



**Competitive advantages**  
Performing a logistics network analysis



**Supply chain trends**  
Perpetual innovation of the industry

**MEDIA PLANET**

August 2012

# TRANSPORTATION & LOGISTICS

3

**WAYS THE TRANSPORTATION AND LOGISTICS INDUSTRY AFFECTS YOU**

## MAXIMIZING EFFICIENCY OF THE SUPPLY CHAIN

PHOTO: MCKEIL MARINE LIMITED (TOP), ALGOMA CENTRAL CORPORATION (BOTTOM)



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# CHALLENGES

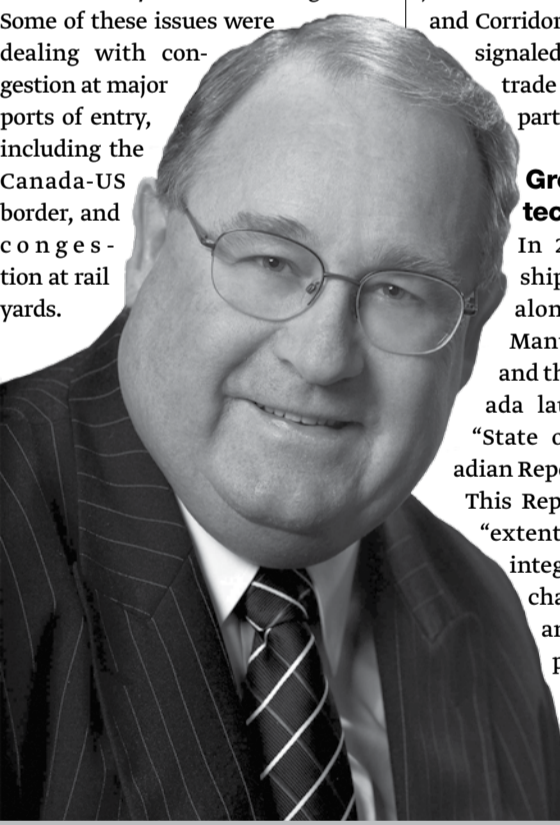
**FACT**  
**1**  
THE SECTOR IS EXPECTED TO FACE A VACANCY RATE OF MORE THAN 80,000 JOBS A YEAR



In the past decade, the logistics industry has seen many changes. From the lack of skilled workers to the increasing use of softwares, **logistics is undergoing constant evolution.**

## The changing face of supply chain management

**W**hen I joined SCL as President back in 2006, supply chain and logistics managers were concentrating on issues mainly related to congestion. Some of these issues were dealing with congestion at major ports of entry, including the Canada-US border, and congestion at rail yards.



**Bob Armstrong**  
Former President,  
The Supply Chain & Logistics Association of Canada

Security of the supply chain was of utmost importance, while low-cost country sourcing had dramatically increased global supply chain management concerns. This, as a result, added to the challenges of improving logistics managers' own domestic supply chains.

The Government of Canada had just launched its Asia-Pacific Gateway and Corridors Initiative APGCI. This signaled a new era of increasing trade logistics with Asia, in particular, especially China.

### Growing use of technology

In 2008, SCL, in partnership with Industry Canada, along with the Canadian Manufacturers & Exporters and the Retail Council of Canada launched the inaugural "State of Logistics: The Canadian Report 2008".

This Report indicated that the "extent to which firms are integrated into global value chains and the efficiency and effectiveness of their product distribution and associated Services are key determinants of competitiveness".

In 2007, Canada ranked in the top 10 by the World Bank for supply chain and

logistics performance.

Since the 2008 global financial crisis, companies, especially retailers and suppliers to retailers, scrambled to strengthen their global and domestic supply chains in order to be competitive.

Supply chain management is very complex. It has become far more strategic (compared to tactical) and technology is now playing a leading role to provide information process improvements. This enhances collaboration amongst all stakeholders within the supply chain, and provides better visibility, while shortening product cycle times.

Companies now align information gathered throughout their supply chain to coincide with their own company's overall strategic business goals.

### Job opportunities

Throughout the years, labour has become a key issue. A survey completed for the industry by The Canadian Supply Chain Sector Council (CSCSC) addressed the need for a better trained workforce. Over 800,000 new employees are needed to fill jobs vacated by retirements, since the industry has an increasingly aging workforce.

We need well educated people with strong analytical skills to fill employment gaps. Industry veterans and companies have been assisting colleges and universities

to help develop the right programs.

### A team effort

I see an abundant, well-educated workforce as a key issue facing the industry today. That, coupled with the proper use and implementation of technology throughout the entire supply chain will continue to improve performance.

Now that Canada has launched the Atlantic Gateway and the Continental Gateway (to complement the Asia-Pacific Gateway Initiative) our marine ports, our railways, the trucking industry, marine carriers, warehouse operators and the like are all providing much-improved services compared to 2006. This enables Canadian companies to capitalize on our trade, transportation, and geographic advantage with the rest of the world.

