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THE MAGAZINE FOR DEMAND-DRIVEN LOGISTICS

July 2012 • Vol. 32 • No. 7

INSIGHT

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INDEPTH

July 2012 • Vol. 32 • No. 7

INFO

July 2012 • Vol. 32 • No. 7

INFOCUS

CANADA TRADE
page 193


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CHECKING IN

by Keith Biondo | **Publisher**

3PL Partnerships: From Tactical to Strategic...

It was déjà vu all over again as I sorted through the responses to this year's Top 10 3PL Excellence Awards survey and 3PL Perspectives research. Like last year, and the year before, and the year before that, a sizable percentage of survey respondents said they select logistics partners based on their ability to secure trucking capacity on demand, and get services at the lowest price: "Give me loads when I need them, and don't charge me a lot." Capacity concerns and cost savings still drive this approach, despite 3PL investments in technology, resources, and connections.

But, one new pattern emerged this year. Many more survey respondents than in past years said they were beginning to forge collaborative, strategic relationships with their 3PLs – not just tapping them for brokerage services, but actually moving away from "provider only" to a fuller logistics partnership.

We didn't ask this specific question on our research survey, so it is hard to identify what is motivating this shift. It could be the economy, with more companies focused on reducing total logistics costs as opposed to reducing just the transport portion. *Inbound Logistics* readers certainly know that practicing demand-driven logistics to better match supply to demand signals will accomplish that. Undertaking an inbound logistics approach, however, is ultimately more complicated than managing outbound transport spend only. Relying on logistics providers to accomplish that philosophy shift requires drawing on more than their brokerage capabilities.

Another motivaton could be a quest for professional excellence, especially in today's job market. Most logistics and supply chain practitioners strive to do the best they can for their companies, and be the best they can for professional development reasons. The career advancement resources *Inbound Logistics* produces always generate lots of reader involvement, indicating that they want to be up on the latest trends and practices to help them excel at their profession. Is there a connection between job excellence and using a broader range of 3PL services?

Suppose you are someone who engages in a Mitty-esque dream about being the world's best supply chain or logistics practitioner, to save the most for your company, and, in so doing, keep your career on track, and your job secure. How do you make that dream real? Even if you are the most proficient practitioner, there are some limits you can't go beyond. You can be limited by your company's structure, available resources, management buy-in, and other business realities.

Even if you are on a quest to be the best, few companies and fewer practitioners have the time, authority, or resources to tear down functional silos, build extra-enterprise technology, establish alliances for capacity sharing and cost savings, position seasonal scalability, stage global logistics and supply chain infrastructure, and more. But if you use your third-party logistics partners for more than brokerage – not just as tactical providers, but as strategic partners – a whole new world of logistics excellence and accomplishments could open up to you.

This 3PL issue offers insight into how to make that happen.

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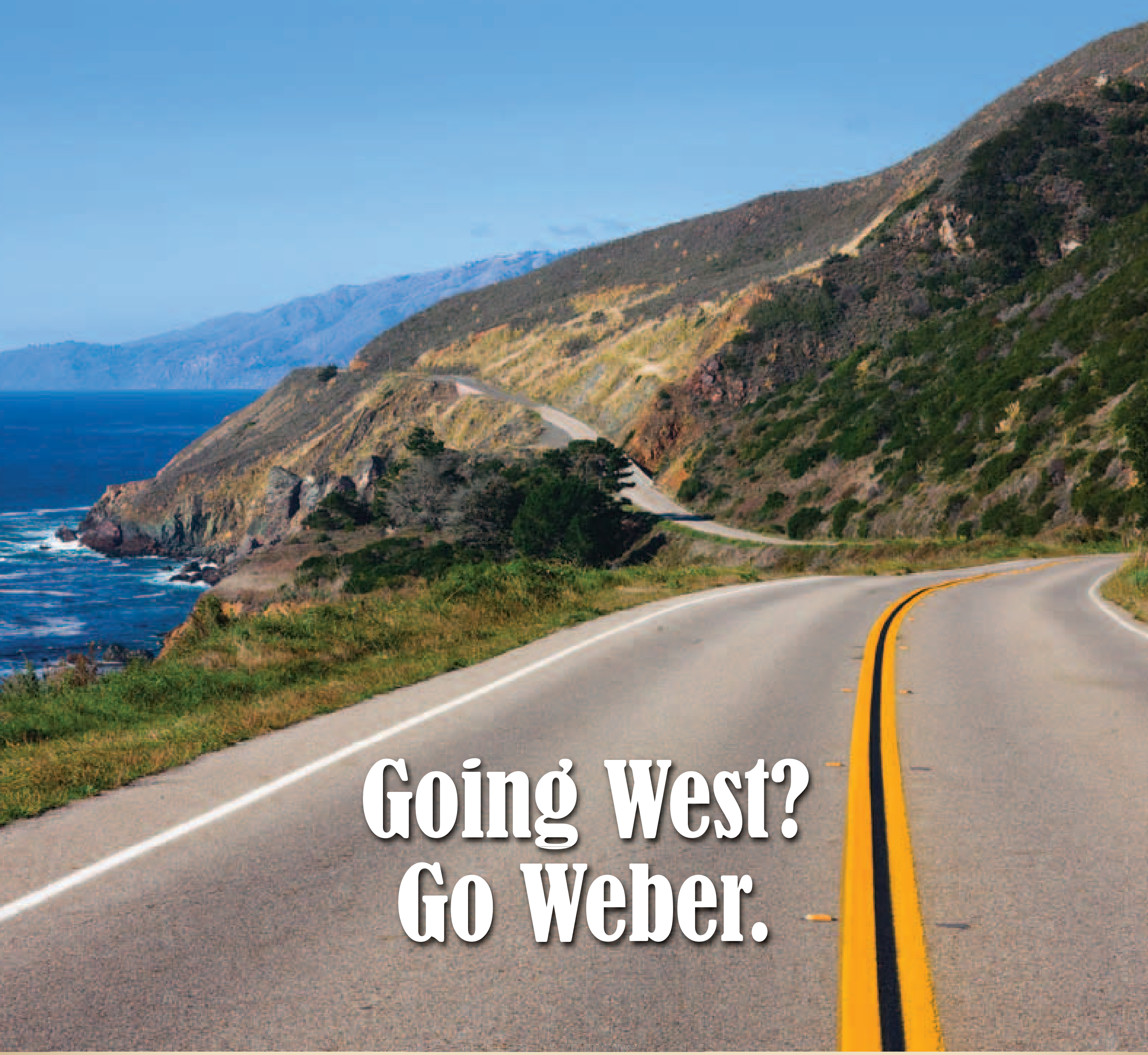

