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New Course  
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## *The Impact of SARS on Healthcare Supply Chains*

Sunnybrook and Women's College's logistics professionals faced skyrocketing purchases of \$1 million within the first week of the SARs that went beyond the customary daily requirements of its some 8,000 staff members. Here's a firsthand account of how innovative practices in logistics helped to mitigate one of the most difficult challenges faced by Toronto's healthcare professionals.

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Ideas for Leadership in Logistics



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# Consolidation is Quickening the Evolution of the 3PL

*As we enter the next phase of the industry's evolution, a rising number of shippers are routinely demanding more services at a lower cost from 3PLs. What's the secret to success in this market? Survival and growth will likely go to those global 3PLs and their customers that share in both the management of the risks and the benefits derived from outstanding performance.*

by Mike Bernos

**A** WAVE OF consolidation is hitting the contract logistics marketplace as European companies seek to capitalize on the outsourcing opportunities that present themselves in both North America and Europe. In fact, an estimated 73 percent of shippers are expected to outsource by 2005 compared to the 37 percent in 2000, according to a recent study by Lazard Freres.

The lesser-known part of the consolidation equation, but equally as telling about the state of contract logistics, is its fragmentation. Core logistics sectors such as warehousing, transportation management, air and ocean freight forwarding as well as dedicated contract carriage are growing at rate of up to 25 percent annually, yet market share for small companies is between 30 to 80 percent.

This means that no single third party logistics provider (3PL) dominates the market and, while major players may stand out in their sectors, no one company is recognized as a leader in more than one sector.

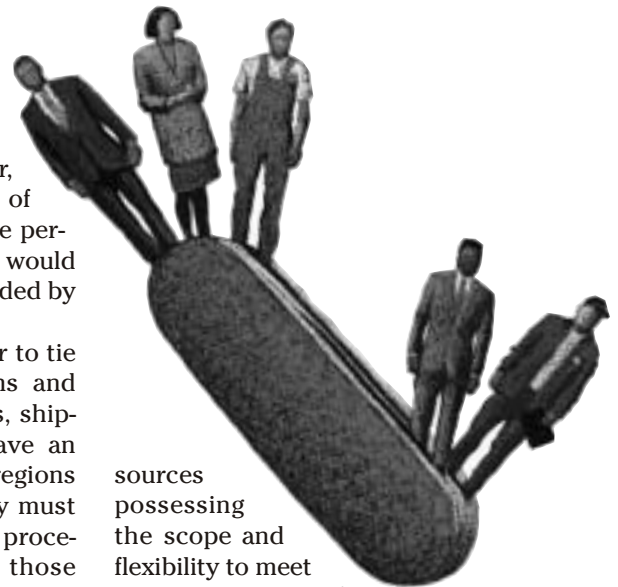
But as consolidation takes hold, 3PLs will add cross-sector expertise to their portfolios as they want to gain a competitive edge in the global market by positioning themselves as lead logistics providers (LLP). Add to this the growing trend for shippers to have a single point of contact or a "single-throat-to-choke" when outsourcing a wide array of services, and 3PLs have even more reason to become prolific.

Few companies can meet the broad range of requirements demanded by

these new initiatives. However, if I were to play the game of "utopia" – that is, to create the perfect scenario for success, what would be the necessary elements needed by a 3PL to execute as a LLP?

**A Global footprint:** In order to tie together global supply chains and the network of their suppliers, shippers are demanding 3PLs have an existing presence in those regions where they do business. They must be familiar with customs and procedures to do business in those locations. Forrester Research has reported that a successful cross-border transaction requires an average of 27 parties. Add to that the many different tariffs, duties, classification codes and restrictions that exist internationally and shipping material globally across borders becomes even more challenging. Operationally, most 3PLs that can provide economy of scope also provide substantial results as a result of leveraging their economies of scale.

**Information Technology:** Many SCEM tools are available, but nearly all are one dimensional or targeted to a core sector such as transportation, warehouse, order management and back-end offerings. As a result, integrating customers and suppliers can be as difficult as mastering a Rubik's cube. However, 3PLs have emerged as the crucible for integrating supply chain applications. Charged with having to bridge sectors to provide an effective supply chain solution, 3PLs have forged an amalgam of supply chain applications from commercial and proprietary



sources possessing the scope and flexibility to meet the diverse needs of customers. For too long the marketplace has overlooked these composite applications because they have not been marketed and branded competitively. But customers are quickly realizing that their logistics solutions can be found within the composite formed by these versatile applications. Recent academic research underscores this conclusion. According to Robert Lieb of Northeastern University, in Boston, many 3PL users rely on their providers for I.T. support and specific I.T. capabilities of individual providers play an important role in the provider selection process. The most important of those capabilities, Lieb says, are the ability to integrate a company's software and systems with those of other companies in the supply chain, the ability to operate the clients' software and systems and to implement new software and systems.

(OUTSOURCING LOGISTICS, continued on page 25)

# The Impact of SARS on Healthcare Supply Chains

Directives from the Ministry of Health and Long Term Care (MOHLTC) called for Sunnybrook and Women's College to go beyond annual supply purchases of \$50 million, to \$1 million within the first week of the SARS challenge. It sounds nearly impossible to manage. But here is firsthand look at how innovative practices in logistics helped to mitigate one of the most difficult challenges to converge on Toronto.

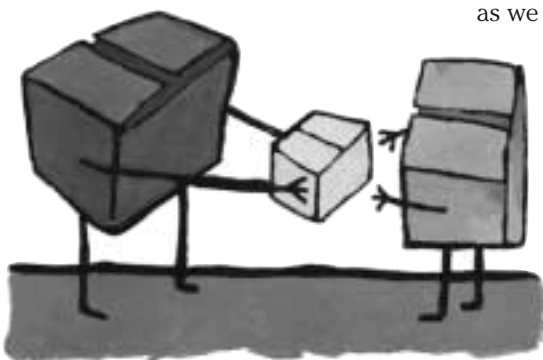
By Sarah Friesen, Director of Supply Chain Services and Biomedical Engineering, Sunnybrook & Women's College Health Sciences Centre

The recent outbreak of Severe Acute Respiratory Syndrome (SARS) in Toronto brought unprecedented challenges to hospitals. For a time, there was no business as usual, as Management and patient care staff alike focused on caring for patients with SARS while continuing to provide care to the general patient population. Layered on this activity was the added complexity of screening everyone who entered the hospitals, and wearing various levels of protective gear. I can't begin to imagine what it must be like to be a frontline healthcare worker right now, and most especially what it was like during the height of the outbreak.

Hospital supply chains had their own taste of being on the "frontline" as we supported the directives issued by the Ministry of Health and Long Term Care (MOHLTC) to protect staff, patients and visitors. Purchasing and warehouse staff demonstrated wonderful creativity and initiative in sourcing products at odd hours and on weekends, and worked collaboratively with our suppliers and the Ministry to set up a whole new range of products in inventory. SARS tested our resourcefulness, and at the risk of sounding dramatic, created supply challenges unlike any I have experienced in my career.

The outbreak became real to many of us on March 27, 2003. I was on my way to an Ontario Hospital Association conference on Healthcare Supply Chains when I got the call to come back to Sunnybrook & Women's immediately. All acute care hospitals in the GTA had received a directive from the Commissioner of Public Health, and we launched into battle mode. The directive required us to: limit access to the hospitals for all patients, visitors and staff; set up SARS isolation units; wear protective clothing (this included a surgical mask for all individuals entering the premises, and special protective clothing for patient care workers in high risk areas); restrict access to staff and visitors, including trades people who had worked at certain hospitals; restrict access of delivery personnel, e.g. couriers, who used to take packages directly to patient care units. At the same time, we began to cancel surgery and clinics.

The impact was immediate and significant. From a supply chain perspective, we were asked to source many products we had never carried in our inventory. We set up new supply carts with SARS related gear and created a 24-hour SARS hotline in our stores department. We changed our receiving department processes so that we could handle all the couriers that used to go direct. We informed our suppliers that regular business had been suspended,



unless they were essential service personnel, and then access was severely restricted. And we wrote policies to support these new processes.

Under normal circumstances, the 12 buyers and contract specialists at Sunnybrook & Women's put in a fairly regular workweek, sourcing products for our end user departments and meeting with suppliers. Receiving is open five days per week, and most of our replenishment activity takes place from Monday to Friday as well. Off-hour emergencies are rare, and are usually the result of the occasional manufacturing delay or missed demand forecast. Overtime is kept to a minimum as we manage tightly within our budgets.

That all changed overnight. For four to six weeks, the supply chain staff at S&W, like the staff at other healthcare facilities in the greater Toronto area, devoted most of their time to managing SARS supplies. The first few weeks were the most tense, and demand was impossible to predict. We took a very proactive approach and built inventories of supplies in anticipation, but still had many challenges to meet the needs of our more than 8,000 staff. As is often the case, most crises happened late on Friday or over the weekend. One buyer was trying to paint her house, and kept getting called down off the ladder to ask yet another supplier to open up on Sunday for some much needed supplies.

We had significant challenges finding the unique products that were required to protect our staff from SARS. Some of the products were items we used regularly, such as gloves and gowns, but suddenly we were using unprecedented quantities. For other items, such as the now famous N95 masks, we had no previous demand. Until we set up our supply lines, we visited every Home Depot and safety supply house in a wide radius looking for masks and face shields. The stakes were high; being out of stock on any of the core supplies was not an option, given the need to protect our patients, staff and visitors.