### The constant change

Supply chain and logistics management has become very complex, but also very exciting. There is constant change and a global presence which could be attractive to anybody seeking a new career. I sincerely hope we can attract the brightest and most enthusiastic people to become the next generation of supply chain and logistics management personnel.

**BOB ARMSTRONG**  
editorial@mediaplanet.com

## The logistics legacy

**"Leaders win through logistics. Vision, sure. Strategy, yes. But when you go to war, you need to have both toilet paper and bullets at the right place at the right time. In other words, you must win through superior logistics. Go back to the Gulf War. After that war ended, the media stories focused on the strategy that was devised by Colin Powell and executed by Norman Schwarzkopf. For my money, the guy who won the Gulf War was Gus Pagonis, the genius who managed all of the logistics."**

—Tom Peters on Leadership

These words about leadership are the legacy of the logistics industry. Having its roots in war, logistics has always taken a backseat to the visions and strategies that have created empires and sustained their wealth. For every

great battle fought throughout history, it's the names of Generals that go down in history books. Who remembers the names of the logisticians?

### Behind the scenes

So the legacy continues on into the world of business. Behind every successful business venture, there's a Gus Pagonis.

Whether it's an in-house logistics manager or an out sourced logistics company, there is somebody quietly working behind the scenes, translating the corporate vision and strategic plan into a live business operation. And yet, true to the legacy, the logisticians expert receives little recognition for making it all happen.

### The unsung hero

Experts on leadership maintain that logisticians are the unsung heroes of the global economy. Even with the recognition that it carries so much weight, experts on leadership believe



**Jay Goldman**  
President and CEO,  
Milgram

"unsung hero" is a status that is both well earned and well deserved.

It is a status that is earned by acquiring the knowledge and becoming an expert on every aspect of supply chain management, from procurement and production, to customs brokerage and transportation, whether by boat, plane, rail or truck.

The status is well-deserved because

it is the logistician who breathes life into business plans, keeping everything from raw materials to electronics, and textiles to food, moving along the supply chain to its final destination.

### Legacy of the un-noticed logistician

Despite the fact that they save the shipment, save the headaches, save the bottom line and even save the day, these heroes go unsung.

So what is a hero, without a parade, to do? He is to continue on as usual, upholding his legacy, because that is what drives the success of his clients and his employer. The logistician can take quiet comfort and humble pride in the knowledge that he shares in their awards and the accolades bestowed upon his clients and his employer, and that he has contributed to their success.

**JAY GOLDMAN**  
editorial@mediaplanet.com

**WE RECOMMEND**

**Canada's maritime industry**  
Discovering the impact of this industry on Canada's economy  
PAGE 4&5

**Canadian maritime industry**  
Explore the power of Canada's ports. **p. 4**

**Professional industry designation**  
Discover the possibilities that come with earning one. **p. 7**

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- Creates 98,556 jobs in Canada
- Produces \$15.9 billion in business revenues in Canada
- Generates \$4.6 billion in employment wages annually in Canada
- Contributes \$2 billion in federal, provincial and local taxes annually in Canada

**SOURCE: THE ECONOMIC IMPACTS OF THE GREAT LAKES ST. LAWRENCE SEAWAY SYSTEM, MARTIN ASSOCIATES (OCTOBER 2011)**  
editorial@mediaplanet.com