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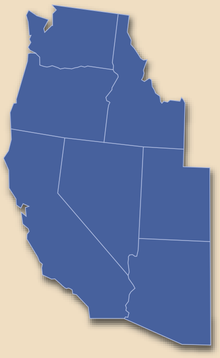

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CHECKINGIN

Felecia Stratton

by Felecia Stratton | **Editor**

...And From Transactions to Trust

In business context, transactional relationships are often laden with legal conditions – unlimited liability, implied agency, utmost good faith. Even with assurances that a partner will do the right thing, it all comes down to costs and consequences.

For many years, the supply chain operated in a similar fashion. Third-party logistics providers (3PLs) demonstrated their value by managing functional needs in a transactional way. These types of arrangements still exist. But increasingly, 3PLs and shippers are working much more collaboratively, often sharing pains and gains. In effect, they have traded handshakes for hugs.

The reasons are myriad. Increasing supply chain complexity has created needs beyond traditional warehousing and transportation disciplines. Many companies still lack the logistics talent and/or leadership to orchestrate sophisticated supply chain efforts internally. Even when they have these resources, some still recognize the value of third-party objectivity.

Economic fluctuations have similarly forced shippers and service providers to look beyond the here and now – whether capacity is bought and sold at a premium, or soft conditions tempt price gauging and gouging – and consider longer-term arrangements that focus on qualitative metrics rather than cost. Finally, the rapid emergence of non-asset-based 3PLs created an outsourcing platform entirely contingent on expanding value through technology, domain expertise, process, and innovation. They are pushing collaboration.

So are we, in our annual 3PL issue. From anecdotal testimonies to exclusive industry research, the idea of partnership permeates this issue's editorial content.

Merrill Douglas' *Great Partnerships* (page 92) explores three case studies to understand how 3PLs and shippers are collaborating in new ways. The core element in each example is the "utmost good faith" – trust that one or more 3PLs can work together to completely overhaul your distribution operation; trust to know a partner will continue to expand its resources to meet your needs; and trust to share business intelligence and proprietary data in the interest of driving innovation and economy.

More telling, *IL's* eighth-annual *3PL Perspectives* market insight report (page 103), provides empirical data that supports a business case for more trustworthy outsourcing partnerships. It's no coincidence that when push comes to shove, 79 percent of surveyed shippers prefer 3PLs that can deliver customer service over cost. That speaks volumes.

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DIALOG

LETTERS TO THE EDITOR

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Take the High Road

Inbound Logistics' June 2012 *Last Mile* section captured my attention. I was interested in the goal of Texas A&M and Freight Shuttle to create elevated and automated cargo lanes that would re-route trailer and container freight off busy highway corridors. It's economical, sustainable, and sensible. It got me wondering why federal and state governments today are hell-bent on spending money to improve passenger-related transportation infrastructure that commuters may or may not use. Instead, it may be in both the private and public sector's best interests to find innovative ways such as this to expedite freight movement in and out of busy cities and ports – and ease passenger travel congestion that way.

—**Dennis Fox,** via email

Editor's reply: As you can read in *Southeast Ports: What's on the Horizon?* (pg. 74), Port Miami is doing exactly what you suggest - albeit via a more conventional means. Its current tunnel project is expected to reduce downtown Miami truck congestion 80 percent by diverting freight directly from I-95 to the port. Also, for more detail on how shippers and carriers are specifically navigating the challenges of urban logistics - while also reducing costs and carbon emissions - check out *Urban Delivery: Getting Into the Grid* (pg. 145).

Running on Empty

How often do tractor-trailers drive without a load? For example, if I sit by a major road, such as an interstate, and watch 100 tractor-trailers drive by, how many of them are going to be empty because they are simply moving from one location to another?

—**Name withheld by request**

Editor's reply: It varies by industry, geography, and type of carrier - from private fleet to for-hire carriers and owner-operators - but has been reduced overall with the rise of 3PLs, expansion of brokerage capabilities and networks, popularity of load-sharing and load-posting Web boards, better technology (both in routing and load optimization), and shared services programs where companies share empty backhaul capacity. A good guess would be less than 10 percent in the United States, when you consider that tractors sometimes run "bob tail" - that is, without the trailer.

Department of Corrections

In the June 2012 edition of *The Lean Supply Chain* column by Paul A. Myerson, the reference to inventory holding costs ranging "from 15 to 40 percent of total revenue annually" should have read "from 15 to 40 percent of the total cost of inventory."

tweetlog

tweeting it forward:

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Tennessee #trucking companies struggle to find drivers: bit.ly/Mwm6on

Carl S @Americantrkr01
@ILMagazine Rates may be the issue

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OK, roads in #Minnesota HAVE to be THE bumpiest in the world! Check this -> bit.ly/Whered_She_Go? #Truckers #Logistics

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Article makes a great point abt overturned citations on #CSA, #trucking, via @ILMagazine & @bizjournals bit.ly/Nqu7tR

10TIPS

STEP-BY-STEP SOLUTIONS

by Deborah Catalano Ruriani

Determining If AS/RS Fits Your Facility

Most businesses that incorporate large-load automated storage and retrieval systems (AS/RS) store and handle full pallet loads moving at high volumes in and out of a distribution center or manufacturing plant. But other business types may also benefit from the solution. Norm Saenz, senior vice president and principal, TranSystems Corporation, offers these tips on deciding if AS/RS is right for your facility.

1 **Consider the products you manufacture and/or warehouse.** Large-load AS/RS solutions are suitable for products requiring tight security, such as pharmaceuticals and biomedical shipments, or climate control, such as frozen goods; and uniform/stable loads that do not require frequent operator attention.

