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Jim Davidson, President, iWheels Dedicated Logistics

Victor Deyglio, Executive Editor, and President and CEO of The Logistics Institute

John Ferguson, General Manager of Canadian Operations, Schneider National Inc.

Susan Gadsby, C.P.P. C.P.M., Director, Procurement, Apotex Inc.

Joe Gallick, Senior Vice President, Sales, Penske Logistics

Claude Germain, Executive Vice President & COO, Schenker of Canada Limited

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“The LQ Executive Exchange was a pleasure to attend. I met interesting people and I feel that the Exchange was very well organized. I guess I should expect nothing less of a group of professional logisticians.”

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“I was impressed by the lineup of speakers and the caliber of those in attendance. Great job.”

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Ideas for Leadership in Logistics and Transportation Strategies
We are honored to announce the following new participants have accepted LQ’s invitation to join its Advisory Board:

SUE GADSBY, C.P.R., C.P.M., is Director, Procurement, Apotex Inc. Ms. Gadsby has more than 20 years experience in supply and logistics management and more than 10 years experience in travel management in various manufacturing and distribution environments. She specializes in re-engineering purchasing functions into a strategic resource within organizations. Prior to joining Apotex, she had similar responsibilities for Bayer Inc., where she reshaped the organization, along with the purchasing practices and supplier relationships. Ms. Gadsby has been on global teams to develop and implement best practices in the area of procurement, has been an active member on various industry advisory boards, featured in leading purchasing, legal and travel management publications, and lecturers in public forums in the area of procurement, bid law, and travel management. Apotex Inc., a global organization, is the largest privately owned pharmaceutical company in Canada, employing over 4,000.

DIANE MOLLENKOPF is an Assistant Professor, Marketing and Logistics, University of Tennessee. Before joining the University of Tennessee, Ms. Mollenkopf served as assistant professor of marketing and supply chain management at Michigan State University. Prior to that, she was a senior lecturer in marketing and distribution at Lincoln University in Canterbury, New Zealand. She also was an award-winning instructor and teaching assistant at Drexel University in Philadelphia, where she earned her doctorate in marketing channels with an emphasis in international business. Ms. Mollenkopf pursued her Ph.D. after working at Avon Products, Inc., where her improvements to Avon’s dispatch and return-products systems in the Newark, DE distribution center netted the company significant annual savings. Later, working for Yves Rocher, Inc., she managed the logistics operations for the start-up of its U.S. subsidiary. She was responsible for liaising with the European factories and managing international transportation for all products sold in the United States. She also helped launch the company’s multi-million-dollar, home-shopping operations. Currently, Ms. Mollenkopf is focusing her research efforts in two main areas: strategic logistics integration and environmentally responsible logistics practices, including reverse logistics. She teaches both undergraduate and graduate level courses.

HANS-JÖRG HAGER and JOSEPH CARNES Join Schenker Management Board

HANS-JÖRG HAGER, Chairman of the Management Board of Schenker Deutschland AG, and Joseph L. Carnes, President of BAX Global Inc., have recently joined the Management Board of Schenker AG, Essen. On the Schenker Management Board, Mr. Hager represents the company’s Land Transport business unit, and Mr. Carnes represents the American logistics service company BAX Global, which Deutsche Bahn AG acquired on Jan. 31 this year.

The Management Board of Schenker AG now includes the following members:

• Joseph L. Carnes, BAX Global
• Hans-Jörg Hager, Land Transport
• Dr. Thomas C. Lieb, Air and Sea Freight
• Dr. Marco Schröter, Finance
• Peter Schumann, IT Management
• Dr. Detlef Trefager, Logistics
• Steffen W. Wurst, Human Resources.

With its four business units – Schenker, Stinnes Freight Logistics, Stinnes Intermodal and Railion – DB Logistics, the Transportation and Logistics Division of Deutsche Bahn, combines logistics competence with rail know-how in the fields of land transportation, air and sea freight, as well as global supply chain management. With a sales volume of 12.4 billion euros, a workforce of 65,000 employees and more than 1,100 locations in 110 different countries, DB Logistics is one of the leading providers worldwide.

John Kincheloe, is Named New Americas Senior VP, Sales & Marketing at GeoLogistics

GeoLogistics Corporation has named John Kincheloe as its new Senior Vice President, Sales and Marketing, Americas. Mr. Kincheloe joins GeoLogistics from EGL, where he held several leadership roles, including Vice President, Northeast Region, responsible for all management and operations. Prior to EGL, he was with Emery for over 21 years in a variety of sales and management positions. Most recently, he was Vice President, South Asia, based in Singapore. Mr. Kincheloe reports directly to Alex Leivici, GeoLogistics’ Chief Executive Officer, Americas. He will be based in the company’s Santa Ana, California corporate office. Mr. Kincheloe is a graduate of Portland State University, Portland, Ore.

GeoLogistics Corporation is a leading global logistics provider with a global network spanning more than 100 countries. GeoLogistics offers customers a broad range of freight management and customized logistics solutions backed by a single, company-wide IT system. GeoLogistics is part of the PWC Logistics family, an organization with annual revenues of over U.S.$3 billion and 17,000 employees.
LQ’s mandate to provide “Ideas for Leadership in Logistics,” is clearly evidenced this issue with articles written by professionals and logisticians from America and Canada who are leading and transforming business by creating new roadmaps and definitions for leadership in this exciting field.

DAVID J. CLOSS, Ph.D., LQ Executive Editor: Dr. Closs is the John H. McConnell Chaired Professor of the Eli Broad College of Business, Department of Marketing and Supply Chain management, Michigan State University. He has consulted with more than 100 of the world’s Fortune 500 corporations regarding logistics strategies and systems. He is an active member of the Council of the Supply Chain Management Professionals.

JIM DAVIDSON, President, iWheels dedicated Logistics, began his career in logistics at The Ford Motor Company in 1963 working in all aspects of logistics for 17 years. Mr. Davidson joined TNT in 1983 and held various management roles, including roles in operations, staff, administration and general management for a number of different divisions. He also served as the TNT board member representing North America at their European-based board meetings. He has served on the executive of the Canadian General Motors Supplier Council as well as Executive Vice President of the ATA Council of Logistics located in Alexandria, Va.

DONAVON FAVRE is an Assistant Professor of Supply Chain Management in the College of Management at North Carolina State University. Prior to that, he was a managing partner of Accenture’s Global Sourcing and Procurement consulting practice where he consulted to companies including Pepsi, Corning, ExxonMobil, Scholastic, and Deutsche Bank. Mr. Favre serves on the advisory board for Emptoris (eSourcing software company). He also worked for Westinghouse prior to his consulting career. Mr. Favre has a B.S. in Industrial and Systems Engineering and an M.A. in Operations Management from The Ohio State University.

DAN FRENCH is a graduate student in the MBA Program at the Broad Graduate School of Management at Michigan State University. Prior to returning to business school, Mr. French was a Manager with Accenture.