For perspective, we purchase approximately \$50 million/year in supplies at S&W. At the beginning of the SARS outbreak, we purchased \$1 million worth of supplies in the first week alone. While this activity leveled out, our daily consumption at the height of the outbreak included:

- 3,000 disposable isolation gowns
- 14,000 pairs of gloves

- 18,000 N95 masks
- 9,500 ear loop masks (used by those not involved in direct patient care)
- 500 pairs of goggles

Our suppliers, both existing and new, were fantastic. They exceeded expectations, responding to our calls at odd hours, searching their global supply chains to meet our needs and personally bringing us supplies in the trunks of their cars. SARS has represented a new business opportunity for many manufacturers, and most have responded by significantly increasing global manufacturing capacity for key items such as N95 masks.

Beyond this, we had to ensure adequate supplies for the door screening process, and brought in several new tympanic thermometers (the type that go in your ear). The screeners go through thousands of probe covers every day as we take the temperature of everyone who enters the hospital. And throughout the hospital we have increased the use of alcohol based hand wash dramatically. As with the core products, the demand for these products skyrocketed overnight, placing significant strain on supply. One weekend we were counting out the bottles by unit while we waited for a rush shipment.

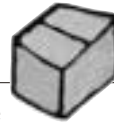
In early April, the MOHLTC divided the GTA into east and west to centralize and coordinate the distribution of supplies. Two healthcare organizations, St Michael's Hospital in the east and Shared Healthcare Supply Services (representing University Health Network and Mount Sinai Hospital) in the west, were designated to manage the demand on behalf of the hospitals in their respective areas. Suppliers were instructed not to ship core products direct to hospitals, but only to the approved warehouse. We provided St Michael's with our average daily demand, and began drawing supplies from a centralized warehouse (through the Ontario Government Pharmacy).

Although the impact of SARS was mainly felt in the GTA, plans were also put in place to ensure that all hospitals throughout Ontario had access to the necessary supplies. Regional Communication and Supply Centres were set up, and will continue to be a resource for hospitals in the

event they have difficulty sourcing supplies. Regional Supply Coordinators were assigned to help the MOHLTC in monitoring demand, inventory availability and the distribution of emergency supplies. As in the GTA, hospitals were asked to provide demand forecasts to the Regional Centres, to ensure adequate supply was available.

What have we learned from SARS? We discovered we weren't ready for a crisis of this magnitude, yet throughout the city and province (and across the country, no doubt), government officials and the management and staff of healthcare facilities came together and created processes and policies that ultimately stopped the spread of the disease. Going forward, we will build on

*We took a very proactive approach and built inventories of supplies in anticipation, but still had many challenges to meet the needs of our more than 8,000 staff.*



those plans so that we can mobilize quickly in a similar situation. For example, the Ministry warehouse will continue to carry a safety stock of essential products, even after hospitals are ordering those items on their own again.

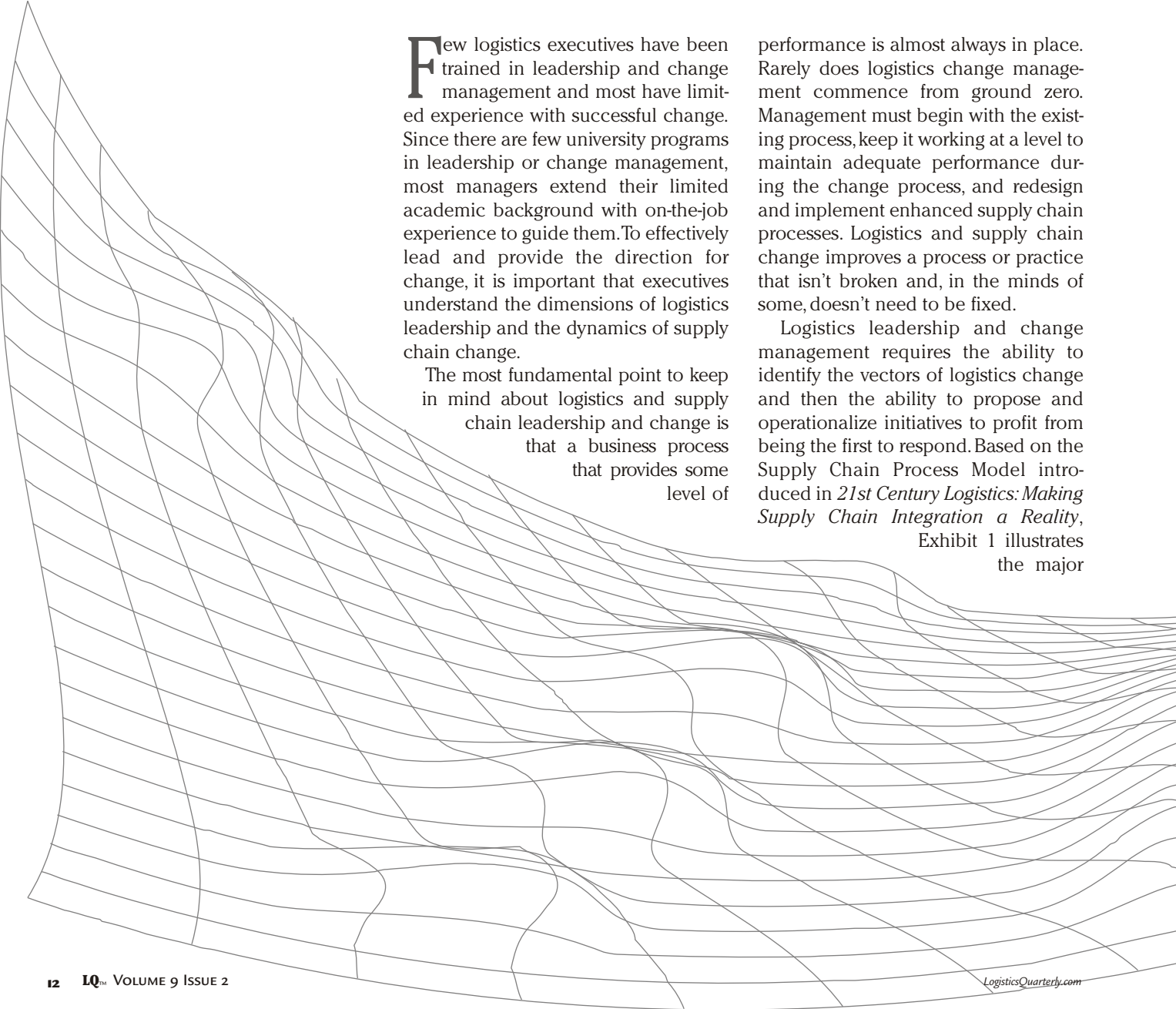
We also learned the value of good communications, as hospitals disseminated reams of information to educate and inform staff and patients, as well as to calm fears. From a supply chain perspective, we set up complex communications channels, to ensure a smooth flow of products to our end users on the frontlines.

SARS has retreated, with the last case reported on June 12, but hospitals continue to exercise vigilance to ensure we keep it that way. Some protective measures have been relaxed, and we are now focusing on our normal business activities again. Managing the SARS supplies has become a part of our daily routine, but we still screen everyone who enters the facilities, and frontline healthcare workers still don protective gear. We learned some important lessons from SARS, and are better prepared to respond should such an emergency reoccur in the future. We also learned the value of teamwork – people's resourcefulness and responsiveness were key contributors to managing through one of the most difficult challenges of our time. ❖

# Perspectives on Logistics Leadership

Five critical dimensions for leadership in logistics can be identified to transform the 20 percent of the logistics change initiative directly within the control of a company's logistics organization. As a catalyst for widespread change, however, logistics leadership must include many other areas of business.

By David J. Closs, John McConnell Chaired Professor, Department of Marketing and Supply Chain Management, Michigan State University



Few logistics executives have been trained in leadership and change management and most have limited experience with successful change. Since there are few university programs in leadership or change management, most managers extend their limited academic background with on-the-job experience to guide them. To effectively lead and provide the direction for change, it is important that executives understand the dimensions of logistics leadership and the dynamics of supply chain change.

The most fundamental point to keep in mind about logistics and supply chain leadership and change is that a business process that provides some level of

performance is almost always in place. Rarely does logistics change management commence from ground zero. Management must begin with the existing process, keep it working at a level to maintain adequate performance during the change process, and redesign and implement enhanced supply chain processes. Logistics and supply chain change improves a process or practice that isn't broken and, in the minds of some, doesn't need to be fixed.

Logistics leadership and change management requires the ability to identify the vectors of logistics change and then the ability to propose and operationalize initiatives to profit from being the first to respond. Based on the Supply Chain Process Model introduced in *21st Century Logistics: Making Supply Chain Integration a Reality*,

Exhibit 1 illustrates the major

capabilities critical for logistics leaders. The ball illustrated in motion by the dotted lines represents the rapidly changing supply chain environment. Like supply chain requirements, the motion is constant and it is continuously being redirected under the influence of customer and competitive actions. The Supply Chain Change Process Model suggests five critical dimensions for logistics leadership. The dimensions include:

1. Ability to identify customer and end-customer requirements;
2. Ability to identify and characterize competitive capabilities;
3. Ability to understand firm and supply chain competencies;
4. Ability to envision the dynamics between the requirements, capabilities and competencies and project the trends; and
5. Ability to develop and lead action plan implementation in a transition environment.

### Customer Requirements

The first dimension is the ability to understand both customer and end-customer supply chain requirements. This includes understanding service requirements and performance levels that will be necessary to satisfy intermediate and end-customers today and especially in the future. For example, logistics leaders must be able to identify the changing delivery and service requirements of channel segments or even of individual customers. The true leader must not only understand current requirements, but must also anticipate future supply chain requirements of customers and the end-customer. An understanding of current and future requirements allows the logistics leader to define the ultimate goal. Not only is this dimension critical for leading the executive's own firm, it is equally as important to be able to lead and educate the firm's critical customers to ensure their long-term success.