# PANEL OF EXPERTS

|    | <b>Question #1</b><br>How do companies benefit from by optimizing software solutions for supply chain and logistics operations?   | <b>Question #2</b><br>Why should companies invest money and be early adopters of these products?   | <b>Question #3</b><br>What can the optimization of software do to a company's bottom lines?  |
|--|---|--|--|
|  <p><b>Alan Dunkerley</b>, VP Product Management, Logistics Flow Control Descartes Systems Group</p>               | <p><b>By implementing technology</b> solutions that unite trading partners across the globe, companies are able to gain efficiencies and better manage resources. The best supply chain management solutions will ensure that the right people, product or data are where you need them, when you need them. A fully leveraged supply chain solution will empower a company to be more competitive, agile, and thrive in today's new world of business.</p>   | <p><b>Companies do not</b> need to invest large amounts of capital into a supply chain solution. There are vendors who provide SAAS (Software as a service)-based solutions that reduce the up-front costs associated with IT infrastructure and license fees. Pricing is usually transactional and based on use. They are also designed to be implemented rapidly (weeks vs. months and years) so that value is realized quickly. Early adoption of these solutions can provide a competitive advantage, in particular, when differentiating based on customer service is of paramount importance. Excelling at the retail home delivery experience is a good example. Simplifying and streamlining the order through delivery process can make your company truly stand out.</p> | <p><b>For logistics-intensive businesses</b>, a well tuned supply chain is a critical strategic asset and can significantly influence operating performance. Optimization of the flow of goods, including the people, processes, logistics assets and data that keep it in motion, is paramount to the agility, productivity and sustainability of any best-in-class business operation. Supply chain management solutions can provide the visibility, command and control necessary to realize this. The net results can include being able to do more with less, adding capacity without adding expense, competing based on differentiated service strategies and much more.</p> |
|  <p><b>Al Norrie</b>, Chairman Supply Chain &amp; Logistics Association of Canada</p>                             | <p><b>Transportation providers focus</b> on reducing operational costs and maximizing their fuel efficiencies and minimizing their environmental footprint. These organizations have typically reported dramatic reduction in inventory, significant asset utilization improvements (including Overall Equipment Effectiveness) and increased customer loyalty leading to reduced product obsolescence. Today's sophisticated and open business solutions enable organizations to leverage their enterprise platform so that it becomes an appreciating asset enabling the business to remain agile and flexible. Capable of responding to the evolving business requirements and challenges—the technology becomes the solution rather than the problem.</p> | <p><b>“State of Logistics:</b> The Canadian Report 2008” released by Industry Canada reports that the top 20 percent performing organizations in total landed costs and on-time customer shipments are more likely to invest in logistics network strategies and technologies such as electronic collaboration with networks of suppliers and customers as well as supply chain modelling applications. Leaders in Supply Chain performance consistently report investment in business solutions and technology at 3-6 percent of their revenue. All the while laggards consistently underperform in contrast as well as experiencing significantly increased risk of failure.</p>   | <p><b>Integrated and collaborative</b> platforms will foster improved communications and planning enabling management by exception. Automated business processes will reduce manual time consuming activities as well as eliminating data latency and inaccuracy. Access to accurate and timely data provides management with information enabling more effective decision making and performance tracking. Monitoring and reporting is the foundation for performance improvements—if you can't measure it you can't improve it.</p>  |
|  <p><b>Sanjeev Rana</b>, Senior Manager Retail, Consumer Packaged Goods, Logistics practice, Infosys Limited</p> | <p><b>The optimization in</b> software solutions is yielding benefits through better management of supply chain risks (e.g. supply impact due to Japan earthquake). It is also seeing tradeoffs, better collaboration of business processes and partners, and staying ahead of competition by adopting social media tools (not just 'crawl' but aggressively pursue social collaboration), analytics, and mobility software solutions. The changing demography of customers (more digital) and demand for more real-time information on freight and inventory is driving a lot on technology innovation and adoption.</p>   | <p><b>While enterprise software</b> companies like SAP and Oracle are expanding their product to bring in more industry view (e.g. asset management for logistics) and going through series of acquisitions, the system integration companies are focused on innovation around platform and products through Edge platforms. Clearly, the companies should invest in real-time analytics, mobile solutions, better visibility of operations through BI dashboards, reducing legacy costs by adopting Cloud, Bigdata, and SAAS solutions. The bottom-line is continuously focused on innovation to fuel in business automation.</p>   | <p><b>There are known</b> cases of how multiple companies have reduced their legacy infrastructure IT costs by around 35-40 percent with adoption of Cloud and modernization efforts. The cash flow directly adds to much needed capital investments into process automation. Considering global supply chain trends and increasing customers' shipment visibility requirements, the software solutions improvements will have impact on both sides by increasing revenue through better customer engagement and collaboration as well as costs side through process automation.</p>   |



**JOINT EFFORT**  
To maximize efficiency in the supply chain, trucking companies must work closely with marine transporters.  
PHOTO: MCKEIL MARINE LIMITED

# The backbone of cross-border transportation

**Transport and road freight are arguably the backbone of meeting the supply and demand that keeps the Canadian economy chugging along; however, the industry continues to face changes and challenges that will be part of its evolution moving forward.**

According to Transport Canada, \$149 billion of exports and \$162 billion of imports were transported by road between Canada and the U.S. in 2011. This accounts for 45 percent of exports and 73 percent of imports,

This flow of trade back and forth between Canada and the U.S. employs about 400,000 Canadians—260,000 of which are drivers—based on statistics from the Canadian Trucking Alliance.

The industry as a whole is worth \$65 billion to the country's economy. While it has a low profile, it also carries weight in the greater scheme—literally and figuratively.

Some individuals believe the shortage is a myth, and it is simply a case of carriers justifying paying drivers less money. They also state that any perceived shortage may be due to fewer drivers willing to work for lower wages and compensation by the hour (as opposed to a rate per mile).

Either way, the Great Recession

is part of the National Harmonization Initiative for the Trucking Industry, and has allocated up to \$6 million over four years to Transport Canada to encourage emissions reductions, as well as to

even day-to-day operations for

freight companies have changed a great deal.