BENJAMIN GORDON is Managing Director of BG Strategic Advisors, a Boston-based consulting firm providing supply chain companies with CEO-level advisory services in the areas of strategy, technology and finance. Mr. Gordon is responsible for leading key client engagements and setting the direction of the firm. Prior to BG Strategic Advisors, he founded 3PLex, the Internet solution enabling third-party logistics companies to automate their business. Mr. Gordon received a Masters in Business administration from Harvard Business School and a Bachelor of Arts degree from Yale College.

ROBERT MARTICHENKO is President of LeanCor LLC. Headquartered in Florence, Kentucky, LeanCor delivers logistics and supply chain management services to companies embracing Lean manufacturing and Six Sigma. Mr. Martichenko is a student of Logistics, Lean and Six Sigma, has published in several industry journals and contributed the chapter on “Lean Six Sigma Logistics” in Michael George’s book “Lean Six Sigma.” Mr. Martichenko holds a Bachelor Degree in Mathematics from the University of Windsor and an MBA in Finance from Baker College. Mr. Martichenko is involved with the Council of Supply Chain Management Professionals (CSCMP), the Lean Enterprise Institute, the Supply Chain Consortium at Saint Louis University, and LQ Magazine.

DR. JOHN T. (TOM) MENTZER, Ph.D., is the Harry J. and Vivienne R. Bruce Chair of Excellence in Business Policy in the Department of Marketing, Logistics and Transportation at the University of Tennessee. He has written more than 160 papers and articles, and five books. His research has focused on the contribution of marketing and logistics to customer satisfaction and strategic advantage; the application of computer decision models to marketing, logistics, and forecasting; and the management of the sales forecasting function. He serves on the editorial review boards of five journals and as occasional reviewer for six others. He presently serves on the Executive Committee and is Immediate Past President of the Council of Logistics Management. He was formerly President of the Academy of Marketing Science and is a Distinguished Fellow of the Academy of Marketing Science. He has served as a consultant for over seventy corporations and government agencies, is on the boards of directors of several corporations, and previously worked for General Motors Corporation.

CHRISTOPHER D. NOREK, Ph.D. is a founding Senior Partner with Chain connectors, Inc., an Atlanta-based supply chain consulting firm specializing in strategy, technology, transportation operations, returns management and supply chain training. He has been in the logistics field for over 15 years both in industry with Accenture, Kimberly-Clark, Apple computer, and CSC as well as a professor at both Auburn University and the University of Tennessee. Mr. Norek has consulted for firms including SAP, amazon.com, accenture, Office Depot, Cingular Wireless, The Sports Authority, Party City, and Aramark Uniform Services. He has been active in publishing for journals in the field and speaking for many organizations and University executive development programs including the Council of Logistics management, NASSTRAC, Georgia institute of Technology, University of Tennessee, university of North Florida, and University of Louisville. He holds logistics degrees from Penn State, Tennessee, and Ohio State.

NICHOLAS SEIERSEN, B.Sc. (Hons.), M.B.A., P.Log. LQ Executive Editor: Mr. Seierson is a Senior Manager with KPMG based in Toronto, Ontario. He specializes in Supply Chain consulting, with particular attention to Strategic Sourcing and Supply Chain Planning & Operations. Mr. Seierson holds a B.Sc. (hons.) in Biochemistry and an M.B.A. in Industrial Management. He teaches executive development courses at top universities in Europe and North America. He has written for numerous publications in North America and Europe on ePurchasing, Logistics, Supply Chain Management and Cost-to-Serve. He is the past President of
YOSSI SHEFFI, Ph.D., is a professor at the Massachusetts Institute of Technology, where he serves as Director of the MIT Center for Transportation and Logistics. He is an expert in systems optimization, risk analysis and supply chain management, which are the subjects he researches and teaches at MIT, both at the MIT School of Engineering and at the Sloan School of Management. He is the author of dozens of scientific publications and two books: a textbook on transportation networks optimization and the recently published The Resilient Enterprise: Overcoming Vulnerability for Competitive Advantage (MIT Press, October 2005). Under his leadership, the Center launched many new educational, research, and industry/government outreach programs, leading to substantial growth. He is the director of MIT’s Master of Engineering in Logistics degree which he founded and launched in 1998. In 2003 he launched the MIT-Zaragoza program, building a new logistics university in Spain based on a unique international academia, government and industry partnership. Outside the university Professor Sheffi has consulted with numerous government agencies as well as leading manufacturing, retail and transportation enterprises all over the world. He is also an active entrepreneur, having founded five successful companies, and a sought-after speaker in corporate and professional events. Dr. Sheffi was recognized in numerous ways in academic and industry forums and was on the cover of Purchasing Magazine and Transportation and Distribution Magazine. In 1997 he won the Distinguished Service Award given by the Council of Supply Chain Management Professionals. In 2002/03 he was on sabbatical in the Judge Institute of Management in Cambridge University, UK. He is also a Life fellow of Cambridge University’s Clare Hall College. He obtained his B.Sc. from the Technion in Israel in 1975, his S.M. from MIT in 1977, and Ph.D. from MIT in 1978. He now resides in Boston, Massachusetts.

THEODORE P. STANK, Ph.D., is the John H. Dove Distinguished Professor of Logistics and Head, Department of Marketing and Logistics at The University of Tennessee. Prior to arriving at UT, he taught at Michigan State University, Iowa State University, and the University of Texas at El Paso. He holds a Ph.D. in Marketing and Distribution from The University of Georgia, an M.A. in Business Administration from Webster University, and a B.S. from the United States Naval Academy. Dr. Stank’s business background includes sales and marketing experience as an employee of Abbott Laboratories Diagnostic Division. He served as a Surface Warfare Officer in the United States Navy prior to his industry and academic experience. He has also performed consulting and executive education services for numerous manufacturing and logistics firms. He is an active member of the Council of Logistics Management. His research interests focus on the strategic implications and performance benefits associated with integrated logistics and supply chain management concepts, specifically related to logistics integration, communications and information exchange, outsourcing, and operational flexibility/responsiveness. He is a co-author of 21st Century Logistics: Making Supply Chain Integration a Reality, has published over 55 articles in academic and professional journals, and has received numerous awards for outstanding teaching.
Is It Time To Review Your Supply Chain Design?

Substantial fuel price increases coupled with other increases, such as an increase in driver pay, can may prompt many executives to consider a change in the number of North American distribution centers they use. Here’s an analysis that can help you to evaluate where your firm stands.

By David J. Closs and Daniel French

In a recent class, while discussing supply chain design and distribution center location, a student asked if the recent run up in diesel prices will have any impact on the optimum number of distribution centers. I replied that the precise answer depends on the specific firm’s transportation characteristics, but we may be able to determine the approximate sensitivity using some generic data. Specifically, the question is: Do the current increases in the price of diesel fuel suggest a need to re-evaluate the number and location of a firm’s distribution centers?