2 **Investigate the clear height of your facility.** This factor determines vertical expansion possibilities and code restrictions. Maximizing vertical space is one benefit of AS/RS systems, which can reach up to 100 feet. If your facility can only build 40 feet high, an AS/RS system may not be the best choice.

3 **Determine whether you can provide a backup plan.** If a crane breaks, you need to know how you will access and pull products while it is being repaired. Determine how long your operation can function with this backup plan.

4 **Weigh the benefits of running an automated crane for each aisle compared to an operator-powered crane.** Perform analytical simulation modeling that validates volumes in and out of the system. At a cost of $1 million per crane, this analysis can produce significant savings.

5 **Analyze your inventory to determine the required storage depth within the racking solution.** Most AS/RS racking systems are single-deep pallet, but some systems can accommodate two or more pallets. Pallet cart shuttle systems can limit the number of aisles and cranes required, and better use square footage.

6 **Ensure the control software for managing the AS/RS system integrates with your WMS.** Integrating warehouse management systems and controls is key to the solution working properly and efficiently.

7 **Decide how much flexibility you need.** Ensure you can add aisles or racking bays to increase the AS/RS solution's longevity. Rack-supported structures limit your ability to adapt if business changes require vastly different racking configurations or throughput requirements.

8 **Calculate your investment.** You can gain significant labor savings by implementing AS/RS, but a trained maintenance staff is required to manage it. Determine return on investment (ROI) by calculating what you can save on additional leased space compared to conventional storage methods.

9 **Consider total ROI.** Benefits may include traceability, inventory control, and accuracy improvements; safer, gentler product handling; tighter security; and possible elimination of physical inventories. Get unbiased analyses regarding aisle length, elimination of non-essential crane moves, axis speeds, and proportion of height to depth, which greatly impacts the entire system's productivity.

10 **Evaluate competitive solutions.** Very-narrow-aisle racking is an alternative to AS/RS, but requires lift truck operators, increasing labor costs. On the other hand, an AS/RS solution usually requires a significantly higher investment in space, information systems, and control.

READER PROFILE

as told to Merrill Douglas

Dennis Omanoff joined Seagate in 2011 and serves as senior vice president of supply chain and procurement. Based in Cupertino, Calif., Seagate is a leading manufacturer of hard drives and storage solutions.

RESPONSIBILITIES

Supply and demand planning, commodity management, procurement, retail supply chain, service supply chain, logistics, and freight.

EXPERIENCE INCLUDES

Several positions in manufacturing engineering, assembly, test and program management, Texas Instruments; executive-level positions in quality and supply chain, SynOptics (later BayNetworks); adjunct professor, San Jose State University; vice president, operations and support, Candera/ZForce; senior vice president, chief supply chain officer, chief procurement officer, manufacturing and corporate real estate, McAfee.

EDUCATION

Fordham University, BA in philosophy and economics, 1977; Hofstra University, MBA in operations research, 1978.

Dennis Omanoff: Hard-Driving Man

WHEN I JOINED SEAGATE IN 2011, FLOODS IN Thailand were taking a tremendous toll on the hard-drive industry, and affected the supply chain for all our key components.

Seagate made some strategic moves at the time to help restore the industry. For example, we provided financial aid to key suppliers, setting the stage for future collaboration. I don't take credit for that, but I was proud to be part of it.

Between those floods, an earthquake in Turkey, the tsunami in Japan, and the volcanic eruption in Iceland, the hard-drive industry has seen a fair share of supply disruptions in recent years. Business continuity and disaster recovery will be a concern for a long time.

At Seagate, we're starting initiatives to better manage information about the health of our supplier network and events that could cause disruptions. We're also evaluating how to regionalize operations. We've launched projects that get us close to our customers, so we can better meet their needs and respond to their time-sensitive demands.

Seagate is also investing in employee development. We're creating resources employees can use to continue their educations, connect with industry-leading programs, and create professional networks within and outside Seagate. When they're facing tough challenges, our people will have resources for finding solutions.

As part of that effort, we're forging a relationship with a major university that

The Big Questions

What do you do to recharge your batteries?
During business trips, I like to take my teams on cultural excursions. I drive race cars, collect wine, and read. I also make the best barbecued ribs you'll ever taste.

What's the worst job you've had?
In high school, I delivered ices at 4 a.m. in Harlem to people who sold them from carts. I got paid in cash, which made me a target for holdups.

What has been your scariest career decision?
Leaving my secure but exciting job with Texas Instruments to join SynOptics, a networking startup. It was a frightening move at the time, but given the new company's rapid growth, I think I made the right decision.

Do you have a guilty pleasure?
Jelly beans.

will allow employees to earn certifications that can assist them through a long supply chain career. In addition, we'll allow workers to perform a variety of jobs, helping them become well-rounded professionally.

McAfee's supply chain organization ran a similar program, and it paid off well. We were the only organization in the company to gain recognition for a high-performance work team from human resources consulting firm Hewitt Associates. I was proud of the way we made employees feel engaged in their work. And, of course, an engaged workforce is a more productive workforce.

One thing I've learned about keeping teams engaged is the importance of communication. Team members need to feel that they are part of the process, and understand how changes the company makes will help them grow.

Not only must you communicate, but you must do it through multiple channels, including some that you might not feel comfortable with. For example, along with e-mails and face-to-face communications, Seagate uses Chatter, a collaborative tool from Salesforce.com that is similar to Facebook for the enterprise.

I've learned that I have to adapt to communicating in many different ways, in order to reach everyone I count on for support.

Seagate ships a hard drive every 6.5 seconds, purchases more than $8 billion worth of material every year from 70 major suppliers, and brings in billions of parts daily to meet growing demand.

Like many of the companies I've worked for, Seagate's business is growing at a rapid pace. The opportunity to participate in fast-growth environments in different sectors has been a wonderful experience. ■


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NOTED

THE SUPPLY CHAIN IN BRIEF

SEALED DEALS

Delightful Quality Produce, a leading Mexican importer, selected **CHEP** to provide pallet and container pooling solutions. During its multi-year contract, CHEP will address quality issues, improve customer service, increase productivity, and advance the management of Delightful Quality Produce's pallet system.