Managing those changes, while also finding creative ways to revitalize the industry as well as making it appealing for current and prospective drivers will be integral in defining a clearer and more inclusive path for the industry's future.

In some respects, being a truck driver is a thankless job because it's part of a huge industry that flies under the radar for most people. Other than trucking traffic flowing along Canada's roads, there is little understood by the general public about how big of a cog it is in the country's economic wheel.

**Reuesting new drivers**  
Despite the large number of drivers currently working in the industry, some insiders have expressed concern over a driver shortage due to its aging workforce. Though drivers are considered "professional" within the industry, the federal government hasn't designated truck driving as a profession, which may play a role in not attracting potential recruits.

tion certainly hasn't helped the cause. With a sputtering economy in the U.S., supply has been less of an issue than demand. Consumer spending south of the border is down. As a result, there has been less demand for product at the retail level.

**The future of green trucking**  
Finding solutions to the problems the industry faces hasn't been easy, and they also arise in the midst of the recession and regulations that are mandating more eco-friendly practices to "clean up" the industry. The government's EcoFreight pro-

gram is part of the National Harmonization Initiative for the Trucking Industry, and has allocated up to \$6 million over four years to Transport Canada to encourage emissions reductions, as well as to

**Flying under the radar**  
Between administrative improvements, including fleet management tools, a more fragmented industry on compensation, and a commitment to "greenify" the business, there is little doubt that



## NEWS

8

MAJOR PORTS

**Port of Thunder Bay**

**1** Located at the head of the Seaway System, the Port of Thunder Bay is Canada's Gateway to the West. Keefer Terminal, home to a new Liebherr LHM 320 Mobile Harbour Crane, handles oversized project cargo for wind farms, mining projects, and the Oil-sands in Western Canada. The terminal has acres of laydown areas, as well as direct access to the TransCanada Highway, to CN and CP railways. The largest export port on the Seaway, Thunder Bay has grain, coal, and potash for international back-haul.

**Port Alberni Port Authority**

**2** The Port Alberni Port Authority is located at the head of the Alberni Inlet off the west coast of Vancouver Island inland from Barkley Sound. The Alberni Inlet provides protected, calm waters that are ice free year round; free of any navigational obstacles; and offers a direct shipping route to the Pacific Rim. With a length of just over 40 kilometres and an average width of approximately 1.5 kilometres the Alberni Inlet and Port Alberni Terminals in Alberni Harbour can accommodate Panamax size vessels.

**Saint John Port Authority**

**3** Located in Southern New Brunswick, Port Saint John has a very diverse cargo base, handling over 31 million metric tonnes annually, including dry and liquid bulks, break bulk, containers, and cruise. Saint John provides global networks to over 350 ports around the world and is easily connected to central Canadian inland markets by both the Canadian National and Canadian Pacific railway systems, and the Trans Canada highway.

**Port of Halifax**

**4** The Port of Halifax is strategically located as North America's first inbound port gateway, with the capacity, depth, and infrastructure to handle the largest container vessels. With diverse handling capabilities, Halifax has the infrastructure to handle, bulk, and break-bulk containerized cargo as well as cruise passengers. The Port of Halifax connects shippers to over 150 countries worldwide and offers direct inbound connections from South China, Southeast Asia, the Indian sub-continent, North Europe, and the Caribbean.

**Prince Rupert Port Authority**

**5** With the distinct advantage of being the closest North American port to Asia by up to three days, the Port of Prince Rupert is uniquely positioned on the shortest trade route between the world's most dynamic economies—an ideal location to serve shippers and producers, facilitate trade, and grow the Canadian economy. With five world-class terminals, including the fastest-growing container terminal in North America, the Port of Prince Rupert is growing Canada's trade with Asia's economies safely, responsibly and sustainably.

**Port of Belledune**

**6** Offering some of the shortest shipping routes between large European and North American Markets, the Port of Belledune opens up a sea of unlimited opportunity to shipping companies as well as importers and exporters. The year-round marine transport facility is a modern, deep water point of access to key north-eastern markets and global markets. The Port has proven itself capable of handling any and all goods, offering flexible services, creative solutions, and excellent rates.

**Port of Sept-Îles**

**7** The Port of Sept-Îles is North America's leading iron ore port and will become Canada's second largest in terms of annual volume handled, with close to 34 million tons expected in 2012. Located between North America, Europe and Asia, as well as year round access to the St. Lawrence, are the origin of its high rating amongst the most important Canadian ports. Nearly 80 percent of its merchandise is destined for international markets, Asia being its top destination. A railcar ferry between Sept-Îles and Matane offers access to the North American rail network.