First, we must determine if diesel fuel costs are really outpacing the other inputs to total logistics cost. By comparing changes in diesel fuel prices since 2000 with the changes in the interest rate, along with warehousing fixed and variable costs, the magnitude of such a differential can be determined. Figure 1 illustrates the year year-over-year changes in the major cost elements influencing distribution system design. Wage rates have been increasing at a very slow rate (less than 5 percent per year). The warehousing rates, including both facilities and labor, have fluctuated up and down. Interest rates, however, have seen a dramatic drop, followed by a recent spike. Only diesel fuel has seen price increases every year since 2001. Furthermore, diesel has seen three price increases of more than 20 percent in the last five years, while the interest rate has only seen one. Based on this information, it certainly appears that diesel fuel has outpaced the other cost factors influencing distribution network design in recent years.

Since December 2000, diesel fuel prices have risen over 62 percent. Figure 2 illustrates the year year-end fuel prices based on data from Transport Topics. Even more alarming is the recent trend, causing diesel to leap 23 percent since December 2004. Since diesel is the primary fuel source for much of U.S. truck and rail shipping, transportation costs have certainly been impacted. For example, assuming that fuel represents approximately 30 percent of overall transportation cost, a fuel price increase of 25 percent increase overall transportation cost by 7.5 percent. It is reasonable to believe that most distribution networks may not be robust enough to remain optimum over such a wide range of fuel prices.

Second, we must investigate the total logistics costs under various location combination scenarios. As most logisticians know, the logistics total cost model is useful for determining the...
optimal number of distribution centers for a geographic area such as North America. The trade-offs used in the model include transportation to and from distribution centers, inventory carrying cost, and fixed and variable facility costs. However, due to their relative magnitude, transportation and inventory carrying cost are the major drivers, having the largest impact.

The hypothesis is that distribution network design will be sensitive to 25-40 percent increases in diesel fuel prices. To test the hypothesis, we used LogicNet 6.1™ modeling and optimization software produced by Logic Tools, Inc. We used the “Metal Works Case” which is one of the standard examples and replicates the distribution network for a durable product with two plants, 11 product groups, and a combination of truckload and LTL (less than truckload) deliveries. Using the optimizer, we successively identified the total cost curve at a base level, and then increased the fuel cost by 25, 50, and 100 percent respectively. Assuming that 30 percent of transport cost is related to fuel, these fuel cost increases resulted in 7.5, 15, and 30 percent increases in overall transport cost. The simulation results contain representative values for transportation, inventory carrying as well as facility fixed and variable cost. Table 1 summarizes the total (non-production related) costs for a range of distribution centers for each fuel cost scenario. The minimum cost

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<th>Number of Distribution Centers</th>
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<th>25% Fuel Price Increase</th>
<th>50% Fuel Price Increase</th>
<th>100% Fuel Price Increase</th>
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**TABLE 1: Optimal Number Of Distribution Centers By Fuel Price**  
(Non-production costs in 000 USD)

**TABLE 2: Location Of Distribution Centers By Fuel Price**

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<th>Base Fuel Price</th>
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**FIGURE 2: U.S. Diesel Fuel Prices Since 2000 (in USD per gallon)**  
(Source: U.S. Department of Energy)
The number of distribution centers is illustrated by the bordered cell. Table 2 illustrates the particular distribution center locations in each network.

The results illustrate the impact of fuel price increases. In the base case, the optimum number of distribution centers is seven. A fuel price increase of 25 percent (i.e., an overall transport cost increase of 7.5 percent) results in no change in the optimum number of distribution centers; however, it is very close to shifting to an optimum of eight distribution centers. A fuel increase of 50 or 100 percent increases the optimum number of distribution centers to ten. In particular, the optimization suggests that distribution centers should be opened in New England (Albany), Northwest (Portland), and a second facility in the Midwest (Indianapolis).

Although these results should not be generalized, particularly across firms that have unique transportation characteristics, they do suggest that optimum distribution system design is sensitive to the fuel price increases that we have seen over the past year. Nevertheless, the 25 percent increase is not enough to force a change. Above the 25 percent level, however, it appears that the optimum number increases by one distribution center for each 25 percent increase in fuel cost. Hopefully, we don’t see fuel price increase of that magnitude for a long time.

These results indicate the relative sensitivity of the number of distribution centers to fuel prices. So now I can tell my student that even with the 25 percent increases in fuel over the last year, there should not be any major impact on the number or location of distribution centers. This is undoubtedly due to the fact that 25 percent increase in fuel yields a relatively minor (7.5 percent) impact on transport rates. However, a 25 percent increase in fuel in conjunction with a 25 percent increase in driver pay (due to the shortage of drivers) would yield a 15 percent increase in transport rates and would have the same result as a 50 percent increase in fuel.

Under this potential scenario (which is reasonably likely), this analysis suggests that the number of distribution centers would be recommended. In summary, these results suggest that the combination of fuel price increases and driver wage increases could have some impact on the optimum number and possibly the location of distribution centers to serve North America. However, the impact of the change on total cost may not be particularly significant given the other cost components. Specifically, at the 100 percent fuel increase level, the total (non-production) cost for seven distribution centers is (U.S.) $49,567 USD while the cost at the optimum number of distribution centers is $48,751 USD. The resulting change in non-production costs are is only 1.7 percent, which is probably not substantial enough to justify significant change. So, for my students and the managers who have wondered regarding the nature of the impact, 25 to 50 percent increases in fuel prices and driver wages certainly makes and impact on the total cost but it may not be enough to justify substantial design changes and the required efforts to make the changes.

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Resilience Reduces Risk

How can enterprises build supply chains that are resilient enough to withstand unexpected disruptions and help the organization to excel?

By Yossi Sheffi
To deliver products in the right quantity and at the right place and time in increasingly volatile markets, and subject to relentless cost pressures, companies have built complex supply chains that span the globe. These supply chains have enabled companies to access worldwide markets and adapt quickly to shifting demand — providing there are no serious breaks in operational performance. The problem is that the very complexity and global reach that are intrinsic to modern supply chain management; the low inventory level and lack of redundancies required to achieve efficient operations, expose companies to a wider range of unexpected disruptions. The challenge is to make supply chains robust enough not only to continue operating in this risky business environment, but also to turn this resilience into competitive advantage.

Supply chains can be disrupted in many ways. There are natural disasters such as hurricanes and earthquakes; there are accidents, and disasters perpetrated by humans such as terrorist attacks and sabotage. These dislocations are in addition to the “normal” ones that arise from the nature of global trade, such as labor disputes, border inspection delays and traffic congestion.

In cases of large disruptions, government overreaction which exacerbates the emergency adds to the disruption. For example, after the 9/11 terrorist attacks the United States government imposed restrictions on flights and the movement of goods at U.S. borders. These actions compounded the damage wrought by the attack itself. The intermittent plant closings by Chrysler in the weeks that followed and the 13 percent reduction in output at Ford Motor Company during the fourth quarter of 2001, were not the direct result of the terrorist attack. They resulted from the shutdown of the Canadian and Mexican borders for truck movements and subsequent delays because of tighter border security.