National DCP, the member-owned distribution and purchasing cooperative for Dunkin Donuts and Baskin Robbins outlets, selected **Transplace** as its third-party logistics provider. Transplace will manage inbound shipments to distribution centers throughout the United States, provide on-demand supply chain visibility, reduce direct transportation costs, and improve National DCP's overall operational efficiencies.

► **Sun-Maid Growers of California,** Plant City, Fla., chose third-party logistics service provider **Star Distribution Systems Inc.** to handle warehousing, order fulfillment, and consolidated LTL transportation.

Nature's Best, the nation's largest privately owned wholesaler and distributor of organic products, recently deployed **Manhattan Associates'** warehouse management system (WMS). Manhattan Associates partnered with VoCollect Voice, a voice-enabled solutions provider for mobile workers, to create a WMS that ensures safe, accurate, and productive supply chains.

Global supply chain and retail technology provider **RedPrairie Corporation** was selected by retailer **Woolworths South Africa** to provide a workforce management solution (WFM). Woolworths selected RedPrairie's WFM solution to leverage point-of-sale data to generate accurate forecasting and improve compliance with optimized schedules. The solution gives Woolworths South Africa managers visibility to key performance indicators and tools to manage performance.

Mattel, the world's largest toy manufacturer, selected global 3PL **Geodis** to manage its logistics and distribution operations in southern Europe. To serve Mattel, Geodis is establishing a warehouse in the Distriport area of Marseilles, France. During the six-year contract, Geodis will implement advanced technologies such as radio frequency and a voice-recognition system. Geodis will also prepare promotional displays, customize packaging, and handle returns management for Mattel.

[INFOCUS] **NOTED**
THE SUPPLY CHAIN IN BRIEF

GREEN SEEDS

▶ Grocery store chain **Safeway Inc.** switched to reusable product containers (RPCs), eliminating the use of 17 million corrugated boxes. The transition also increased shipping efficiency, which prevented the emission of 37,518 metric tons of greenhouse gases. Because RPCs can be stacked higher and more densely than traditional boxes, fewer trips are required to transport the same amount of product. That decreases trucking emissions and traffic volume.

◀ **SDV,** a global third-party logistics provider, recently built a warehouse in compliance with the highest environmental standards. All 452,084 square feet of the green warehouse, located in Singapore, are designed with eco-solutions such as low thermal transmittance materials, natural lighting technology, an air-conditioning plant system, and a detailed waste reduction plan. In addition to these sustainability efforts, SDV will supply recharge stations for electric vehicles in parking lots by the warehouse's completion date in August 2012.

Raleigh, N.C.-based logistics service provider **Longistics** added the fuel-efficient Kenworth T700 to its transportation fleet. The truck features an exhaust gas circulation system that produces near-zero emissions, is California Certified Clean Idle, and has low aerodynamic drag.

UP THE CHAIN

Blake Thompson was appointed senior vice president of supply chain and manufacturing at **Swisher Hygiene Inc.,** a provider of hygiene and sanitation products and services. Previously senior vice president of supply chain for Snyder's-Lance Inc., Thompson has more than 30 years of supply chain and operations experience.

Chris Villavarayan was named vice president, global manufacturing and supply chain management, commercial truck, for **Meritor Inc.,** which manufactures automobile components for military suppliers, trucks, and trailers. Villavarayan is responsible for global manufacturing operations, increasing results-based lean initiatives, improving the supply chain network, and continuing the focus on standardization and process excellence.

Micrel Inc., which provides analog, high bandwidth communications, and Ethernet IC solutions, promoted **Robert Wahl** to managing director of worldwide supply chain management and back-end operations. Previously the director of Micrel's global supply chain, Wahl has been responsible for the company's worldwide supply chain, including all inventory levels and turns, sales operations support, and purchasing. With this promotion, Wahl continues his current role, while taking on the additional responsibility for back-end operations, which include worldwide assembly, test, and supplier management.

Berry production company **California Giant Berry Farms** hired **Gary Bertone** as logistics manager. In this newly created position, Bertone manages all prepaid freight for customers, tracks daily rates, and negotiates agreements with carriers.

m&a

EPES Logistics Services, a full-service logistics company based in Greensboro, N.C., purchased **Meredith Transport,** a freight brokerage business that specializes in truckload, less-than-truckload, specialty shipping, and international freight. The strategic acquisition expands EPES Logistics into new markets and builds on the strengths of each company.

PS Technology (PST), a subsidiary of Union Pacific Corporation, acquired the Yard Control Systems division of **Ansaldo STS USA.** Based in Norristown, Pa., Yard Control Systems focuses on railroad classification yard automation and control systems in North America. The acquisition boosts PST's enterprise management capabilities through Yard Control Systems' Star III hump process control system, rail yard process control, and its automation solutions.

BTS Logistics Inc., a logistics solutions provider based in Warrenville, S.C., bought **Bekins Tradeshow Services.** The acquisition allows Bekins Tradeshow Services to provide pre-show planning, warehousing, transportation, last-mile distribution and installation services, and the exhibition of high-value products. In addition, Bekins Tradeshow Services' relationship with Wheaton Van Lines offers access to the Wheaton fleet and drivers.

recognition

American Honda recognizes CEVA as a top supplier with its Premier Partner award.

◀ American Honda presented its **Premier Partner** award to **CEVA Logistics** for excellence in quality, value, and customer service for more than two decades. CEVA recently reengineered American Honda's delivery network, and played an instrumental role in reducing its carbon emissions as the first provider of natural gas-powered tractors.

TotalTrax received Delaware's **2012 Award for International Excellence.** The annual award is presented to Delaware companies demonstrating achievements and growth in international trade.

Florida East Coast Railway (FEC) was honored as Anheuser Busch's **2011 Intermodal Carrier of the Year.** FEC ranked first among competitors in operational metrics, on-time pickup percentage, average payload per shipment, trailer pool compliance, and loaded trailer aging.

International Produce Limited (IPL), the UK's largest fresh produce importer, selected **Damco** as its **2012 Service Provider of the Year.** Damco was recognized for innovative logistics services that enhance IPL's supply chain and reduce its carbon footprint.

Domino's Pizza honored long-time partner **Ryder System Inc.** with its **2011 Pizza Supplier of the Year award.** Domino's evaluated its partners on vehicle uptime, safety, damage prevention, and equipment availability, among other performance factors.