**Port of Trois-Rivières**

**8** Located at the heart of the St. Lawrence River, the Port of Trois-Rivières offers access to marine transportation as well as to rail and highway networks connecting North America to the rest of the world. The Port of Trois-Rivières is a proactive partner looking at ways to improve shippers' logistics and competitiveness. By bringing together all modes of transport, the Port of Trois-Rivières and its partners design logistic solutions that provide shippers with highly efficient supply chains in order to meet their particular needs.

FACT

2

SHIPS HAVE  
A SMALLER  
CARBON  
FOOTPRINT  
THAN TRAINS  
AND TRUCKS

**PASSING THROUGH**  
Traffic is put at a stop as the draw bridge raises to allow the ship pass with its cargo.  
PHOTO: MCKEIL MARINE LIMITED



# Canadian ports: Key supply chain facilitators

**Pause for a moment and consider how much of what you see around you has entered Canada via a port facility. Canada's ports serve as key nodes in both domestic and international supply chains. They extend the country's supply chains to more than 160 countries worldwide and handling over 460 million tonnes of goods valued at over \$160 billion annually.**

Ports and their terminal operators are essential for the transfer of commodities between marine and land-side transport modes, serving as the link between the country's major landside carriers—rail and road—with a growing and complex system of domestic and international shipping line services in an increasingly integrated continental marketplace.

**Trade diversity**

Canada is striving to increase its international trade diversity by seeking free trade agreements around the globe with many countries, including 27 countries of the European Union.

This international trade strategy means that Canada's ports will increasingly play a major role in the development and growth of national and international supply chains. Canada's strong system of ports is a critical part of the infrastructure necessary to facilitate the increased trade created under new free trade agreements.

As Canada's international trade grows, so too will port throughput—and the general prosperity of the country.

**Canada, the trading nation**

Canada has recognized the import-

ance of efficient trade movements by taking significant steps to integrate key supply chain elements, including ports.

Significant public and private sector investment in designated transportation corridors and their associated gateways and ports have contributed to a vibrant Canadian port network, giving Canada a significant competitive advantage.

This investment must continue over the long term to sustain Canada's stellar reputation as a trading nation.

**Gateways and trade corridors**

The success of the Asia-Pacific Gateway and Corridor Initiative in addressing major freight movement bottlenecks in Western Canada led to similar strategies in other parts of the country.

Enhancements to Canada's other supply chains and port gateways are being addressed through the Atlantic Gateway and Trade Corridor, and the Ontario-Quebec Continental Gateway and Trade Corridor, which focuses on the St. Lawrence and the Great Lakes. Canadian ports are significant components within these major supply chain initiatives.

**Port Infrastructure**

Continued improvements to Canada's many supply chains are essential as the country reaches out globally with its exports. To serve Canada's growing international trade, ports must have the infrastructure capacity to meet the commodity throughput demands now and into the future.

Today's port infrastructure deficit is a key issue to be addressed in

the coming years to ensure they can continue to provide efficient service to the country's major supply chains. Canada must have sufficient port capacity to support the federal government's current and future trade negotiations. Without that capacity, opportunities will be lost.