The U.S. government’s reactions disrupted numerous just-in-time manufacturing systems that depended on reliable international shipping.

How can enterprises build supply chains that are resilient enough to withstand these incidents and help the organization to excel? First, (use a different word because there is no second number in the sequence) they need to define the objective. Resilience is a notion borrowed from the materials sciences, and represents the ability of a material to recover its original shape following a deformation. For companies, it measures their ability to, and speed at which they can, return to their normal performance level (production, services, fill rate, etc.) following a disruption.

Resilience can be achieved either through redundancy or through building flexibility into supply chains. The standard use of redundancy includes either underutilized capacity — which most companies can ill-afford, or the use of safety stock of material and finished goods. Such inventory can give a company time to plan its recovery following a disruption. Indeed, many companies have increased inventories when preparing for a disruption.

Extra inventory, however, is expensive to hold in particular when preparing for large, infrequent disruptions. And as demonstrated by “lean” and “six sigma” processes, it can also lead to sloppy operations that result in increased costs and reduced quality. By contrast, increasing supply chain flexibility can help a company not only withstand disruptions but also better respond to the day-to-day vagaries of the marketplace.

To build in flexibility for resilience, companies must involve many facets of supply chain design by:

- Developing the ability to move production among plants, use interchangeable and generic parts in many products, and cross-train employees.
- Using concurrent processes of product development, ramp up, and production/distribution.
- Designing products and processes for maximum postponement of as many operations and decisions as possible in the supply chain.
- Aligning their procurement strategy with their supplier relationships.

These principles create not only resilient supply chains that can recover from disruptions but also flexible supply chains that can respond to day-to-day demand changes. One begets the other, because a supply shortage and a demand spike are, at their core, a problem of supply/demand mismatch. Companies who have built their supply chains to respond to significant demand fluctuations have also built in the ability to respond to supply shortages.

How exactly do these supply chain principles increase resilience? Postponement and built-to-order operations allow for diversions of parts and semi-finished material from surplus areas and products to satisfy shortages elsewhere. Thus, with only a few days of committed orders, Dell was able to fare much better than Apple during the 1999 Taiwan earthquake, which disrupted the worldwide supply of memory and graphic chips. Hewlett-Packard (HP) sells printers all over Europe. HP often faced the problem of having, for instance, too many printers for the Danish market and not enough for Hungary. Using the concept of postponement (delaying the final configuration of a product until as late as possible in the supply chain when more accurate demand information is available) HP builds “vanilla” printers that include everything but the power supply, the wall plug, the decals, and the language of the instruction manuals. Once HP receives orders from particular countries, it adds that country’s particular power supply, plug and language materials through a clever access hole in the side of the box and sends it to the country.

This creates resilience because it is much easier for HP to respond to supply/demand mismatches.

The use of a small number of commodity parts not only simplifies operations and concentrates the procurement outlays, it also creates flexibility to move the business among suppliers should one falter. When Intel’s Systems Group reduced its mix of 2,000 types of resistors, capacitors, and diodes to only 35 types, it not only simplified procurement and reduced costs but also increased Intel’s ability to respond to demand changes and supply disruptions.

Reducing time to market also means that the time to recover from disruptions is likely to be short. To this end, Lucent created a special Supply Chain Network organization in 2001. Cutting across the company’s engineering, procurement, manufacturing, distribution, and even sales divisions, the network increased the company’s agility.
The use of multiple suppliers with different characteristics allows HP to not only have redundancy but also builds in flexibility. HP’s choice of supply plants for its printers division means that during ramp-up and end-of-life they can use their agile (yet more expensive) plant, but during the steady demand period of each printer, they can use the more efficient plant.

Supplier relationships are key to firm resilience. Indeed, unsound supplier relationships can pose a major threat in any business. British car company Land Rover learned this lesson in 2001 when it suddenly lost its sole source of chassis for the popular Discovery vehicle. Its key supplier went bankrupt. Land Rover eventually had to pay down some of the supplier’s debts to restore supplies, suffering severe production delays in the process. The car manufacturer was unaware of the financial dealing the caused its critical supplier to bankruptcy. Such oversights are common. For example, last summer British Airways’ (BA) operations at Heathrow Airport in the UK ground to a halt when its ground workers staged a sympathy strike with the lay-off workers at its core supplier, Gate Gourmet. The airline was caught off guard by Gate Gourmet’s actions and failed to anticipate the response of its own workers. The result was canceled flights, irate customers and negative publicity.

Having a close relationship with Gate Gourmet may have anticipated the response of its own workers. The result was unaware of the financial dealing the caused its critical supplier to bankruptcy. Such oversights are common. For example, last summer British Airways’ (BA) operations at Heathrow Airport in the UK ground to a halt when its ground workers staged a sympathy strike with the lay-off workers at its core supplier, Gate Gourmet. The airline was caught off guard by Gate Gourmet’s actions and failed to anticipate the response of its own workers. The result was canceled flights, irate customers and negative publicity. Having a close relationship with Gate Gourmet may have alerted BA to their impending actions and their possible effect on BA’s workers, giving it time to prepare and possibly stop the strike before it started. Yet Willie Walsh, the company’s CEO who joined BA recently, said that the August strikes had “nothing to do with British Airways” and BA could not have seen it coming.

On the other side of the Atlantic, General Motors is paying dearly for its flawed relationship with supplier Delphi Corp. The enterprise was spun off from GM in 1999, and with annual sales of $28 billion is a major supplier. Since it cut loose from its parent, Delphi has been unable to compete effectively with leaner, more efficient competitors, and recently filed for bankruptcy. GM was caught unprepared for the fall out from the failure of a key supplier.

Contrast this to the approach taken by auto company Toyota to its suppliers. The highly successful Japanese carmaker holds stock in many of its suppliers, and they reciprocate by holding Toyota shares. Respective companies are bound together by mutual interest and are committed to the long-term health of their businesses. For instance, one parts supplier, Aisin, part of the Japanese company Aisin Seiki Co. Ltd., customarily shares testing sites with Toyota to help the automaker cut costs.

A strong, stable supplier network greatly enhances market resilience, and companies can lay the foundation for such a network by forging the right links with suppliers. It is unrealistic, however, to expect such close relationships with all suppliers. Instead, companies should recognize that there are two basic types of supplier relationships and each has different demands. Core suppliers are the one on which the company choose to depend not only for parts but also for innovation; these companies build parts whose characteristics the ultimate customers recognize. The dependency on these core suppliers requires a company to have a deep knowledge of each vendor, not only because it is trying to draw on their innovation but also because the unexpected failure of one could be disastrous. Conversely, the preference may be for arms-length relationships which do not require such investment in supplier relations. In this case, the supplier network needs to include multiple suppliers so that the company can find an alternative source quickly should one of its vendors become problematic. Neither approach is right or wrong, the point is to commit to one and develop the appropriate strategy. Note, that this is not an “all-or-nothing” proposition. Dell, for example, has strong single-supplier relationships with its processors and boards vendor (Intel) and its operating systems vendor (Microsoft). By contrast, it has several vendors for components such as disk drives.