Con-way Truckload received the **2011 Lowe's Gold Carrier Award** for excellent operating performance, on-time service and reliability, and EDI shipment status compliance. Con-way Truckload achieved a compliance record of 99.5 percent last year.

TRENDS

SHAPING THE FUTURE OF LOGISTICS

THE 23rd ANNUAL STATE OF LOGISTICS REPORT:

Sputtering Toward Sustained Growth

The city was abuzz with speculation about the fall presidential election in June 2008 when Rosalyn Wilson, senior business analyst for Delcan Corp., gave her annual State of Logistics presentation in Washington, D.C. Stormy economic clouds were already gathering as a consequence of the housing bubble burst and subsequent credit crunch, adding extra gravitas to the November polling.

by Joseph O'Reilly

Wilson's "Surviving the Slump" mantra offered brief glimmers of optimism amid a gloomy backdrop. The economy was still growing in 2007, albeit at a far slower pace, and total business logistics costs topped nearly $1.4 trillion, marking the fourth-consecutive year of record growth.

But that optimism swiftly turned. The rest, as they say, is history.

Fast forward to the present, and "The Long and Winding Recovery"—as Wilson titled her 2012 report co-sponsored by the Council of Supply Chain Management Professionals and Penske Logistics—provides a telling metaphor for how the United States is still enduring a slump that featured multiple humps and bumps. Now, headed into another presidential election season, the logistics industry is poised, if paused, as the economy sputters toward sustained growth.

In 2011, total logistics costs rose 6.6 percent to $1.28 trillion, still well below 2007's high-water mark. Logistics costs as a percent of Gross Domestic Product (GDP) rose 2.6 percent to 8.5 percent. Still, if the U.S. Federal Reserve's recent assessment is any indication, full economic recovery is at least three years away, says Wilson.

While the failure of sustained economic growth is beginning to deteriorate recent gains in manufacturing and business spending—industrial production was up only 3.9 percent in 2011, much lower than the 6.3-percent rise in 2010—consumer goods output shows signs of recovery. Production was up 2.7 percent in 2011, compared to 0.8 percent in 2010. Consumers are buying again, with less discretion even, which offers promise for U.S. manufacturers and retailers.

"Several records were set in 2011," notes Wilson. "U.S. exports of manufactured goods reached a record $1.27 trillion in 2011, up 15.1 percent from 2010. One leading manufacturing sector was motor vehicles and parts, which grew 17.7 percent. Industrial supplies represented the largest goods export category with a record $499.5 billion worth of exports in 2011, followed by capital goods with $491.4 billion."

Rising inventories and plummeting interest rates—a result of this renewed optimism—led to increases in related costs such as insurance, depreciation, taxes, and obsolescence. Consequently, inventory carrying costs rose 7.6 percent during 2011.

THE STATE OF LOGISTICS 2012:

For What It's Worth

(in $U.S. billions, except where noted)

CARRYING COSTS ($2.184 Trillion, All Business Inventory)	
Interest	$3
Taxes, Obsolescence, Depreciation, Insurance	$294
Warehousing	$120
SUBTOTAL:	**$417**
TRANSPORTATION COSTS	
Motor Carriers:	
Truck–Intercity	$431
Truck–Local	$198
SUBTOTAL:	**$629**
Other Carriers:	
Railroads	$68
Water	
INTERNATIONAL	$28
DOMESTIC	$5
Oil Pipelines	$10
Air	
INTERNATIONAL	$16
DOMESTIC	$15
Forwarders	$35
SUBTOTAL:	**$177**
SHIPPER-RELATED COSTS	**$10**
LOGISTICS ADMINISTRATION	**$49**
TOTAL LOGISTICS COST	**$1,282**

SOURCE: 2012 *State of Logistics* report

Retailers Go Lean

Wilson cites one trend that began prior to the recession: the sophistication with which retailers are managing inventory—from demand-driven logistics to lean principles to vendor-managed inventory.

"Retailers have leaned their inventories, and now require suppliers to deliver only the product they need," she says. "As a result, retail inventories have been relatively stable, while wholesale and manufacturing inventories have increased.

"During most of 2011, manufacturing and wholesale sales and inventory levels were well-matched," she adds. "At the end of the year, however, when manufacturing was slowing and retailers were not restocking their shelves, stockpiles began rising."

More telling, the retail inventory-to-sales ratio (a measurement that compares inventory against sales for the same month) remained static—between 1.25 and 1.3 in 2011. In early 2009 it was 1.48, reflecting the dissonance between rising inventories and decreasing sales. While retailers have adjusted to demand variability, a flat retail inventory-to-sales ratio also indicates that manufacturers and wholesalers are holding more products farther upstream in the supply chain.