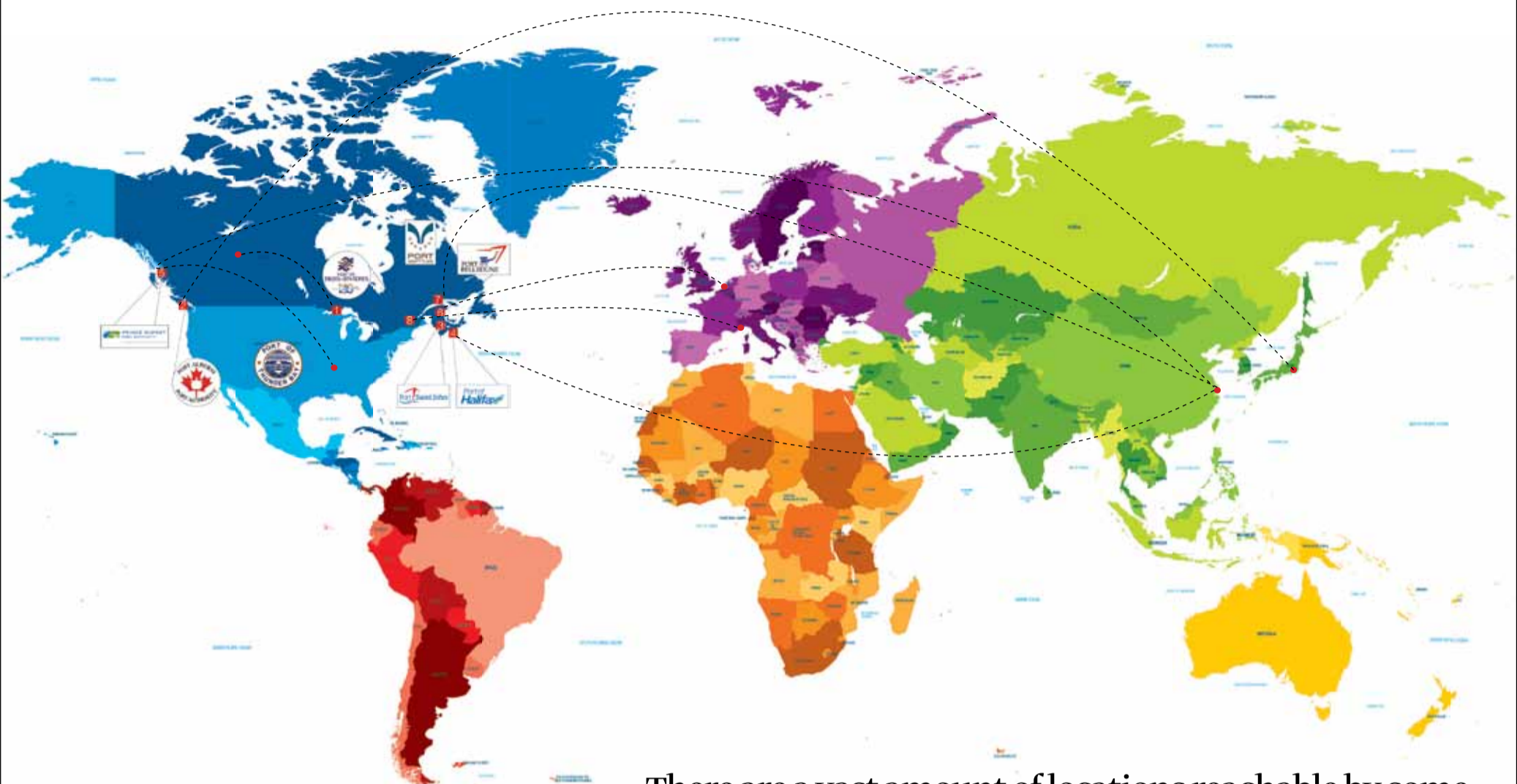
Canadian ports are major partners with all supply chain stakeholders, as such it is essential that their strategic role be recognized as an integral part of Canada's National Marine Policy.

WENDY M. ZATYLYN,  
EXECUTIVE DIRECTOR,  
ASSOCIATION OF CANADIAN  
PORT AUTHORITIES

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# Canada's Ports: Discover the opportunities



There are a vast amount of locations reachable by some of Canada's largest ports. This map displays some of the highlighted trade routes available through many ports.



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## PROFESSIONAL INSIGHT

The Logistics industry has been seeing a large growth in competition. Today, companies must be as **innovative** as possible and think outside the box to **differ from the competition**.

## Performing a logistical network analysis

In a globalized market in which inter-company competition is gradually giving way to competition between supply chains, conducting a strategic analysis of logistical networks plays a key role in the pursuit of competitive advantages.

Strategic analysis of logistical networks is designed to reduce costs, increase client service levels, and maximize profits. To achieve these goals, strategic decision making must be balanced between procurement, production, inventory management, and transportation.

**Logistical network analysis: Objectives**

Logistical network analysis is fundamentally aimed at determining the number of production sites, warehouses, and depots. It is also used to develop scenarios for assigning not only a capacity to each of these sites, but also an optimal geographic location in view of specific network constraints.

From both a local and global perspective, logistical network analysis is aimed at determining supply sources, production volumes, and inventory levels for each site being studied.

As this pertains to transportation, logistical network analysis is used to weigh the merits of various transportation modes. It is also used to develop a transportation plan with a view to determining the most suitable modes for each segment of the network.

**Logistical network analysis: Proposed methodology**

Given the need to jointly optimize various logistical aspects, such as production levels, inventory levels, and supply sources, adopting a systemic methodology is essential to the success of such a project.

**Collect data**

**1** It is very important that data be collected concerning the current network (site location, node typologies), products (nomenclature, weight and volume), constraints (client demand, production capacity, delivery lead times, service levels, etc.), network costs (facilities, storage, production, transportation, etc.), and the transportation modes utilized.

**Determine distribution strategy**

**2** The distribution strategy is used to determine the service level



**Nicolas Hien, M.Sc.**  
President, APICS Montreal



**Stephan Lauzon**  
President, CAL Québec

sought by the organization in response to demand in various markets. This strategy also stands at the forefront of considerations concerning the desired network transportation structure.

**Determine scenarios**

**3** Determining scenarios forms the central pillar of strategic analysis. By varying site locations, network structures, client demand levels, and service levels, an array of scenarios can be developed to model a large number of situations with a reasonable likelihood of occurring. For example, you can determine the impacts of soaring client demand on network costs, significantly increasing service levels in certain regions or delocalizing your production activities.