Although supplier relationships are integral to resiliency, the most important factor that clearly distinguishes between companies who bounce back from a disruption and those who do not is the corporate culture. Organizations like Nokia, Toyota, UPS, Schneider National, FedEx, Dell, and the U.S. Navy can be studied to understand the principles that make them flexible and resilient. While on the surface, companies such as Dell and the U.S. Navy may not seem to have much in common, a closer look shows these resilient companies share several common traits, especially within their corporate culture.

A flexibility culture is one where communication is pervasive and continues. At Dell, for example, executives receive production reports every two hours on their pagers, so that everybody is continuously aware of what is going on. Another characteristic of a flexibility culture is power distribution: giving even low-level employees the power to make decisions. For example, any employee on the Toyota assembly line has the power to stop the line if they notice a quality (or other) problem. Similarly, any sailor on the deck of a U.S. Navy carrier has the power (and the responsibility) to stop flight operations if they sense something wrong. At Spanish retailer Zara, young designers have the power to redesign and authorize manufacturing and replenishment of garments, based on information about which products are in the highest demand. This policy lets Zara respond to customer preferences in three weeks compared to Marks & Spencers’ nine months.

Unfortunately, culture is difficult to define and even more difficult to change. But this is not an impossible task. The success of the quality movement in the 1980’s and the safety campaign in the early part of the last century serve as strong examples of how corporate culture can change dramatically. Several corporate turn-around cases, like that of Continental Airlines under Gordon Bethune, also show the importance and the plausibility of changing corporate culture. Even the culture of populations can change as demonstrated by the anti-smoking and anti-drinking and driving campaigns in the U.S. These successful cases should serve as blueprints for companies striving towards resiliency, because the right culture means that the entire organization is deputized to serve as the eyes and ears of the corporate security and resilience efforts, and can take the necessary actions to recover from any disruptions when the normal hierarchy is not operational.
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The transport management landscape has undergone dramatic change in the last 26 years. Beginning in 1980, after nearly six decades of regulation characterized only by glacial change, the transportation environment has been in a constant state of flux. The first 20 years of deregulation challenged managers with the task of confronting increased safety and social regulation, escalating customer expectations, increased globalization, improved technologies, labor and equipment shortages, and industry mergers and consolidation. To their everlasting credit, transportation managers were able to achieve staggering improvements that helped reduce the percentage of the U.S. Gross Domestic Product spent on logistics almost in half during that period (from over 16 percent in 1980 to just under 9 percent in 2000). Managers from that era have many interesting tales regarding exactly how those changes were accomplished.

The degree of change experienced in the transportation environment from 1980 to 2000, however, pales in comparison to the changes that have occurred since 2000. While some of this change can be correlated with the changing sociopoliti-
March 2006

Higher consumer prices – while the elements of the
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retirement of track and merger/consolidation to make
a profit. Then consider that it costs millions per mile to
build new rail lines. Rail has figured out that better utiliz-
ing, and in some cases shrinking, its present network and
rolling stock capacity is a better formula for profitability.

Further, port facilities are inadequate to handle the volume
of freight growth resulting from the historic levels of foreign
trade imbalances, predominantly caused by growth of trade
with China. On any given day there are dozens of ships
anchored in the harbor at the ports of Long Beach and Los
Angeles waiting for dockside availability. Such delays are
carried by inefficient labor to offload and insufficient road
and rail access to facilitate the movement of containers from
portside facilities.

Finally, increased security regulations as a result of 9/11 are
further slowing movement through ports, and promises from
regulatory bodies to increase the number of inspections
could cripple the flow of international freight. Although the
situation is more dramatic in maritime ports, it is similar to
that experienced in airport facilities.

So how are we to deal with this “Gathering Storm” and pre-
vent the realization of the “Perfect Storm?” Below is a list of
major implications to the shipping community and the
broader economy as a result of the elements of the storm.

1. Reliable transportation availability is no longer a given –
smart shippers are no longer leading negotiations with carri-
ers on price, but rather are trying to lock in capacity with reli-
able service providers.

2. And don’t look to rail to relieve the problem. Until
consider that it costs millions per mile to
build new rail lines. Rail has figured out that better utiliz-
ing, and in some cases shrinking, its present network and
rolling stock capacity is a better formula for profitability.

The Perfect Storm cannot be prevented by ignoring it. It
can only be managed by recognizing the signs of the
Gathering Storm and taking proactive actions to lessen the
impact on individual companies, supply chains, and the
economy (both U.S. and global) as a whole.
This article highlights the global changes driven by the trend toward Asia, and the resulting winners and losers in logistics.

India and China: Getting Big Fast
To understand the changes in Asia, it is instructive to start with China, since China along with the United States represent a combined 60 percent of global trade.

Today China, along with India, stands at the epicenter of the Asian miracle. The two countries represent a population of 2.2 billion. In addition, both are attracting foreign direct investment, with China attracting $60 billion, and India drawing $3 billion. Overseas firms like Yellow Roadway (YRC), DHL, and GeoLogistics are attracted by the significant growth potential in India and China. The Indian logistics market represents $15 billion, according to Frost & Sullivan, and is growing at a rate of 7 percent annually. Meanwhile, China weighs in at $250 billion of logistics spend according to UPS, and is growing 16 percent annually.

An important engine of growth is China’s 2001 acceptance by the World Trade Organization (WTO). As a result, China must now adhere to WTO’s rules, and is liberalizing rapidly. In the past four years, China has reduced tariffs from 25 to less than 10 percent. Continued legal changes attract more overseas investment and fuel accelerated expansion.

Another key driver of Asian logistics growth is the low level of logistics outsourcing. Both China and India have underpenetrated, third-party logistics (3PL) markets. India’s 3PL sector represents 3 percent of the country’s total logistics spend. China’s 3PL sector represents just 2 percent of its country’s total logistics spend. In contrast, the U.S. 3PL sector is much more penetrated, at approximately 10 percent, with Europe even higher, at 25 percent. Clearly the Asian 3PL sector has a lot of room to grow.

A core reason for this low penetration in the Asia market is their low efficiency. In the United States, over the past 25 years, logistics costs as a percentage of GDP has declined from 17 to 9 percent. In China, logistics costs today represent 21 percent of GDP. In the U.S., logistics costs declined due to a combination of government infrastructure investments and high-growth, asset-light outsourcing logistics companies. These trends are also increasing in both China and India.

By Benjamin Gordon
The governments of India and China are investing aggressively to fuel accelerated growth. India, for example, whose logistics market is approximately 0.7 percent of the U.S. logistics market, announced plans for $17 billion in transport infrastructure investment between 2006 and 2010. In contrast, the United States just signed into law SAFETEA-LU, a $286.4 billion, six-year spending plan for transportation infrastructure that equates to 5 percent of its annual logistics market. Thus, on a per-annum basis, while the United States is investing 5 percent of its annual logistics spend on infrastructure, India is investing 23 percent or over four times as much.