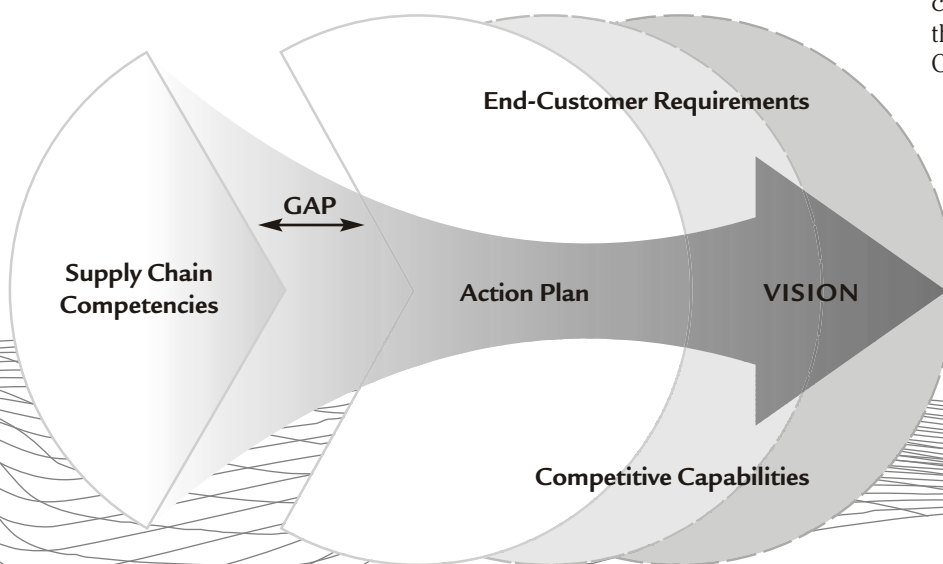
### Competitive Capabilities

The second dimension of a logistics leader is the ability to identify and understand competitive capabilities. A logistics leader must anticipate and understand the current and likely strengths and weaknesses of key competitors. Such understanding is critical to allow a firm and its supply chain

*Logistics leadership and change management requires the ability to identify the vectors of logistics change and then the ability to propose and operationalize initiatives to profit from being the first to respond.*

partners to match competitive threats and target weaknesses. However, information and understanding regarding the supply chain environment are often difficult to obtain. The leader must determine the framework to characterize both competitive and non-competitive firms and then develop the means to assess and benchmark other organizations. While it is not easy to identify the current capabilities of competitors, true logistics leaders must insight regarding future competitive capabilities.

## EXHIBIT 1 Supply Chain Change Process Model



### Supply Chain Competencies

The third dimension of a logistics leader is the ability to understand and critically evaluate the competencies of their own supply chain. The Supply Chain 2000 Framework and diagnostic methodology introduced at Michigan State University (MSU) determined that high performing supply chains exhibit high degrees of customer integration, internal integration, material/service supplier integration, technology and

planning integration, measurement integration and relationship integration (For a more detailed discussion, see *21st Century Logistics: Making Supply Chain Integration a Reality* from the Council of Logistics Management). For each of these integration competencies, a logistics leader must be able to assess the firm's capabilities as well as the complementary capabilities of

operations, processes, or application of external resources to achieve such visions. Such leaders are also able to articulate the reality of the present, thus identifying the comparative gap between vision and reality needed to motivate change.

The role of visioning is to conceptualize the supply chain situation and identify desirable and achievable system modifications consistent with overall enterprise objectives. To enhance the current situation, the vision must be shared and

operating complexity by identifying and focusing on relationships and practices that, if modified, have the potential to enhance performance. Change management leadership is the art of creatively identifying, articulating and guiding a shared vision of the opportunity gap and the means to improve. While leaders astute in change management may identify an opportunity and scope its potential, the existence and magnitude of a gap is typically not so obvious to managers who are deeply involved in day-to-day operations. The balance between vision, current reality, and resource opportunities creates the essence of a logistics leader's action plan.

Successful logistics change leaders must be able to communicate the benefits and risks associated with the vision in a credible manner if widespread support for any initiative is to be generated. Leaders who successfully enable change are masters at creating legitimacy for visions in terms of detailing future directions and conceptualizing the capabilities and resources necessary to get there. Most important, such visions must be aligned with overall enterprise and supply chain goals.

Just as a firm's supply chain competency is dynamic, so are the associated visions. Since visions are about the future, they frequently change. In fact, visions must undergo constant refinement if they are to remain relevant. Once a vision is widely shared, it immediately impacts current decision-making. In essence, the shared vision becomes part of the present as well as the desired future and the logistics leader can effectively establish that vision as the goal.

#### **Action Plan**

In a matter of time, organizational leaders will conclude that sufficient potential exists to justify undertaking change.

The fifth dimension of logistics

adopted by a wide range of individuals and groups who must be involved if to achieve meaningful change. Thus, visions with a high degree of perceived legitimacy and offering substantial opportunity are more likely to be accepted over those proposing radical change. For some types of supply chain change, reasonable modification of current practices and relationships is sufficient. The truly difficult leadership challenges are those proposing that well-established practices or relationships be discarded or radically modified. As noted earlier, resistance to new practices and relationships that challenge a sense of individual and business security can force a serious, if not terminal, resistance to the change management process.

The difference between the logistics leader's current assessment and the vision of desired achievement defines the opportunity gap that determines the performance and financial benefits attainable from improved integration. To be meaningful, these performance and financial measures must be quantified to initiate and drive change. In this respect, leadership is essential to help simplify

*To enhance the current situation, the vision must be shared and adopted by a wide range of individuals and groups who must be involved to achieve meaningful change.*

other supply chain partners. While the MSU research has demonstrated that high performing supply chains must have a high level of ability in all of the integration competencies, it is possible for firms to achieve high performance by using the competencies of supply chain partners.

#### **Vision**

Visioning is a process of creativity and innovation. The fourth dimension of logistics leaders is the ability to develop a *big picture* perspective that conceptualizes the dynamics and influence of complex interrelationships. Leaders see an integrative pattern of connectiveness where others may see only specific events and problems requiring resolution. The connectiveness relates the trends in terms of customer requirements, firm capabilities, competitive capabilities and the responses in the form of firm competitiveness. Leaders are able to create a vision of future market requirements and then identify refinements in

leadership is the ability to develop this conclusion and then develop a plan to operationalize it. The sales and development process is particularly challenging in a transition environment. The environmental dynamics of logistics and supply chain management mean that the guidelines and principles must be constantly transitioned and refined. The principles that were learned or applied yesterday must be refined to work in the current environment. Effective action planning requires the logistics leader to adapt and extend the traditional principles to the current and anticipated environment.

This requires that the logistics leader be able to systematically: 1) identify the change initiatives; 2) characterize the benefits; 3) determine the obstacles to overcome; 4) highlight the organizational implications; 5) determine the resource requirements; and 6) establish accountability and action measurements. While it is not necessary for the logistics leader to embody the detailed skills for change management, an effective leader must maintain the big-picture perspective and drive the change management initiatives.