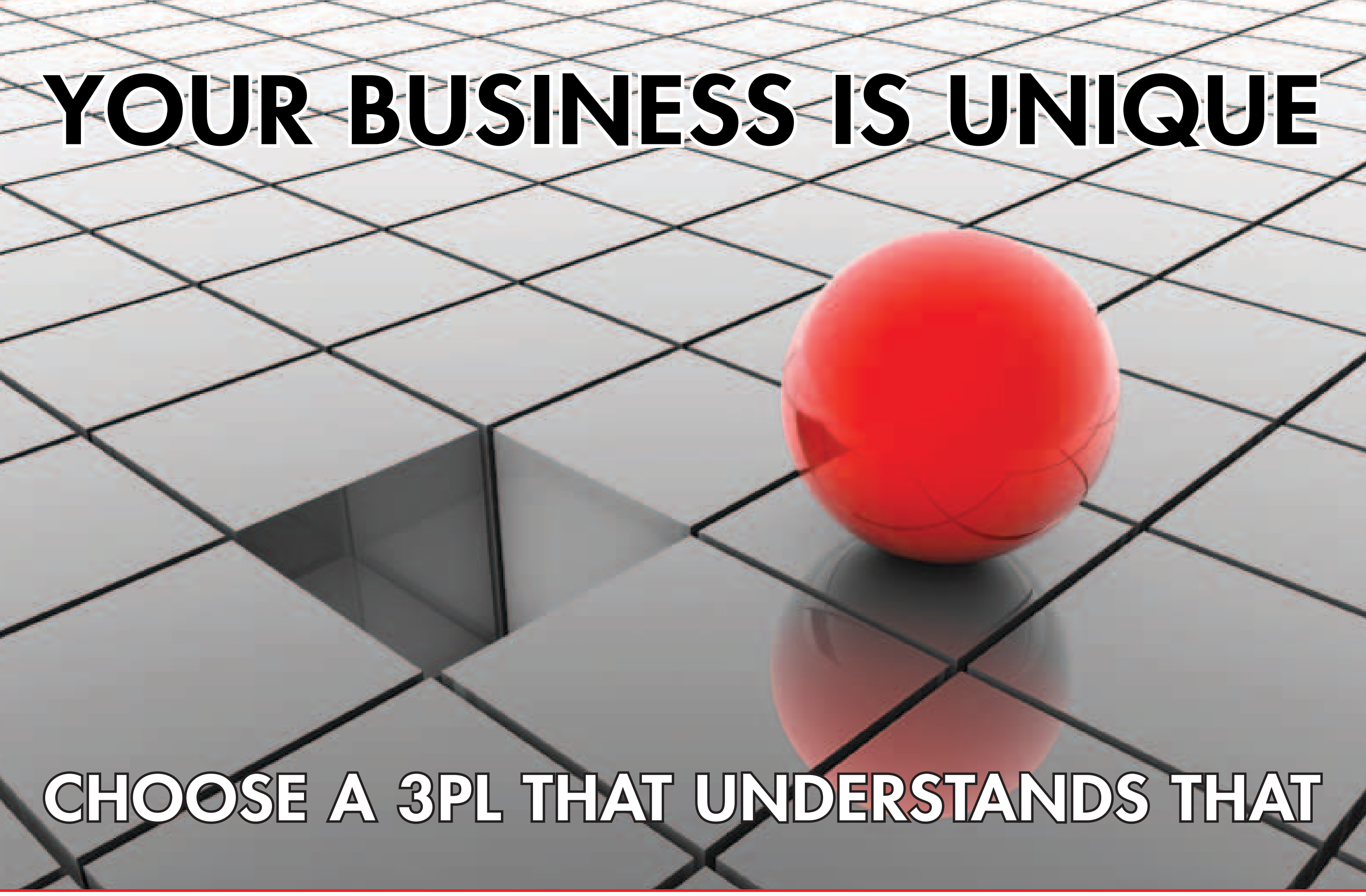
Richard Thompson, executive vice president, supply chain and logistics, Jones Lang LaSalle, moderated the State of Logistics panel.

In terms of warehousing, excess capacity continues to drive rates down. Distribution center consolidation and better use of space—through technology and business process improvements—demonstrate that businesses are doing more with less.

A Tale of Four Modes

The U.S. transportation industry presents a more dynamic picture of where industry is headed. From afar, indicators show promise. Up close, they look distorted. Transportation costs increased 6.2 percent in 2011, largely a result of higher rates, not greater volume. Beneath the surface of the U.S. transportation system, old concerns are beginning to re-emerge.

"Air, water, and pipeline revenues declined in 2011, while railroad, truck, and forwarders experienced revenue growth," says Wilson. "For the first four months of 2011, volumes ranged from 11.4 to 13.8 percent above 2010 levels. Meanwhile, freight payments ranged from 27 to 35 percent higher than the previous year for the first seven months.



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"The economy began to slow down significantly by the start of the third quarter, and the only signs of strength were earlier-than-normal shipments and inventory buildup in anticipation of the holidays in July," she notes. "Then, volume and total freight dollars paid dropped off."

Capacity speculation remains a common factor among all modes. The motor carrier base jettisoned assets during the recession through optimization and attrition. Having achieved a relative supply/demand balance, rates inevitably increased in 2011, and more recently in 2012—allowing carriers to regain revenue after a prolonged fallow period.

That said, trucking companies still face a litany of concerns—from driver recruitment, training, and retention, to fuel, insurance, and new government-mandated equipment costs. The U.S. Federal Motor Carrier Safety Administration's CSA and Hours of Service regulations place pressure on the motor freight industry to qualify a shrinking driver pool. With freight demand expected to rise as the economy recovers, this further constrains over-the-road capacity investment and growth.

The Hours of Service regulations, which go into effect in July 2013, "will reduce the maximum number of hours a truck driver can work within one week from 82 to 70," says Wilson. "It will cause

Supply Chain Sustainability: From Wheat Fields to Walmart

If big-box retailer Walmart has its way, the next item on its ever-expanding green agenda is sustainable farming. As part of its broader initiative to reduce supply chain carbon emissions and serve as a model for corporate social responsibility, the company is sending employees into the fields to help farmers reduce their use of carbon-intensive fertilizer and improve logistics, according to Reuters.

Walmart has entertained similar ambitious ideas in other parts of the world where it operates. Its Direct Farm program in China, for example, has successfully engaged more than 750,000 local growers in an effort to connect farmland with supermarkets. The company expects this initiative will generate one-third of farm produce and cereals sold in Walmart China stores.

But the latest "grainstorm" may push Walmart into an entirely different sphere—agricultural innovator. The company's objective is to move its Great Value-branded flour and wheat products from field to shelf more efficiently, using less carbon. In the process, it hopes to trigger transformative changes in the way U.S. farmers grow wheat, lowering costs and improving yields for a crop that has failed to keep pace with sustainability improvements in other commodity areas such as corn and cotton.

Among Walmart's goals are some low-hanging fruit: convincing more farmers to abandon the practice of plowing fields after each harvest, and using satellite imagery to optimize fertilizer use. But there are challenges, too. Wheat is already one of the least-intensive crops in terms of nitrogen fertilizer, using half as much as corn to produce one acre of grain.

As it continues to buy more wheat to support its in-house brand, Walmart will flex its commercial muscle to bring changes to the agricultural landscape by getting farmers to adopt better techniques and label the flour it sells as a sustainable product.

Walmart is also evaluating opportunities to promote

As part of its Direct Farm program in China, Walmart leases farmers' land, contracts with them to grow produce, then purchases the products.