Asian business leaders see these trends and are responding by seeking outsourcing solutions. A survey by Harris Interactive and sponsored by UPS indicated that Asian executives are seeking to outsource at a rate three times faster than that of their U.S. and European counterparts. When asked whether they are moving “very extensively” or “completely” to outsourcing, 29 percent of Asian executives said yes. In contrast, just 11 percent of U.S. and European executives agreed with this assertion. As a result, logistics markets are opening up and growing rapidly throughout China, India, and indeed much of Asia.

**Impact on U.S. Logistics Markets**

The impact of Asia’s ascendance on U.S. logistics markets has been swift.

First, manufacturing has shifted from the United States to Asia. In November 2005, General Motors (GM) declared plans to slash 30,000 jobs in Canada and the United States. Days later, GM announced plans to add 450 workers in India, and 200 in China. In the next 3 years, GM intends to raise auto parts sourcing in India from $120 million to $1 billion, and up to $80 billion in China.

Second, carriers and freight forwarders have gained significant benefits. In November 2005, three North American carriers – American, Continental, and Air Canada – initiated service to Delhi.

Third, the West Coast of the United States has continued to register record levels of demand. As Asian-based manufacturing is shipped to the United States for consumption, the ports of Los Angeles and Long Beach are reporting record volumes. Los Angeles, for instance, handled over 700,000 Trailer Equivalent Units (TEUs) in the month of October alone. In the coming year, China will originate over 48 percent of all import freight into the United States, much of it via the West Coast. California-based firms have grown correspondingly. For example, California-based freight forwarders GeoLogistics and BAX Global have both completed successful turnaround in the past five years, expanding from unprofitable operations in 2000-2001 to over $50 and $100 million in operating profit, respectively, on the basis of dramatic Asia-U.S. freight forwarding growth.

**Consolidation is Coming, in China and throughout Asia**

The rapid ascent of China has caught the attention of global logistics leaders.

In China, over 150 merger and acquisition transactions have taken place with U.S. companies over the past decade. Companies like GeoLogistics, YellowRoadway (YRC), and others have forged deals to enter China. Historically, U.S. companies seeking growth in Asia have targeted the Western-friendly markets of Hong Kong and Singapore. Mainland China, after all, didn’t even have a stock market until 1990, and many of the core assets of the country remain under government ownership.

However, this acquisition approach is changing rapidly, as companies target mainland China as well as neighboring markets. According to MidMarket Capital Advisors, two-thirds of Chinese acquisitions in the United States have been conducted as 100 percent transactions through Hong Kong entities. In contrast, two-thirds of U.S. acquisitions in China have involved majority investments in mainland China. This activity is expected to continue to surge.

This trend is also seen in other parts of Asia. In India, DHL purchased Blue Dart, establishing a foothold in the domestic courier and express marketplace. FedEx and UPS are also strengthening their positions in the country, and recently increased the number of flights in and out of China.

**Implications for U.S. Companies**

For U.S.-based logistics providers, the implications are monumental.

On the one hand, companies that gain a successful foothold in Asia can expect to see significant growth. U.S.-based companies like Expeditors, BAX Global and GeoLogistics now derive a majority of their profits from Asia. In a market where logistics companies were historically valued at 5-7 times operating profit, or EBITDA, the high valuations (Expeditors trades at close to 20 times EBITDA, BAX sold for 11 times EBITDA, and GeoLogistics sold for 14 times EBITDA) reflect the premium markets, investors, and buyers place on Asian growth opportunities. Similarly, when PWC Logistics announced a string of three acquisitions to strengthen its presence in Asia in 2005, its market valuation skyrocketed from less than $2 billion to over $8 billion, in a large part due to the premium that investors placed on the company’s Asian expansion.

On the other hand, companies that overlook Asia do so at their peril. Much like the European manufacturers of the 1800s, who found themselves supplanted by Samuel Hopkins and other leaders of the U.S. manufacturing golden era, U.S. companies today who fail to invest in Asia will eventually slip behind. For example, Expeditors grew its market value by 20.3 percent over the past five years. In contrast, EGL, a firm with a weaker Asian presence, grew its market value at half that rate, or 9.5 percent. Smaller firms face an even more dramatic impact, as freight forwarders with a subscale presence in Asia/U.S. trade lanes are finding themselves increasingly shut out of lucrative markets by larger competitors.

Smart logistics companies have several options for responding. Some, like BAX and GeoLogistics, sought mergers with the global firms of Deutsche Bahn and PWC Logistics, respectively, gaining resources to fund accelerated growth in Asia. Others are raising capital in a bid to fund acquisition-led growth while maintaining independence. What is clear is that every U.S. logistics firm needs a strategy for growth in what may be known as the Asian century.
The fabled duel between the tortoise and the hare is symbolic of the strategies required to consistently win the supply chain race. It’s as much about managing information as selecting the best modes of transport. Wheels can effectively integrate all available resources to provide winning management solutions for your supply chain.

Sometimes the tortoise, sometimes the hare, but every time the professionals at Wheels can put you across the finish line, with the best bottom line...everytime.
Inventory Reduction: The Path to Supply Chain Management

Inventory is not only a critical part of supply chain management; too often it is the main cause of a painfully incremental progression toward effective and genuine supply chain management.

Reading this article will enable you to see inventory from a perspective contrary to most conventional views defining inventory as an asset. Perhaps the greatest incentive to change our viewpoint is the unprecedented speed at which corporate environments are transforming. Not surprisingly, many organizations and individuals are seeking shelter against these transformational changes, which result in either corporate growth or rapid decline. The old guard, which has traditionally been comprised of stable organizations, is now oftentimes staring down bankruptcy.

What will differentiate the winners from the losers in this context? Many will respond to this question with answers that pertain to profitable growth, the ability to embrace globalization or, perhaps, a commitment to embrace technology to realize productivity gains. These items are the effects of doing the right things, but they are not the strategies that define today’s industry leaders.

The one element that will define organizational survival is, in a word: “inventory.” I am referring to the unwavering, relentless and even fanatical drive to reduce excess inventories. Why can inventory reduction lead to organizational success? It goes beyond the reduction of inventory carrying costs. The most powerful result of inventory reduction is the relationship between inventory, waste elimination, problem solving and teamwork.

Because of the extreme of today’s business issues, it is time to talk in absolutes. Topping our list of absolutes are

1. An organizational culture focused upon and committed to the elimination of waste at all levels.

2. Individuals within successful companies will be problem solvers
first and process owners second.  
3. Companies who have problem solving cultures will achieve and benefit from the riches of teamwork and true supply chain management.  
4. Eliminating waste, problem solving, teamwork and supply chain management are achieved through the elimination of excess inventories.  

At this point, you are probably asking yourself a few questions, such as: How can inventory reduction pertain to waste elimination, problem solving and teamwork, and be critical to quality measure in order to realize optimal supply chain management?