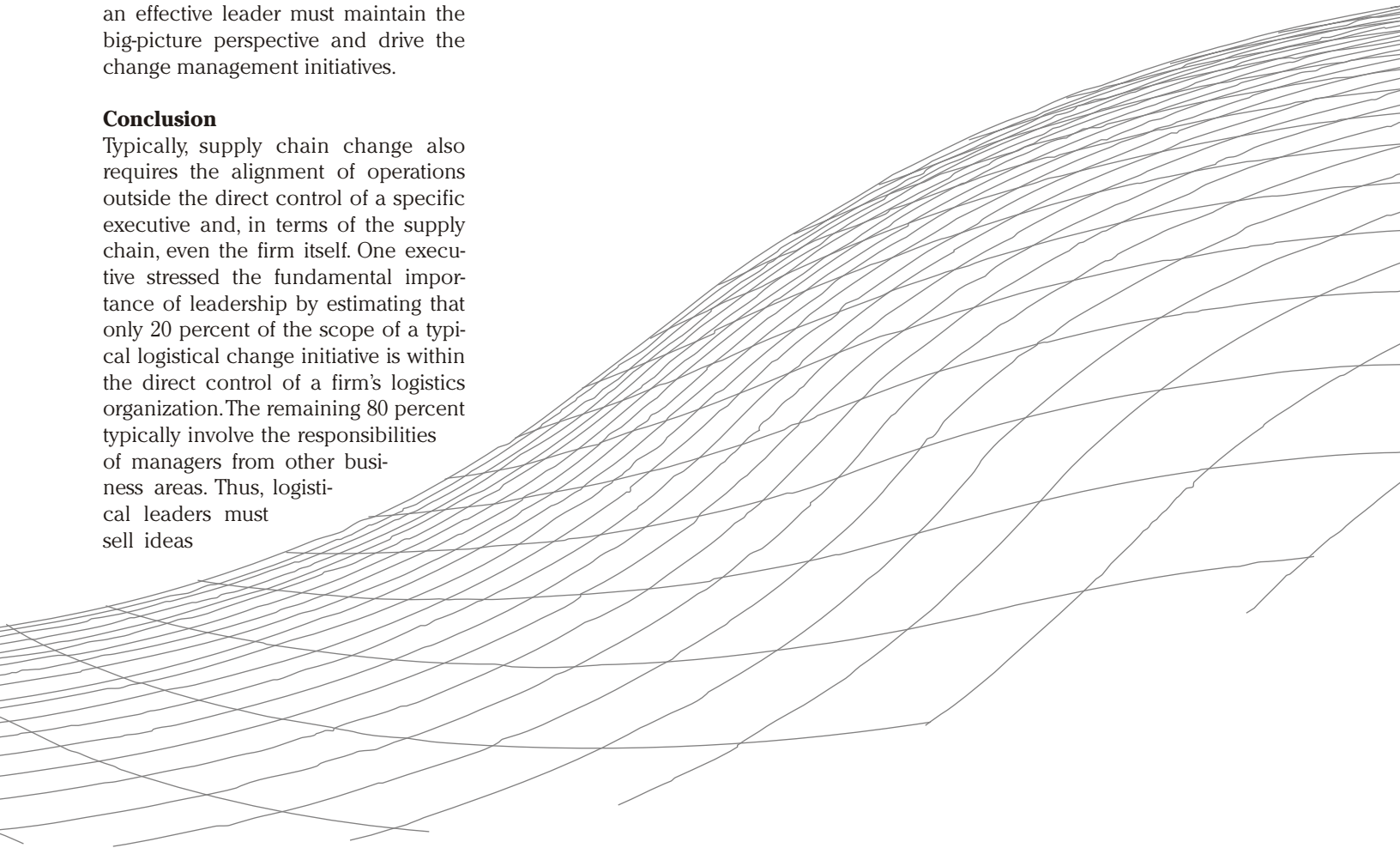
### **Conclusion**

Typically, supply chain change also requires the alignment of operations outside the direct control of a specific executive and, in terms of the supply chain, even the firm itself. One executive stressed the fundamental importance of leadership by estimating that only 20 percent of the scope of a typical logistical change initiative is within the direct control of a firm's logistics organization. The remaining 80 percent typically involve the responsibilities of managers from other business areas. Thus, logistical leaders must sell ideas

and serve as cross-functional catalysts. Managing change through others is a difficult task that logistics leaders need to master.

The abilities represented through these dimensions represent a significant challenge and a substantial opportunity for managers to differentiate themselves. Combining logistics and supply chain knowledge with effective change management skills provides an individual an opportunity to establish his or her importance in supply chain and supply chain's importance for the organization. The increasing role that logistics and supply chain management continue to take in corporate competitiveness shows that there will always be a need for logistics leaders. ❖

*This article is adapted from: Donald J. Bowersox, David J. Closs, and Theodore P. Stank. 21st Century Logistics: Making Supply Chain Integration a Reality (Chicago, IL: Council of Logistics Management, 1999). Chapter 10.*



# Transforming Nortel's Logistics Practices

## *Charting a Course to a Variable-Cost Logistics Model*

By Joe Grubic, Senior Manager, Logistics Integration,  
Global Logistics, Nortel Networks

**D**URING THE LATE 1990s and early 2000s, Nortel Networks undertook a major transformation of its supply chain on a scale and scope, which at the time, was unprecedented in the networking industry. The goals of this transformation, which involved the entire end-to-end supply chain, from sourcing to manufacturing, to logistics to installation – were to drive greater efficiencies, make it easier for customers to do business with the company and create a faster, more flexible, and more agile supply chain for the delivery of end-to-end networks.

A key enabler of that transformation was the decision to move from a vertically integrated model – where most supply chain activities were done in-house – to a virtually integrated model that leveraged the capabilities of strategic suppliers by outsourcing and divesting those parts of the business that were no longer a competitive advantage in-house. As a result, Nortel Networks improved its leverage of the economies of scale offered by its suppliers, realized significant cost reductions and increase its competitiveness.

Also central to this transformation was the creation of virtual end-to-end supply chain teams to support specific customers and/or clusters of customers, as well as single points of accountability (Customer Operations Leaders) for managing the customer's experience across the supply chain and beyond, from the time an order is placed, to when the customer network is operational, and through to post in-service support. The right tools gave these teams the ability to proactively manage the end-to-end supply chain. Of particular importance were visibility and event management capabilities that helped coordinate and integrate the information for managing material flows.

A closer customer alignment brought a deeper understanding of customer requirements, as well as valuable insights into how to increase agility and flexibility to better respond to ever-changing customer demands.

Also, embarking on this supply chain journey clearly helped to minimize some of the external pressures associated with this sector's market downturn. For example, it contributed significantly to Nortel Networks' ability to quickly ramp down to meet the realities of a recessed market environment, while maintaining consistent and aggressive pressure on the competition.

### ***Five steps to a more agile logistics model***

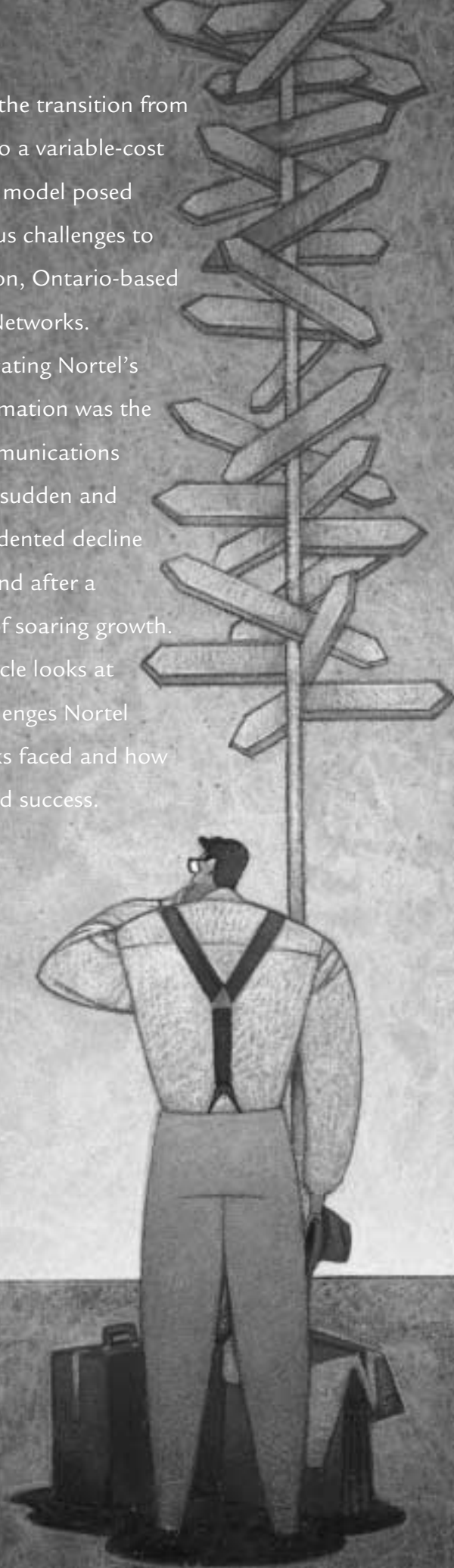
An important success factor in this overall supply chain transformation was an equally dramatic shift in the company's logistics business model. The transition to a variable-cost logistics model involved five strategic phases: inventory reduction, supply chain analysis, footprint reduction, warehouse closures/renegotiations, and supply chain synchronization (see Figure page 18).

### ***Inventory reduction***

The first step in the transition, inventory reduction, took on particular importance given the market environment at the time.

Between 1998 and 2000, Nortel Networks had expanded its global logistics network to both support the rapid surge in demand (Nortel Networks' revenue grew 72 percent up to (U.S.)\$30.3 billion during this period) and manage orders from the growing number of supply points that stemmed from outsourcing and divesting the bulk of its manufacturing to contract manufacturers. As well, the company put in place strategically located warehouses within each region globally to integrate and

Making the transition from a fixed to a variable-cost logistics model posed numerous challenges to Brampton, Ontario-based Nortel Networks. Complicating Nortel's transformation was the telecommunications sector's sudden and unprecedented decline in demand after a period of soaring growth. This article looks at the challenges Nortel Networks faced and how it realized success.



marshal orders from the different supply sources prior to delivery to the end-customer. By 2001, Nortel Networks had approximately 2.5 million square feet of warehouse space.

During this period of high growth, driven primarily by the Optical Networks segment, inventory in regions close to the customer was increased to keep ahead of anticipated demand. Optical components were in short supply and this inventory helped to ensure a sufficient supply to meet aggressive customer timelines, grow revenues and gain competitive advantage. Further, the creation of Customer Fulfillment Centers (CFCs), which were co-located with global multipurpose warehouse facilities called Logistics Operations Centers (LOCs), also helped position unassigned finished goods inventory closer to the customer. These CFCs maintained an inventory of ready-to-go product dedicated to individual customers or customer clusters, while the LOCs housed product inventory and installation-related material. The LOCs also served as distribution and marshaling centers, consolidating all products and equipment necessary to ship and install a complete network order.