**Evaluate scenarios and select one**

**4** Once various scenarios have been established, they should be evaluated. To this end, you should develop an evaluation scale, including parameters to be considered and appropriate weighting factors. Once the criteria have been established and the scenarios have been evaluated, you can decide which scenario is most suitable—this

will be the future logistical network.

**Implement scenario**

**5** Implementing the scenario requires meticulous planning, not only in structural terms, but also in terms of change management and training, two intangibles that remain a key component of project success.

**Evaluate performance**

**6** After the scenario has been implemented, performance evaluation is used to provide the feedback required for project analysis. Evaluating financial factors (effective cost of the new network) or client service factors (delivery lead times, inventory outs, etc.) facilitates competitive benchmarking and ensures continuous improvements in our logistical network.

**The source of a competitive advantage**

From a perspective of globalized supply chain management, logistical network analysis—thanks to the role it plays in reducing costs and improving client service—is likely to be a major source of competitive advantages.

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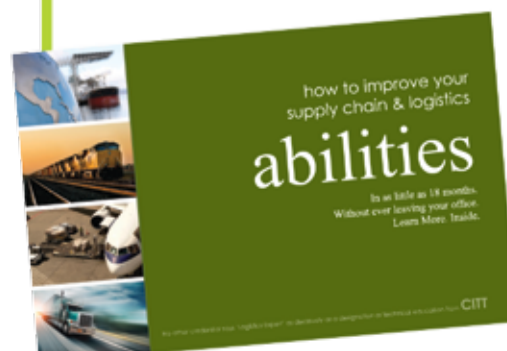


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<sup>1</sup> "12th Annual Survey of the Canadian Logistics Professional", Canadian Transportation & Logistics, January 2011.

<sup>2</sup> Materials Management & Distribution/Purchasing b2b Salary Study.



# INSPIRATION

FACT  
**3**

THE SUPPLY CHAIN IS ONE OF THE MOST ESSENTIAL SECTORS OF THE CANADIAN ECONOMY



**A WEALTH OF OPPORTUNITY**  
With a shortage of skilled workers and a surplus in available jobs, the logistics industry offers an abundance of opportunities for job seekers.

## Discover what a professional designation can lead to

**Earning a professional designation in logistics can take years, but it does have its benefits. With hard work and dedication, these designations offer a whole new set of skills for supply chain management professionals.**

When he was a university student working the night shift at a plywood factory, Warren Sarafinchan didn't realize that his desire to become a banker would instead lead to a career as a professionally-certified executive in supply chain and logistics.

Upon graduating in 1992 with a Bachelor of Commerce degree from the University of Alberta, Sarafinchan leveraged his factory job experience and education to take a role with a company specifically focused on logistics. By the time he earned his Canadian Institute of Traffic and Transportation (CITT) designation for supply chain and logistics in 1995, he had already made a commitment to pursue a bigger role in the industry.

**What to look for**

"At the time, I saw logistics and supply chain as an emerging profession within



"Someone who is working to gain or who holds a CITT certification is an individual that comes with a high standard."

**Warren Sarafinchan**  
VP of Supply Chain, Sun-Rype Products

the business world," says Sarafinchan, who is the vice president of Supply Chain of Sun-Rype Products in Kelowna, B.C. "As a senior executive in supply chain, when I hire people, I look for the CITT designation because I know the caliber of individuals and the training, development, and work experience you need to earn your certification."

The CITT program is made up of between five to 10 specialized logistics and business management courses that can be completed in 18-24 months. Sarafinchan adds that both undergraduates and post-graduates are welcome to apply to take the courses. Additionally the courses taken during their university degrees or college diplomas are sometimes accepted as credits for

the program. Upon completion of the curriculum, members are required to have five years of work experience to finalize the process.

**High standard of a designation**

CITT was first incorporated in 1958 and has been a mainstay in the industry ever since. Sarafinchan has himself been a member of CITT's board since 2003. Members also take part in an annual conference called Reposition that brings together supply chain professionals. This year's conference is from November 4th-6th in Halifax.

"When you hold a designation, there are so many opportunities to interact and build a strong network with other talent," he says. "Someone

who is working to gain or who holds a CITT certification is an individual that comes with a high standard."

**Adaptation to changes**

One of the biggest changes he's seen since he earned his certification is the level of sophistication in the industry today. Because of his intricate knowledge of the company's supply chain and logistics, he has "a seat at the big table" with a need to know and explain how the decisions he's expected to make impact the company's financial statements.

"I believe very strongly that supply chain functions through organizations are competitive points of difference between companies," he says. "The world continues to change, and in order to adapt to that change, you need the right people. My scope now includes purchasing, planning, logistics and customer service, so our company's supply chain is expected to deliver a high level of service, timely delivery and thought leadership."