"precision farming," which uses satellite-guided planting to improve yields, and no-till methods that proponents say reduce soil erosion and maintain land quality. And, given its logistics pedigree, Walmart has also identified a potential backhaul commodity that can fill empty trucks in the South—manure from U.S. poultry producers that wheat farmers use as fertilizer.

a three- to eight-percent loss of productivity for each driver."

Ocean freight is experiencing a different problem. Steamship lines have too much capacity, with new vessel orders outgrowing demand. In 2011, a peak season never emerged, forcing carriers to reduce rates.

"Lack of business and lower rates led several carriers in the transpacific trade to suspend some services during the slack winter months or leave a market entirely," says Wilson. "By late 2011, the number of idled containerships worldwide roughly doubled to 246, or four percent of global containership fleet capacity—about one-third of what we experienced at the height of the recession, when 12 percent of the fleet was idled."

Air cargo carriers bring more bad news. Revenue declined two percent in 2011. Over-capacity led to bad load factors, dropping domestic airfreight revenue ton-miles more than three percent. International airfreight was bolstered by a record $400 billion in export goods transported by air.

One positive transportation sector is rail. The cost for rail transportation jumped 15.3 percent, down from a 21.8-percent rise in 2010. Class I freight revenue per ton-mile continues to increase, up 12.9 percent, from 3.33 to 3.76 cents. Ton-miles, however, were up only 2.3 percent in 2011. Higher rates accounted for almost all of the increase in rail transportation costs.

As the threat of a truck capacity and driver shortfall weighs on shippers, intermodal transport remains a logical solution—and railroads are well-equipped to handle it. There were 15.2 million total carloads in 2011, a rise of 2.2 percent over 2010, while intermodal volume rose 5.4 percent, to 11.9 million containers and trailers. Railroad capital investment in equipment increased 91 percent during the same period.

> Excess warehousing capacity continues to **drive rates down.** Businesses are doing more with less.
>
> **Rosalyn Wilson,** State of Logistics Report

Supply Chain Excellence to the Core?

Apple may rank as the number-one supply chain in the world—five years running, according to Gartner's annual Supply Chain Top 25—but not all analysts share that opinion. Take, for example, Steve Banker, ARC Advisory Group's service director of supply chain management.

Banker contends that Apple's excellence lies in innovation and product development, which shouldn't be confused with supply chain management. In a recent blog posting, *The Apple Supply Chain: Best in the World?*, Banker details the dynamics that make the company's supply chain "fascinating."

On the plus side, Apple controls its own demand. "As long as it underestimates demand for a hot new product, it will have loyal customers clamoring for the new devices and willing to wait," says Banker. The company also has procurement and pricing leverage, buying up components—and sometimes the machines that make those components—while freezing out competitors.

On the downside, Apple's product launches require a great deal of complexity and secrecy, as well as a flurry of production activity in the lead-up to a deadline. This places a great deal of stress on overworked factories—and ultimately the company's reputation.

"While the existing customer base has largely ignored labor relations problems, the demographic of the people that buy Apple products indicates a concern for social responsibility," says Banker. "Further, the Chinese market is becoming very important to Apple, and closer scrutiny by the Chinese government could affect shipments."

The reality is that Apple's supply chain is predicated by product innovation and expedited time-to-market expectations, making it vulnerable to exceptions that could threaten parts availability and, even worse, system failure.

"Apple's new CEO, Tim Cook, is a supply chain guy with a strong reputation. He is working to improve the company's reputation for social responsibility," says Banker. "But if I were Apple, I'd rather have another product development guru like Steve Jobs. To drive continued growth and margins, the company needs to continue to excel at product development, but only needs to be competent in supply chain management. Unfortunately, there are not many Steve Jobs out there."

Is it supply chain or product development excellence that keeps Apple's retail stores stocked with hot, new products?

Freight Demand Steadies, Capacity Concerns Surface

As the U.S. economy shows signs of consistent recovery, freight patterns are returning to some level of seasonal normalcy, according to Milwaukee-based financial services company Baird Equity Research. Demand trends solidified through May 2012 after exhibiting below-seasonal trends to start the month—reflective of a stable underlying freight environment.

Current supply/demand dynamics are tight, but have not yet driven up rates given the stable demand environment. Baird's research indicates that shippers are aware of capacity tightness and driver supply issues, which will support rate growth as some seek to secure capacity. That said, rates will continue to trend at two to four percent growth without acceleration in demand.

On the cost side, diesel prices have fallen six percent since they peaked at $4.15 per gallon in early April 2012. Continued fuel moderation could provide a potential tailwind to truckers, easing cost pressures while improving consumer demand.

TMS Market Responds

The transportation management system (TMS) market has bounced back from the global economic downturn and is showing signs of renewed growth, according to Dedham, Mass.-based ARC Advisory Group's annual report.

"One significant trend is the continued higher growth of the planning and execution segment compared to the fleet management segment," says Steve Banker, service director of supply chain management and principal author of ARC's *Transportation Management Systems Worldwide Outlook: Market Analysis and Forecast through 2016.*

"In 2011, year-over-year growth in

planning and execution was in double digits," Banker adds.

One implication is that companies are becoming more strategic in how they manage the transportation function within the supply chain (practicing demand-driven logistics, for example) and not just relying on better asset utilization and optimization efforts at the local level to reduce freight spend.

While North American revenues have returned, and ARC predicts robust growth into 2013 as pent-up demand drives the market, elsewhere the forecast is far less favorable. Europe's expected slide into another recession will see TMS revenues shrink for the next two years. However, because North America is the most significant market for TMS, and demand is building in other regions of the world such as Latin America, growth will continue in spite of Europe's travails.

Pharma Chains Confront Costs and Counterfeiting

Pharmaceutical companies are paying more attention to their supply chains as they attempt to boost profits and clamp down on counterfeit drugs, according to *Pharmaceutical Supply Chain in the United States*, a new report by London-based GBI Research.

Corporations are tailoring supply chains to products based on market demand and production costs. Manufacturing is commonly outsourced to emerging economies where labor is cheap, while less substantial, branded products are produced closer to customer bases in developed countries where profit margins are higher and transportation costs lower.