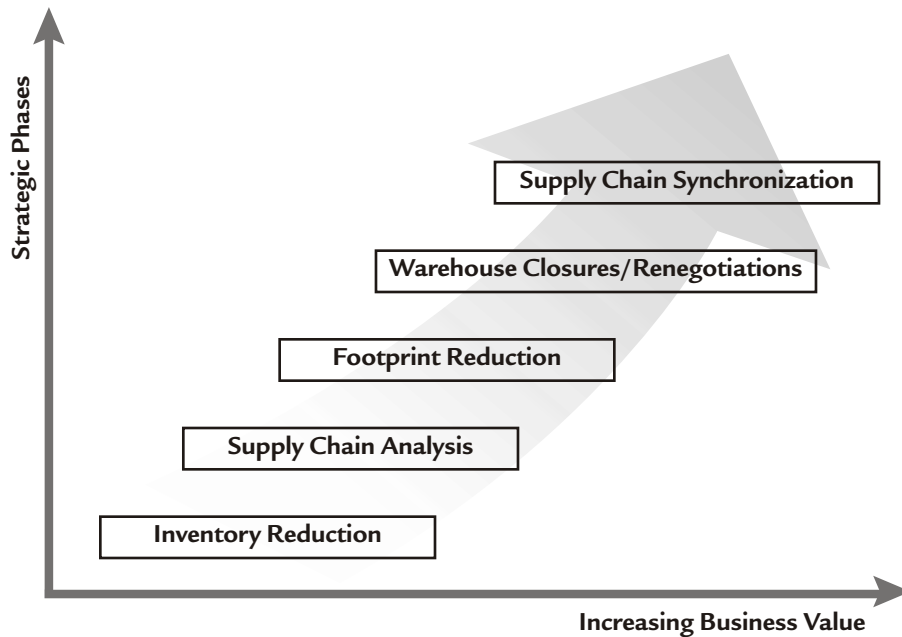
From 2001 onward, however, the demand for optical networks began a dramatic slide, and the warehouse network suddenly housed a significant amount of excess inventory, a situation that complicated the move to a variable-cost logistics model. Slow-moving inventory consumes warehouse space and can weaken a company's leverage with logistics service providers (LSPs) when negotiating for increased variability in pricing terms. This is because it reduces the productive space that would otherwise provide the LSP with potential revenue opportunities.

Declining demand put increased focus on reducing all types of inventory, including pre-process materials, manufactured finished goods, purchased finished goods, assigned finished goods and customer-owned inventory. At the same time, the company took the opportunity to streamline other inventory management systems it used, such as Enterprise Resource Planning (ERP) systems, Material Resource Planning (MRP) systems, Warehouse Management Systems (WMSs), legacy applications, and even manual spreadsheets – to created unprecedented efficiencies in inventory management.

The implementation of warehouse management systems across most of the LOCs helped address this challenge, as did integrated web-based tools that provided inventory updates and visibility in those locations, such as temporary project warehouses, where investment in a warehouse management system could not be justified. The result was a consolidated view of inventory across the entire logistics network. This much-improved visibility also allowed other organizations within the company to effectively manage and reduce inventory.

As a result of these initiatives, inventory levels in Nortel Networks logistics networks fell by more than two-thirds between 2001 and 2002.

**FIGURE 1**  
**Fixed-cost to Variable-cost Logistics Strategy**



**Supply chain analysis**

The second phase involved a complete analysis of the supply chain to determine the future requirements of the logistics infrastructure.

With outsourcing, the traditional manufacturer/customer relationship would become more complex and require a more thorough understanding of supply chain product, information and financial flows. Understanding these flows, which were expected to become even more

*"From 2001 onward the demand for optical networks began a dramatic slide and the warehouse network housed a significant amount of excess inventory – a situation that complicated the move to a variable-cost logistics model."*

fluid and dynamic, would be critical to aligning the logistics strategy to current and future business requirements. Today, for example, it is not uncommon for a single customer order to include several transactions, involving both internal and external purchase orders with various Original Equipment Manufacturers (OEM) suppliers and/or contract manufacturers.

Some of the challenges in this phase involved understanding and provisioning for various factors that could potentially impact the degree of supply chain flexibility. For instance, what would be the impact on order lead times and inventory if a supplier chose to relocate its manufacturing plant to another continent? Would the

company's systems still be integrated with the supplier for order-status updates and delivery-status information?

These and other potential influencing factors were included in the supply chain analysis, which involved a review of the entire distribution infrastructure and led to a redefined logistics strategy with regard to such items as warehouse locations, cross-docking and marshaling requirements, order fulfillment inventory and service. As well, as the business stabilized, a better view emerged of the future capacity requirements for the logistics network, easing the challenge of more closely aligning this logistics network with business and customer service requirements.

During this stage, Nortel Networks made the critical decision to outsource global management of its logistics operations to Kuehne & Nagle LeadLogistics (KNLL), a fourth-party logistics provider (4PL). KNLL became the single point of contact between Nortel Networks and the services of multiple third-party LSPs worldwide, and assumed responsibility for the performance of these LSPs. For the most part, Nortel Networks had already outsourced to third-party LSPs all existing in-house operational logistics activities, such as transportation, warehousing, export readiness and customs brokerage activities.

The objective was to leverage KNLL's resources, capabilities and technology to further develop, integrate and optimize the supply chain network across the various

third-party LSPs. The divestiture to KNLL was notable because it was the first of its kind within the industry on a global scale.

The decision to divest to KNLL was based on the following business rationale:

- Divestiture would enable the management of logistics activities to be centralized with a company for whom logistics was the core competency;
- It would allow Nortel Networks to move forward from a fixed-cost to variable-cost model by leveraging the investments in the required supply chain integration technology and tools already made by KNLL;

- The retained resources within Nortel Networks could be directed toward core areas and functions;
- Demand for synchronized supply chain network capabilities was increasing and KNLL was a leader in this area.

In summary, leveraging logistics capabilities externally would enable Nortel to put a stronger value proposition – increased supply chain visibility, reduced cost, and improved service levels – in front of customers.

### **Footprint reduction**

The third phase involved reducing fixed infrastructure and other costs within the logistics network. The result? The company reduced its warehouse footprint by more than 60 percent. This was a significant as the logistics warehouse network was primarily managed through fixed-contractual relationships with logistics service providers (LSPs).

*The company reduced its warehouse footprint by more than 60 percent. This was a significant as the logistics warehouse network was primarily managed through fixed-contractual relationships with logistics service providers (LSPs).*

### **Warehouse closures/re negotiations**

The next step engaged the LSPs to review ways to reduce costs in such areas as transaction-based and variable-pricing models, footprint reductions, sub-lease opportunities and operational consolidations. Most LSPs rose to the challenge. In instances involving dedicated warehousing operations, the level of support received was dependent on the ability of the LSP to bring in other clients to take over or sub-lease the space Nortel Networks no longer needed. Additionally, opportunities to sub-lease the space depended on the capital investment to separate the space for additional clients.

The company also investigated whether it should close some operations in some facilities, based on a calculation of the termination costs and an understanding of the liabilities as they related to the terms and conditions of the associated LSP agreements. Factors in this decision included such items as unamortized capital, severance liabilities, loss-of-profit compensation, real estate lease obligations and facility leasehold improvements.

Next, Nortel considered opportunities to renegotiate agreements with particular LSPs. It might have been possible, for instance, to move operations from one facility to another that was managed by the same LSP. The LSP may have had other clients interested in sub-leasing the facility.

### **Supply chain synchronization**

The final step was the evolution to a synchronized supply chain, – an ongoing process that the company continues to pursue.

Synchronization is the strategic implementation of tools and processes that optimize inventory flows, transportation and other touch-points within the supply chain. Requiring extensive collaboration among supply

chain trading partners, supply chain synchronization leads to a variable and flexible logistics network that minimizes inventory levels and transaction costs and optimizes inventory flows.

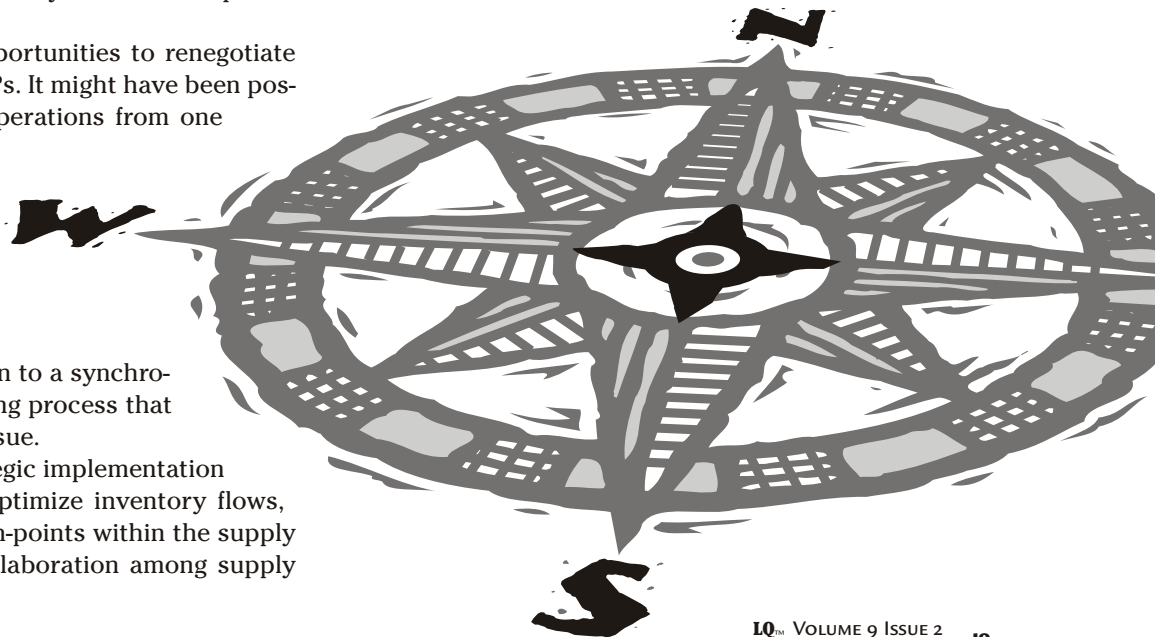
One of our primary objectives in moving to a fourth-party logistics provider was to leverage KNLL's IT infrastructure and toolset to promote this synchronization between Nortel Networks and its supply chain trading partners. The success of this evolution depends on tools