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FACTS ABOUT THE LOGISTICS WORKFORCE



**Kevin Maynard**, Executive Director  
Canadian Supply Chain Sector Council

➔ The annual labour force growth rate of the supply chain sector was 2.23 percent from 2001 to 2010.

➔ The sector added about 15,300 new jobs per year between 2001 and 2010.

**Surveys indicate the following to be the main human resources issues facing the supply chain sector:**

- Attraction
- Education and training
- Keeping pace with technology
- Succession and career planning

**Employees identified skills they feel they require much more of to be successful in their jobs:**

- Financial planning
- Forecasting
- Cost analysis
- Knowledge of international business practices
- Knowledge of laws and regulations
- Knowledge of logistics functions and the supply chain
- Mechanical skills
- Optimization of workflow
- Knowledge of transportation
- General management and business
- Languages

➔ Most organizations are not prepared for the level of technological integration that will be required to compete successfully.

**Canadian laggards**

➔ In general, Canadian organizations lag in both investing in and implementing new technologies.

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## FROM TRANSPORTATION INNOVATION TO THE GREEN SUPPLY CHAIN

In a market where competition between firms is becoming more and more a competition between supply chains, organizations must innovate continuously. As a powerful engine of the current economy, the transportation industry and supply chain in general have led the way as a result of opportunities afforded by technology advances and new trends in business.

**Perpetual evolution**

There is something Darwinistic in the evolution of the Transportation Industry, a theory of evolution by natural selection based on innovation, where companies must change to survive in one of the most competitive industries in the world. Characterized by very low profit margin and a challenging environment (sensitivity to oil prices, shortage of truck drivers etc.), this industry experienced dramatic change in the last few years.

The use of IT solutions to make logistics operations more efficient is one of the more important trends in this industry. Many innovations are currently at the early stage of deployment with technology such as radio-frequency identification (RFID) and automatic traffic monitoring to increase visibility and tracking within the supply chain. These initiatives lead to more than just cost reduction. These initiatives provide critical information from a supply chain integration perspective thereby reducing the bullwhip effect.

The evolution of transportation industry is also closely linked to the development of ports and maritime activities. In the last few years, major capital investments have been made to develop port infrastructure to meet port user's needs and attract freight.

**Green supply chain**

The green supply chain could be defined by the minimization of the environmental impact of a product or service



**Humphrey Vernaus, P. Eng**  
District Manager,  
APICS Canadian

at every step of its lifecycle. The current trend of being green found its origin in customer requirements, governmental regulations and opportunities to improve corporate image. Many

initiatives have been deployed with the dual purpose of reducing logistics costs while being green. Vehicle routing and network redesign to reduce mileage and empty returns are the most common examples; however, there are others opportunities remaining with respect to green supply in the transportation industry.

Consider purchasing decisions in which supplier selection is influenced by environmental criteria such as product development with packaging optimization considerations, warehousing with low or zero equipment emissions, reverse logistics and recycling with return of packaging/shipping materials. Use of natural gas is another example, stringent federal and state emissions laws require an improvement in vehicle emissions and the natural gas offers an opportunity to meet these environmental standards.

Even building design and construction are subject to the influence of a

green supply chain with the Leadership in Energy and Environmental Design (LEED), a very popular rating system for construction and operation of high-performance green buildings.

**Finding a competitive advantage**

In conclusion, the transportation industry profile is currently changing from a very conservative mentality to an experiment in innovation for the entire supply chain. Due to the high degree of competition in this industry, companies need to change their old habits and continuously look forward to new ways of increasing performance and service levels in new environmentally friendly ways.

**NICOLAS HIEN AND HUMPHREY VERNAUS**  
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## INSIGHT

PUSHING THE LIMITS

**Fuel Efficiency**

Distance in kilometres that one metric ton of cargo travels on 1 litre of fuel

Ship

312

Rail

181

Truck

75



Lawson Report 2007



## INSIGHT

**Transportation in the Seaway**

**7** Barges used for marine transportation can carry an enormous amount of cargo. A single barge can carry as much cargo as 400 trucks and even 11 rail cars. Despite what many believe, sea transportation is by far the most fuel efficient way of shipping (compared to other popular methods such as by rail or truck). With one ton of cargo and a single litre of fuel, a cargo ship can travel over 300 kilometers, while rail travels just over 180 and trucks a mere 75.

Marine shipping is not only great for the environment compared to alternatives, it also has a huge impact on the Canadian/U.S economy. In the great lakes alone, the marine shipping industry produces \$35 billion in business revenues. This industry also creates roughly 227,000 jobs in the Great Lakes Seaway.

**TUGGIN' AWAY**  
The Labrador Spirit barge and Tony Mackay tug transporting a load of stone from Newfoundland to Hamilton.  
PHOTO: MCKEIL MARINE LIMITED