**Waste Elimination - Problem Solving – Teamwork and Inventory**

To draw an analogy, picture your organization as a boat navigating down a river. The river represents the business environment, flowing fast, with treacherous unknown obstacles ahead. Just below the water are many rocks waiting to puncture the hull of your boat. These rocks represent waste of all sorts, such as waste of transportation, space, inventory, time, knowledge, packaging, internal silos and poor supply chain relationships. Building on this analogy, the inventory is the water level of the river. As inventory rises, so does the water level.

As we flow down the river, we are very cognizant of the rocks (waste) below. In fact, some of these rocks have now protruded above the water and we are at risk of sinking this boat. We can opt for one of three things to stay afloat:  
1. Try to navigate around the rocks, relying on people and brute force to get us through. The equivalent of daily fire fighting.  
2. Raise the water level (inventory level) in order to ensure the river flows on top of the rocks to avoid puncturing the boat.  
3. Eliminate the rocks permanently, making the river void of waste and obstacles.

Unfortunately, for many organizations, we choose to raise inventory levels as soon as obstacles surface. For example:  
1. We do not have confidence in our supply base (a rock), so we increase safety stock (the water level) to gain a sense of security.  
2. We have unstable transportation lead times (a rock), so we increase buffer stocks (raise the water level) in order to cover ourselves for the uncontrolled variability in lead times.  
3. We have a lack of teamwork between internal departments (a rock), so we build inventories up between departments (raising the water level) in order to protect ourselves from perceptions of incompetence in other departments.  
4. We do not communicate with customers (another rock), so we hedge against demand uncertainties by raising finished goods inventory levels (raising the water level).

These examples show that we often use inventory to hide waste and other problems. Secondly, inventory develops and promotes cultures where internal and external silos are built and maintained. In other words, functional silos are not invisible walls, as we all believe; they are physical walls constructed with inventory. This inventory builds walls that deter any efforts for horizontal and vertical integration in the supply chain.

Completing the river analogy, one of two things will result in the end.  
1. We will continue to ignore waste (the rocks) and continue to raise the water level (inventory) in order to avoid the rocks. Eventually, the water level will spill over the river banks, grounding us and rendering us inoperable. This is equivalent to bankruptcy caused by uncontrolled internal costs as a result of waste perpetuating itself throughout the organization.  
2. We can recognize that we need to eliminate the rocks immediately and permanently. The goal is to create a river that is calm and navigable. This will only be accomplished if we eliminate the rocks. To achieve this, however, we need to see them and therefore it’s imperative that we reduce inventories to expose this waste.

To be sure, this is not an easy task. It is counter intuitive for us to think the best step forward is to reduce inventories in order to highlight many of the problems inside our organization. The process may shut plants down, short ship customers and expose lack of teamwork at senior levels of the organization. Who in their right mind would sign up for that?

**It’s a Matter of Survival**

There is no question that our vision of true supply chain management is not being realized as quickly as needed. Many people think that people issues and the proverbial internal silo cause this delay. Organizations that continue to allow functional silos to exist, and fail to foster teamwork will not survive. Organizations that do not relentlessly eliminate waste will not survive. These are the “absolutes” I alluded to.

Much research into learning models has shown that human beings learn best by solving problems. As Aristotle said, “we learn by doing”. Teamwork is about solving problems together, having a common goal and leveraging the strengths of each team member to maximize the overall potential of the team. Cross-functional teamwork is not something that results from training programs or feel good pep talks. Teamwork happens when we are forced to solve problems together and realize that inventory is hiding the problems we need to solve.

Once this is accomplished, supply chain management will be a bonus byproduct. That is, supply chain management is not something we directly implement; it is simply a result of doing the right things. It evolves when we decide to fight against waste in the system. Organizational survival depends on this one crucible.
Who’s Who in Logistics?
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Procurement Solutions: What Might Work For You

Procurement, know in the past as ‘Purchasing’, was once viewed as an unglamorous back-office function. It included negotiations with suppliers, procuring the parts and ensuring they were sent to the manufacturer of the products. Today, procurement’s status in the supply chain includes a wide array of requirements, encompassing everything from determining client requirements, to a global sourcing strategy. Here is a look at how technology and its application can help improve your company’s growing procurement practice.

By Christopher D. Norek and Donavon Favre

Background
One of the recent significant trends in supply chain management is the upgrade of the traditional purchasing process from its perceived status as routine and a “back office” function to a more strategic and visible area. Particularly, the traditional term of purchasing has been expanded and renamed procurement, which encompasses more than the tactical process of filling out purchase orders. Procurement includes determining customer needs, understanding the industry and the entire global supply base, determining a sourcing strategy, selecting suppliers and managing those suppliers over time. This article will cover the technology options to help your company improve its sourcing/procurement process and give executives some advice to consider while making these decisions.

Procurement Solution Functionality

Strategic Sourcing/eRFX/Reverse Auction – used to standardize and automate the sourcing process
  • Supplier identification and industry analysis
  • Can set up a preferred supplier list in advance
  • Can have an automated link into Producer Price Index (PPI)
  • Automated preparation and submission of Request for Information (RFI) and Request for Quotation (RFQ)
  • Online negotiation (Reverse Auction or online bidding)
  • Supplier Selection and bid analytics (determining the suppliers with the lowest total cost of ownership)
  • Contract Management
    – Repository for all contract information
    – Tie contract negotiated metrics to day-to-day

Transactional Procurement – used to automate the tactical process of day-to-day orders to suppliers
  • Automated requisition and purchase order process
  • Automated item selection from an item master or electronic catalog

• Automated receipt, approval and electronic funds transfer
• Electronic connection to supplier systems
• Data Management – used to manage and analyze procurement data
  • Content management – data cleansing, standardization and normalization
  • Spend analytics – analysis of key spend categories and key suppliers
  • Performance management – tracking of key performance indicators (KPIs) such as spend savings, supplier performance

Transportation Procurement – using automated solutions to select carriers with which to negotiate and then choose the lowest rate for individual shipments
  • Allow transportation bids to be handled online thereby eliminating the paper bid process and speeding up carrier identification and qualification prior to face-to-face negotiations
  • Within transportation management systems (TMS) lies the capability to automatically select and engage the lowest cost carrier for a specific shipment

Which of these solutions should you consider?
Strategic Sourcing solutions should be considered for any entity which has a significant amount of spending with outside suppliers (over $50MM total).
The spend should also be segmented into categories (i.e., sheet steel, contractor services) and sorted in descending dollars so only the top dollar spend categories are candidates for a strategic sourcing solution (the number of significant categories will go up for firm’s with a larger amount of spending). For smaller companies, a hosted solution (software run by the software company, behind their firewall) is less expensive and more manageable. For larger companies with higher usage, the software is typically purchased outright.

Transactional procurement systems are typically used to reduce the time and effort associated with the tactical aspects of procurement, such as requisition and purchase order creation as well as, the approval and payment processes. Companies with 10,000 purchase transactions or more per year should consider transactional procurement solutions. Companies with fewer transactions who don’t purchase a solution outright can take advantage of supplier internet sites for business-to-business transactions – for example, ordering office supplies or work gloves directly from a supplier’s website using a purchasing card.