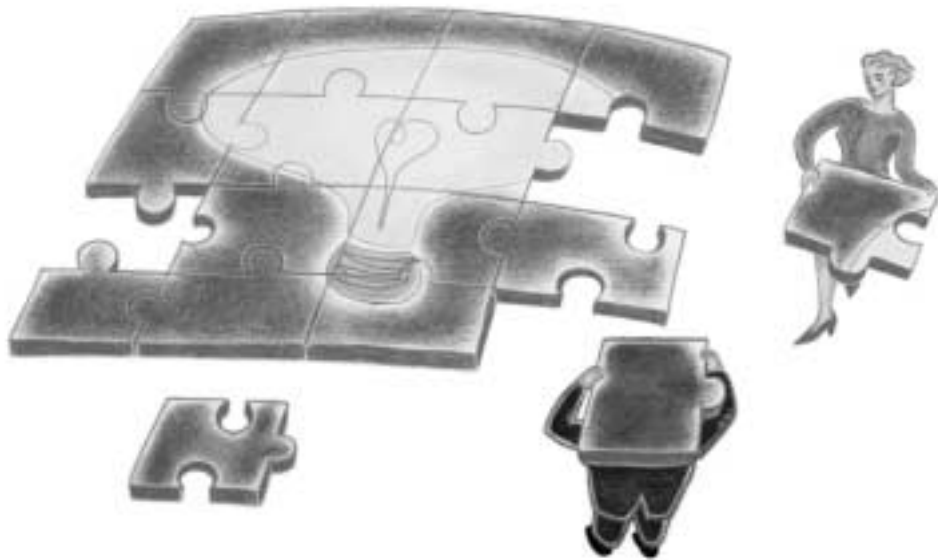
and processes as well as the buy-in of people across Nortel and its supply chain providers. It needs to be a win-win situation for both parties.

As these synchronization efforts continue, the anticipated supply chain efficiencies are beginning to be realized. Already, for instance, a synchronized supply chain has delivered a greater level of visibility, enabling the company to more accurately time the release of inventory from its suppliers and better execute and synchronize the timing of shipments and product delivery to customers.

Further synchronization will require a collective agreement on the key metrics defining acceptable performance to ensure that all parties are contributing to some of the company's key objectives of revenue growth, minimized costs, improved asset utilization and ultimately, shareholder value.

Nortel Networks is aggressively pursuing these initiatives and expects to see significant improvements to its supply chain from an increasingly flexible, variable-cost logistics network – improvements that will provide end-to-end order visibility and supply chain command and control capabilities.❖





# *A Transformation in Logistics Strategy*

When a new array of challenges converged upon Richmond Hill, Ontario-based Unisource, its executives perceived an opportunity to reinvent its business. As a result, the company no longer focuses on selling product. Instead, its professionals speak with clients in a new language that encompasses everything from total procurement costs to supply chain and collaborative opportunities for improvement.

By David Faoro, Director of Business Process Improvement, Unisource Canada, Inc.

Often the way companies perceive a business challenge is important in determining their success to meet it. Today, Canadian wholesale distributors have identified a wide array of new challenges and trends that have prompted some to review their traditional business practices. For example, they might have observed a manufacturing customer's plant bursting at the seams because its purchasing team orders in truckload quantities to get the best price. In these circumstances, it would not be uncommon for the wholesale to be asked for a solution.

These challenges go beyond the requirements of manufacturers. Another common challenge might involve retail customers that may have too many sup-

pliers delivering too often, causing their staff to needlessly spend a lot of time placing and receiving orders and, to aggravate this situation, it seems some other suppliers can't control store-delivery times.

Do these challenges to wholesale distributors represent opportunities to help the customer? Perhaps. Traditionally, many customers of wholesale distributors have sidestepped this question and turned to third party logistics providers (3PLs) to find the answers and solutions.

However, in the last decade new options have come to the fore. It's evidenced by a handful of wholesale distributors that have evolved from conservative family- or privately-run operations to become companies offering sophisticated integrated supply chain

solutions. These companies have transformed their traditional business models and broken business paradigms to better serve the changing needs of their customers.

A case in point is the transformation in the business and logistics strategy of Unisource Canada, Inc. Several years ago, Unisource, based in Richmond Hill, Ontario, was a typical wholesale distribution company serving multiple-market segments with a broad market focus. Its roots were in the paper distribution business. Through acquisitions Unisource expanded into the packaging and industrial supply sectors. Standard services were provided to its customers, the company's service levels were on par with industry standards, its sales growth was commensurate with the economic performance of the country and its customer base was stable.

In this context, Unisource chose to transform its business and recast the way it worked with its clients. The assessment of the company's business strategy began with an analysis of external factors and their implications. Four major external trends emerged from Unisource's review:

• **Integrated Supply and Business Process Outsourcing:** After implementing major expense reduction programs encompassing areas such as headcount reduction and internal process redesign, companies were looking to remove costs related to their vast network of suppliers, primarily in indirect areas that included office supplies, safety supplies, MRO, etc. They also wanted to reduce their overall purchasing costs. This resulted in a significant reduction in their number of vendors, or a shift to consolidators. In summary, they wanted to reduce procurement cycles and administration costs, eliminate paper-based processes and reduce costs associated with the ordering process.

Also, Unisource's customers were speaking in a new language, signaling the need to change the traditional dialogue used by the company to sell clients products. This new language encompassed total procurement costs, supply chain and collaborative opportunities for improvement. Unisource learned that if sales people only spoke

in terms of product pricing and performance, suppliers could not move forward with customers in a meaningful way.

• **Consolidation:** Customers, competitors and suppliers were consolidating at a rapid pace. Customers were demanding pricing and services based upon their new scope and opportunities to leverage their positions. As suppliers consolidated, they challenged existing supply chain relationships, bypassing distributors and moving to direct end-user shipments. Also, competitors aimed to gain new efficiencies from the merger-and-acquisition era of the 1990's. This meant the competitive landscape was changing and maintaining the status quo in business strategy was risky.

• **Globalization:** Free trade and globalization brought new products and suppliers to the marketplace, heightening competition and increasing the commoditization of key groups of products. As a result, many grades of paper and other products offered by Unisource were pushed to be true commodity items in line with resources and products such as oil and gas and steel. Customers had begun to source products globally and keeping in touch with this expansive market had grown more difficult.

• **B2B E-Commerce:** In conjunction with this trend and a growing demand calling for integrated supply solutions, the explosion of new technologies and e-commerce solutions provided the tools to support this demand. For the first time, customers were provided with a simplified view of products and prices, affording them the ability to manage entire categories of expenditures. Multiple Internet procurement models now targeted the sourcing cycle. These included:

- Complete sourcing solutions
- Auction/exchange services
- Electronic outsourcing
- E-Marketplaces

Concurrently with this analysis a series of internal studies were conducted along with a management review of the supply chain organization within Unisource. Other areas that were reviewed included the company's posi-

tioning within market segments, a review of competitive activities and customer requirements.

A review of these external forces and an extensive internal analysis showed the current strategy would not lead to a continuation of Unisource's leadership position in the market. In fact, if Unisource had held its current course, either existing competitors would move to fill the emerging need in the market or 3PLs might soon offer

*“A review of these external forces and an extensive internal analysis showed the current strategy would not lead to a continuation of Unisource's leadership position in the market.”*

the services provided by wholesale distributors. Another possibility was an e-commerce solution that stripped out key-product categories currently sold to customers.

The analysis of these trends and carefully conducted research resulted in Unisource's recasting its customary product focus on paper and packaging supplies to concentrate its resources on selected customers and services targeted to unique segments; Unisource transformed its business strategy to be closer to that of a 3PL business model.

To support this change, many new initiatives were undertaken. Some of the key challenges included sales training, inventory management, the pricing of services and internal resources. They also involved new technologies, such as warehouse management systems, e-commerce solutions and ERP programming changes, all of which were essential to refocus Unisource's service offering.

Some of the resultant programs offered today by Unisource include inbound supplier consolidation programs, Just In Time (JIT) inventory management solutions and retail store distribution services. These programs provide ways for Unisource's customers to reduce costs and inventory, as well as lead times for products with increased service levels.

## Key Initiatives

### Sales Training

Sales associates had strong product knowledge based on a traditional

Wholesale Distributors and Third Party Logistics Providers (3PLs)	
WHOLESALE DISTRIBUTOR	3PL
Firms that buy and re-sell products in which they have taken ownership. Will break lots to supply smaller order quantities to customers.	Firms that provide integrated logistics services for use by customers. Services include transportation, warehousing, cross-docking, inventory management, order fulfillment. Typically, they do not take product ownership.
Focus on specific customers or products.	Focus on customer segments, logistics solutions or technologies.
Extensive product and application knowledge.	Extensive business process and supply chain knowledge
Offer credit or payment terms to customers.	Typically, financing not part of offering.
Manage customer order process - simple to complex.	Can manage order process through outsourced call centers.
Technical and product support.	Supply chain studies and process improvement support.
Standard product offerings, willing to manage customer-specific inventory.	Provide customized customer solutions.
Metrics based on return on sales, net operating income.	Metrics based on return on assets, EBIT percentage.

This chart indicates key differences between a traditional wholesale distributor and a third party logistics provider.

product-focused sales strategy. The shift from selling a product to a service, or even a concept, was a major departure from previous practices. To help, a team-selling approach was implemented, enabling people from Unisource's Logistics, I.T. and Operations teams to participate together in sales presentations. This helped to transfer knowledge from its technical specialists to both Unisource's customers and sales professionals. In addition, focus teams were formed to create sales templates and other selling tools. Internal training educated other disciplines about supply chain practices. As a result, meetings with customers focused on conducting business reviews in which collaborative opportunities were discussed instead of the customary focus on selling products.

### Inventory Management

In the typical wholesale distributor business model, inventory is owned by the wholesaler and sold to customers. The wholesaler is responsible for the care and control of inventory. However, when a customer wants a logistics solution and desires to retain ownership of the inventory, internal systems need to be reviewed and modified. Clear rules must be developed to ensure goods are

insured, and that business processes and related costs are clearly defined. Unisource developed clear work instructions and operating principles for its customers. One noteworthy example involves a U.S.-based company that recently entered the Canadian market. This company looked to Unisource to provide a total supply solution. It wanted to retain control over proprietary products. So Unisource provided logistics services (including inventory management) for these products and sold other products to them under a typical wholesale distributor model.

### Pricing of Services

When the traditional business model of a wholesale distributor is built on return on sales and metrics are geared towards cost ratios as a percentage of sales, what happens when services instead of products are sold? To address this question, a strong discipline of activity-based costing and structured use of pro-forma business models was applied. This allowed multiple people to assess business opportunities in a consistent manner. Secondly, metrics were changed to shift from return on sales to an Enterprise Value Earnings

Before Interest Taxes (EBIT) percentage and return on capital employed, as well as other performance indicators.

### Internal Resources

This process involved segmenting the customer base and understanding the cost to serve individual segments. As larger, more complex customers began to require customized solutions, internal resources needed to be released. In the past, all customers, regardless of size and complexity, were treated equally.

Through segmentation process and a thorough study of Unisource's customer base, we found that some groups of customers were consuming internal resources disproportionate to their relative financial contribution. A service matrix was created that enabled levels of services to be tailored to the size and complexity of the customer. This afforded internal service providers more time to spend with customers that had more complex needs, and it simplified the process to serve smaller customers possessing less complex needs. This clear and concise understanding of customer profitability was rooted in the discipline of activity-based costing.

This strategic shift has produced staggering results. Key customers with integrated supply programs now account for approximately 20 percent of Unisource's total sales, up from virtually nothing four years ago. Unisource now has multi-functional sales teams exploring collaborative supply chain opportunities with customers. These same opportunities are also being explored with the company's suppliers to ensure the total supply chain is being reviewed. In summary, we are now speaking the language of a logistics service provider, a dramatic transformation from a company that only sold products just a few years ago.

What is on the horizon? We believe traditional 3PLs will soon begin their foray into the realm of wholesale distributors. But their competition will comprise of a different breed of companies; They will be vying for business against re-born distributors that embrace the concept of integrated supply chain management and customers will have an unprecedented number of options to meet their constantly changing requirements. ❖



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 Dundas, ON



**Mr. Sumit Pan, P.Log.,**  
 Material Logistic  
 Professional,  
 IBM Canada,  
 Markham, ON



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 Facility, Liquor Control  
 Board of Ontario,  
 Whitby, ON



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 ICBC,  
 Burnaby, BC



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 Material Planner,  
 BC Hydro,  
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 Wilson Freight Canada Ltd.,  
 Richmond, BC



**Mr. Rod Saunders, P.Log.,**  
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 Autoparts,  
 Canadian Tire Corp.,  
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**Ms. Sharon Shupe, P.Log.,**  
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 MDS Sciex,  
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**Mr. Mark Soubry, P.Log.,**  
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**Mr. Greg Stankos, P.Log.,**  
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 IBM Canada Ltd.,  
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**Mr. Bryan Tai, P.Log.,**  
Business Analyst,  
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**Ms. Irene Taylor, P.Log.,**  
Production Supply Planner,  
Nova Chemicals  
Corporation,  
Red Deer, AB



**Mr. Terry Thomas, P.Log.,**  
Area Distribution &  
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**Ms. Karen Van Alstine,**  
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Assurance Manager,  
Spectrum Supply Chain  
Services,  
Cedar Hill, TX



**Mr. Simon P. Varughese,**  
P.Log., Manager- Traffic  
& Customs., Incredible  
Clothing Company,  
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**Ms. Lawrey Waylen, P.Log.,**  
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Unigistix Inc.,  
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Toronto Operations,  
Panalpina Inc.,  
Mississauga, ON



**Ms. Donna Williams, P.Log.,**  
Traffic Coordinator,  
Mattel Canada Inc.,  
Mississauga, ON

***New Professional Logisticians***  
*whose photo was unavailable at press time*

- Capt Krista D. Brodie, P.Log., DND
- Maj Edwin V. Cosstick, P.Log., DND
- Maj Jacinta A. Fitzmaurice, P.Log., DND
- LCdr Steve E. Irwin, P.Log., DND, ON
- Maj Greg M. Langlois, P.Log., DND
- Maj J. Claude Leblanc, P.Log., DND, QC
- Maj Dan C. McLean, P.Log., DND, ON
- Maj J.D. Mario Morin, P.Log., DND, QC

- Capt Dan A. Smith, P.Log., DND, Petawawa, ON
- LCdr G. David Thompson, P.Log., DND, BC
- Maj Allan R. Thompson, P.Log., DND, VA
- Maj Heather J. Thorne-Albright, P.Log., DND, Orleans, ON
- Capt Jocelyn E. van Diepen, P.Log., LT Div, CFSAL,  
Department of National Defence, Borden, ON
- Maj G. Mario St-Hilaire, P.Log., Commandant - Compagnie de  
Soutien Rapproché, DND, QC

(OUTSOURCING LOGISTICS, *continued from page 9*)

In order to have the breadth to create this crucible, 3PLs need great penetration into supply chains. The automotive industry with its tiered supplier system, and electronics with its far-flung supplier network are exemplary arenas where 3PLs have had to expand their I.T. offerings.

**Financial resources:** As Dave Kulik, president and CEO of TNT Logistics North America has been quoted stating, “The probationary period for 3PLs is over.” Indeed, as shippers demand more services at lower cost, 3PLs are in the next phase of their industry’s evolution, which means success is defined by greater efficiency and cost savings, and survival goes to those companies entering into the risk-and-reward sharing contracts.

The global logistics company – the ultimate litmus test for an LLP, 4PL and any other acronym that describes the complete logistics provider – must be efficient in all sectors; It must have the scale and operating expertise in transportation management, warehousing, dedicated contract carriage, freight forwarding and the latest technology to integrate customers and suppliers all the way through the supply chain.

The primary benefit that accrues to shippers from this capability is that contracts do not start from scratch, but instead emerge from a vortex of best practices proven worldwide in such as sectors as automotive, electronics, retail, heavy machinery, fast-moving consumer goods, pharmaceuticals and aeronautics. Clearly, the results can have a significant impact throughout a company’s value chain.

MIKE BERNOS is a senior manager of Corporate Communications, TNT Logistics North America.

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## A Proven Process for Success: Project Management

*The Project Management Institute is having a profound impact on the landscape of logistics in Canada and worldwide. Here is a snapshot of how the discipline of meticulous project management yields outstanding results.*

by Pamela Bocek Murphy, PMP



**W**HEN IT COMES to outperforming competitors, a rising number of companies are finding the newly emerging discipline of project management can provide many advantages, from reducing costs to bolstering the bottom line.

What exactly is the practice of project management? Project management is predicated on the elements that constitute a project. A project is a temporary endeavor undertaken to create a unique product or service,

according to the Project Management Institute (PMI). In this context, the word *temporary* means that every project has a definite beginning and end. *Unique* means that the product or service is different and can be distinguished from other products or services. A high profile and familiar example would be a project that is implemented as a means to achieve an organization's strategic plans.

Project Management is the application of knowledge, skills, tools and techniques to a broad range of activities in order to meet the requirements of a particular project. Project management is comprised of five processes, namely: initiating, planning, executing, controlling, and closing – as well as nine knowledge areas. These nine areas center on management expertise in project integration, project scope, project time, project cost, project quality, project human resources, project communications, project risk management and project procurement.

The phrase “project management” began to emerge in the late 1950's and early 1960's when the size, scope, duration and resources required for new projects began to deserve more analysis and attention. PMI, founded in 1969, has grown rapidly from 8,500 members in 1990 to now include more than 100,000 members in 125 countries. PMI is the leading nonprofit professional association in the area of project management, administering a globally accepted and recognized, rigorous, examination-based, professional certification program of the highest caliber. The PMI Certification Program maintains ISO 9001 certification in Quality Management Systems as evidence of its commitment to professional excellence.

Today, project management is used globally by multi-billion dollar corporations, governments and smaller organizations as a means of meeting their customers' needs by both standardizing and reducing the basic tasks necessary to complete projects in the most effective and efficient manner. Many organizations around the world such as HP and Ryder utilize project management to enable innovative processes, plan, organize and control strategic initiatives, as well as to monitor

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performance and forecast their impact on the organization and project(s).

An exemplary application of the practice of project management emerged as a result of the May 2002 merger of Hewlett-Packard and Compaq Computer Corporation. This \$18.5 billion deal forced HP to tackle the daunting task of integrating the estimated 60,000 Compaq employees with HP's 90,000-plus work force spread across 160 countries. The merger also provided the new HP with logistics and distribution challenges in Canada. HP's enterprise strategy to drive customer value in today's challenging environment remained a key focus throughout this logistics initiative.

In this case, HP had a distribution facility with Ryder performing logistics services in the Toronto, CN area. Compaq had two other facilities also within this area. HP closed these Compaq facilities and merged them into the HP-Ryder facility. Besides the shutdown and physical move of the products, new systems had to be integrated into the Ryder facility and employees needed to be trained on these new systems and processes.

Both companies engaged the services of their project management expertise to provide the leadership required for a transparent integration involving the on-time closure of both facilities and completion of this project under budget. The project management methodologies noted earlier were deployed to ensure issues

were identified and quickly resolved, risks mitigated and contingency plans developed. As a result, all of the required tasks were completed within the established timeline and budget.