Data management and analytics are valuable for medium to large companies with a large number of part numbers and supplier information. They are especially valuable for companies with multiple locations and/or divisions where data is not currently managed centrally. With data standardization, companies can find common suppliers and items across divisions and locations, allowing them to aggregate spend volumes and achieve discounts.

**What Executives Should Know and Do**

* Have your team evaluate spending data from your procurement and/or payables department to understand your total annual spend
  – Include all spending categories in addition to raw materials/component parts such as energy and information technology
* Ensure that data has been standardized and normalized so that your items are described consistently across all divisions and locations
* Analyze your current strategic sourcing and transactional procurement activities for efficiency and effectiveness
  – Aggregate all volumes to increase negotiating leverage
  – Look to upgrade and eliminate paper-based transactions in procurement
* Trial a strategic sourcing solution with two or three strategic sourcing events before buying

**Benefits of Improving Procurement**

Procurement has become very popular because most companies can realize savings between 5 and 15% on material and service cost reductions (including price, inventory, and payment terms). Additionally, a focus on procurement results in improved supplier management including measurement, continuous improvement, and supplier relations. Lastly, by using employing procurement automation, your employees can become more efficient and effective with more time available for strategic procurement activities. With millions or even tens of millions of potential savings available, procurement will continue to be an area of increased focus.
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DND PLogs (no pictures available)
I AM OFTEN ASKED ABOUT industry trends as if such forecasts can eliminate cross-border delays, inclement weather, or any of the other opposition our industry regularly faces. Nevertheless, identifying industry trends and embracing the concomitant challenges can empower a company, ensure its long term viability and contribute to its competitive advantage.

The dictionary defines trend as a “general tendency, bent or inclination”. In the transportation business, these “inclinations” provide both shippers and carriers with opportunities to improve performance, add value and dramatically improve supply chain management by forcing us to operate more strategically.

Trends reflect the changes in how we do business. They are unavoidable patterns in behaviour that demand a response. They are omnipotent and omnipresent. They compel us to lead or follow, or get knocked out of the way. What has been your company’s fate, in light of the following trends?

**Shrinking carrier capacity.** Philosophically, there’s always more than one way up a mountain. Unfortunately, in our world of clogged highways and driver shortages, the passage over, through or around the said mountain is limited.

Existing roads and rails are loaded to maximum capacity. Few routes are open to expansion, particularly given the cost. Governments are reticent to invest in new roads or rail lines where cost justification cannot be clearly provided.

As for the trucks, the universal driver shortage continues to plague our industry. Drivers are retiring or abandoning the lifestyle faster than replacements can be recruited. There is no fast and easy answer, just patience and conservative use of existing resources, which leads me to our next industry trend.

**The Carrier’s focus on profitability.** It’s no coincidence that our industry operates using terminology taken from the arena of war and military deployment. With shrinking carrier capacity creating battlefield conditions, carriers, much like military generals, need to carefully determine how their limited resources will be utilized. With steely precision carriers have the ability to pick and choose the loads they’ll handle, often implementing dedicated round-trip schedules to keep their drivers happy by enabling them to work close to home.

**Rising prices.** Prices fluctuate based on capacity. It’s a simple case of supply and demand economics. As capacity shrinks, prices go up. Many shippers already know first-hand how prices can fluctuate according to the day of the week. Get closer to the weekend, when resources get scarce, and you’ll pay a premium price.

**Security.** Stringent security measures instituted since 9/11 are what’s impacting our industry the most. Programs like CSA, C-TPAT, FAST, NEXUS, PIP and CANPASS are designed to help, not hinder, the flow of goods and people across the border – a fact that’s often forgotten when faced with additional costs, cross-border delays and impending restrictions placed on certain drivers.

**Visibility of shipper’s goods, right down to SKU.** Never underestimate the power of GPS-enabled tracking systems and what they will continue to do for the betterment of our industry. Think of the television commercial in which a transport truck screeches to a halt in the middle of a desert highway because the packages convey the message that they’re on the wrong road. Such visibility is an industry benchmark. Harnessing it’s power is what the future is all about.

**Shipper’s supply chain optimization.** In a perfect world, supply chains would be seamless. In reality, there are many bumps in the road. Shippers face increasing adversity that instigates a constant search for economy and better practices. A worthy carrier or third-party logistics provider will find solutions for the shipper as part of their value-added service.

**Building partnerships beyond lowest bid.** We’re all in business for the long haul (pardon the pun), so building long term business partnerships is important to the bottom line of every shipper and carrier. The trend now is for shippers to

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**Spotting the Trends**

“Trends reflect the changes in how we do business. They are unavoidable patterns in behaviour that demand a response.”

By Jim Davidson
make choices based on the total supply chain cost instead of the incremental costs because the sum of the parts is always more expensive than the whole process.

Purchasing logistics services piece-by-piece is like buying an automobile one part at a time; it’s expensive, complicated and somewhat irrational. More shippers are procuring comprehensive logistics services from a carrier or 3PL they trust. Hence, there is considerable value in the building of long-term relationships instead of short-term contracts.

Conversely, carriers strive to provide value-added services like strategic planning, compatible electronic communications, superior equipment and scheduling. The optimum choice ends up being whoever provides the best service at the lowest cost.

**Compliance.** Issues of security, driver performance, equipment maintenance are of greater concern to overall safety, compliance to government-mandated programs and company performance. Shippers increasingly pay greater attention to a carrier’s Commercial Vehicle Operator’s Record (CVOR). As a result, carriers with the highest safety record and best equipment dominate the industry. The alternative is for shippers to bear the “hidden” costs of accidents and/or non-compliance.

**Mergers and acquisitions.** Merger and acquisition activity ebbs and flows depending on the state of the economy and the confidence level of investors. Our industry is strong and currently benefiting from the influx of significant investment. Consolidation amongst carriers is once again fast and furious. Consequently, there are few companies for shippers to recruit as their logistics partner. Carriers’ rates will continue to increase and the quality of their revenue will improve as they can afford to be more selective about the cargo they carry.

**Shipper’s receivables.** There is an old Chinese proverb that states: “...may you live in interesting times.” In other words, in today’s context, the fact that on any given day a large multi-national corporation may default on their payables certainly holds my interest and concern. We live in a time when brand name manufacturers that once had fat bank accounts and excellent credit may lose the ability to pay over night. As a result, carriers must make conscious decisions about whether or not to do business with certain companies based on their ability to pay their bills.

**Growing use of intermodal transportation.** Container shipping is an industry standard. The combination of rail and road is unbeatable for cross-country shipping. Unfortunately, there is still some inherent imbalance in the routes. Capacity pressures exist on certain railway lanes, others allow for greater use. Yet the tendency will remain to favor intermodal transportation for its speed and economy.

I’ve been in the transportation industry a long time and seen many trends come and go. The few I mention in this article are here to stay. I look forward to sharing a more detailed analysis and commentary on their impact in future issues of LQ.
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