By applying project management, both companies enabled senior executives to:

- Establish measures of success
- Enable customer focus and alignment
- Quantify value commensurate with cost
- Optimize the use of organizational resources
- Incorporate quality principles
- Put strategic plans into practice
- Ensure fast time-to-market

When engaging more than one service offering and/or when there is a facility startup or a facility closure/move, Ryder will deploy a program manager to ensure the scope of work is clearly defined with deliverables, milestones, planning assumptions, critical success factors, and resource roles identified that will fill the specific tasks identified in the scope of work. The program manager will develop and validate the startup budget and track the burn rate of the project to the end. As the program manager works on the project plan and oversees the deliverables to completion, the project will transition to its Operations group for the ongoing support of its client's customers. A meeting is held to ensure the client agrees the deliverables have been achieved. The final steps involve the client completing a customer satisfaction survey and a debriefing meeting to review the lessons learned on the project. These lessons then become the basis for program management process improvements. The goal is to improve upon each engagement to deliver results faster, better and cheaper than in previous engagements and ensure we have provided excellent customer satisfaction.

In summary, when a complex project is involved, it's important to engage the services of a program manager and preferably one that has earned the PMP certification. This resource will help to analyze opportunities, chart the best course and execute it flawlessly.

*PAMELA BOCEK MURPHY, PMP, is the Program Manager of Ryder Logistics & Transportation. She is based in Phoenix, AZ.*

*PMI's Global Congress 2003 - North America, begins September 20, at the Baltimore Convention Center. For more information visit PMI's Web site at: <http://www.pmi.org>.*

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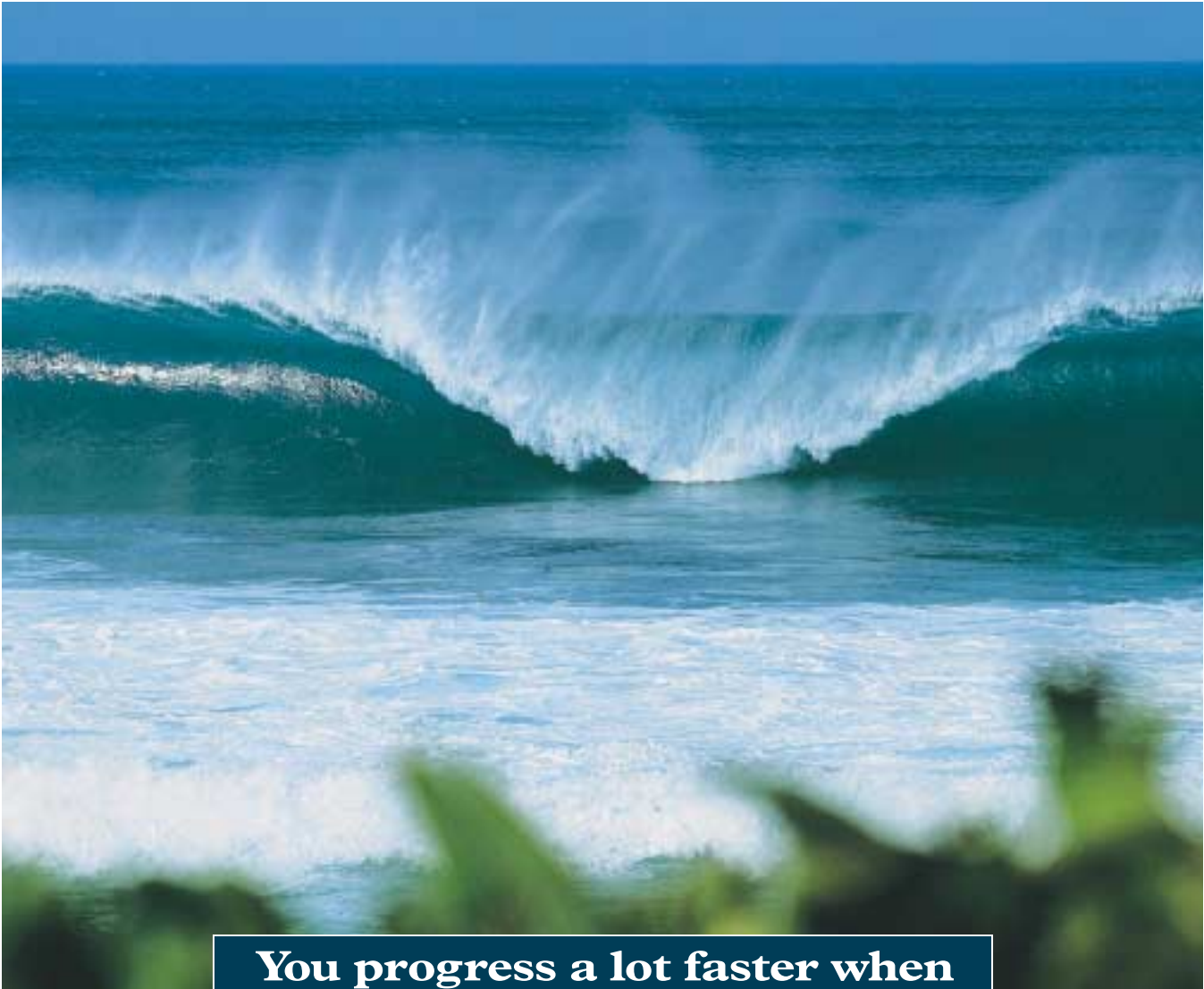
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# Steering Organizations Through Change

*In exercising leadership, companies and their executives often chart courses that can transform their organizations as well as create risks. In this issue, our contributors provide a compass to show how leadership and change create new opportunities.*

*by Fred Moody*

**C**USTOMARILY, each edition of LQ features articles on leadership in logistics and supply chain management. But this edition is especially dedicated to the theme of leadership.

Clearly, as evidenced by our contributors, there is a great diversity of talent and accomplishments that define leadership. Our contributors' practices and organizations encompass a landscape as diverse as logistics

itself, from technology and healthcare to leading educational institutions in the field.

However, there are also commonalities that define leadership, as shown by Dr. David Closs in his article entitled *Perspectives on Logistics Leadership*. It is noteworthy that, in each case, leaders have made important contributions to distinguish their organizations and practices to realize achievements that will be lasting.

Our contributors show that one of the greatest forces calling for an open-mindedness to new ideas in this discipline is the global environment, from the crisis imposed by SARs to radical shifts in the economics of supply and demand. The global economy is unleashing new competitive forces and calling for new ideas to compete and fuel success. Perhaps not surprisingly, our contributors also depict the way that logistics and supply chain management are evolving to reach out to other disciplines in business in the context of the global village.

As LQ approaches its tenth anniversary, it is also changing to mirror the growing level of sophistication in our field. We are maintaining our vision and editorial mandate to convey managerial knowledge through articles written by professionals for professionals, but our presentation is different. I believe our new look affords a richer, more reader-friendly editorial environment. We continue to be vigilant and look forward to implementing future developments to create more value for our readership.

I would be remiss if I failed to note that not all of the submissions dedicated to the theme of leadership were published this issue. But we're looking forward to the publication of these articles in the future as we develop and offer more information to further good management in this exciting field.

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## Ryder's Logistics Services Include:

### Supply Chain Management Solutions

Involves the integration of multiple transportation and distribution functions to help optimize complex supply chain processes.

- ▶ **Supply Chain Consulting:**  
*Value chain assessment, Logistics strategy planning, Functional design, Process management.*
- ▶ **Integrated Logistics Operations:**  
*Integrated transportation and distribution as a coordinated and continuous process.*
- ▶ **Lead Logistics Management:**  
*Total management, Network services.*
- ▶ **e-Fulfillment Solutions:**  
*End-to-end management of the fulfillment channel, from order entry to final delivery, including transportation planning/management, value-added services, and reverse logistics.*

### Distribution Management Solutions

A set of services that provide clients with a comprehensive solution for outsourcing a portion of their distribution network or their entire network.

Distribution Management

encompasses the warehousing and transportation of products and can also include other value-added services involved in the distribution function.

- ▶ **Distribution Consulting:**  
*Network planning, Facility design.*
- ▶ **Product Supply Services:**  
*Inbound replenishment.*
- ▶ **Product Distribution Services:**  
*Warehouse management, Outbound delivery.*
- ▶ **Product Distribution and Support Services:**  
*Distribution to DC or retail outlets, Reverse logistics.*

### Transportation Management Solutions

An array of services that provide a single source for planning, executing, and operating an integrated transportation solution.

- ▶ **Transportation Consulting:**  
*Transportation network planning and design.*
- ▶ **Transportation Management:**  
*Procurement, Shipment Planning and Execution, Audit, Payment and Data services.*
- ▶ **Freight Brokerage:**  
*Fleet support services to fill excess capacity.*

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*Routing and Scheduling to maximize delivery efficiency, and meet your customer requirements.*
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### Introduction

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### Value Based Warehousing

Value Based Warehousing (VBW) is a customer solution that combines Sensible Automation, which we refer to as Strategic Automation, with Schenker's SoliNet Warehouse Management System, and the most appropriate material handling equipment.

#### VBW maximizes customer value by focusing on:

- Quality
- Efficiency
- Flexibility

#### VBW achieves superior performance by leveraging:

- Scale of operation
- Existing foundation
- Warehousing skills and expertise

### Solution Features

Some highlights of our Value Based Warehousing solution include:

- Collaborative approach
- Integrated technology
- Sensible automation
- Appropriate material handling equipment
- Guaranteed quality results
- Turnkey solution
- Speed of implementation
- Integrated security

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