The report also demonstrates how transportation and logistics developments are helping to facilitate recalls and curb counterfeit drugs—primarily through the use of Radio-Frequency Identification (RFID).

In the United States, product callbacks have increased steadily over the past decade, with the Food and Drug Administration recalling 1,742 drugs in 2009 alone. Recalls occur for a number of reasons, including poor quality packaging, defective labeling, and product contamination.

RFID devices embedded in product packs and scanned by special readers eliminate human error, as well as the need to replace labeling damaged in transit. Equally important, tags can store encrypted data, therefore reducing the possibility of fake medications entering the supply chain.

WSDOT Weighs in on Trucking Efficiency

In an effort to keep truck drivers moving, especially as Hours of Service and driver availability become increasingly constrained, the Washington State Department of Transportation (WSDOT) is leveraging technology so that commercial vehicles can bypass weigh stations.


Washington state is tapping new technology that lets trucks bypass weigh stations and stay on the road.

The Commercial Vehicle Information Systems and Networks (CVISN) enabled more than 1.1 million vehicles to circumvent weigh stations in 2011, while decreasing travel times by an estimated 98,000 hours. The system uses weigh-in-motion scales, transponders, and automatic license plate recognition to screen trucks as they approach. With typical weigh station stops taking about five minutes — at an estimated cost of $10.28 for time and fuel — CVISN saved truckers almost $12.1 million in 2011, according to Washington state officials.

"In the grand scheme of commercial trucking, time really is money," says Anne Ford, WSDOT commercial vehicle services administrator.

WSDOT estimates that 39 percent of all commercial vehicles driven in the state last year used CVISN transponders, an increase of 9.4 percent since 2008 and 3.7 percent since 2010. Over the past four years, the system saved freight haulers $51 million and reduced previous delays at weigh stations by approximately 414,000 hours, officials estimate.

"CVISN is extremely efficient and aimed specifically at keeping freight moving along our state's highways," Ford adds. ■

Multi-channel Retailing Triggers Distribution Shift

Jones Lang LaSalle's report, *Retail 3.0: The Evolution of Multi-channel Retail Distribution,* demonstrates how e-commerce and m-commerce (mobile) channels are revolutionizing the retail sector. Nearly 80 percent of retailers report online sales have increased in the past five years; some report spikes of 25 percent or more. The "store" is now everywhere–in consumers' pockets, at their homes, and at the mall–which is forcing shippers to adapt their traditional distribution center space needs and networks *(see chart)*.

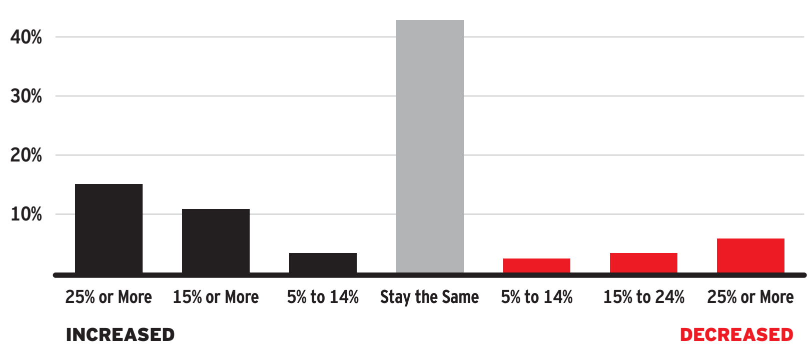
"With multi-channel selling comes a major focus on distribution–how to get from ship to shore to store or your door as quickly and efficiently as possible," says Kris Bjorson, head of Jones Lang LaSalle's Retail/e-Commerce Distribution Group.

Traditional warehouses that support stores require less investment and machinery, and fewer staff. The new direct-order fulfillment DC can cost three times as much, and involve three times as many employees, placing greater emphasis on site selection.

"Considering proximity to key customers, tax incentives, sales tax, and the availability of local labor is vital to retailers when searching for the right location for their e-commerce distribution centers," adds Bjorson.

The inability of some domestic logistics service providers to fulfill high volumes of parcel shipping at low costs and within a reasonable delivery window, however, dramatically impacts the direct-to-customer channel. Retailers have to establish their own distribution networks or rely on outsourcing.

How have your distribution center space needs changed in the past 5 years?



Source: Jones Lang LaSalle & National Real Estate Investor online survey, April 2012

GLOBAL

THE WORLD AT A GLANCE

by Joseph O'Reilly

Latin America Charts Path to Growth

Considering trade with Latin America? Here's a look at five key countries in various stages of economic, political, and trade/supply chain growth.

ARGENTINA. Until recently, Argentina has been relatively resilient to global economic woes, and the impact of slower growth in Brazil. Ernst & Young's *Rapid Growth Markets Forecast* predicts 3.8 percent GDP growth in 2012.

Recent unexpected, government-imposed trade restrictions could, however, depress this modest growth. In October 2011, the Argentinian government introduced new restrictions on buying foreign currency—those buying currency now need prior approval from the tax agency. This move seems to be a response to a recent drop in international reserves, which have fallen by more than US $5 billion since early August 2011.

Additionally, the central government just enacted regulations to minimize imports. Importers are now required to fill out a mandatory Anticipated Sworn Declaration of Imports, which must be approved by the government. Foreign manufacturers wanting to bring their goods or services into the country must enter into partnerships with local manufacturers for production.

These new measures have created a tangle of red tape and brought denunciation from 14 member states of the World Trade Organization, including the United States and the European Union.

The import restrictions risk freezing Argentina out of international markets and making it more of an economic outlier than it already is, notes Marcela Cristini, senior economist at the Foundation for Latin American Economic Investigations.

Walter Molano, a Latin American specialist at BCP Securities, also criticized the crackdown on imports. "The Argentine economy is doing well," he says. "But they're missing the big Latin America boom."

For Unilever, the new restrictions "hurt our ability to deliver good customer service and put products on the shelf," says Wendy Herrick, vice president of customer service and logistics for North America, Unilever. "We have to assess whether we should set up a third party to make products inside the country, or build a facility to produce certain items."

BRAZIL. Recent economic indicators leave little doubt that the Brazilian economy has slowed. With the health of the global economy also deteriorating in recent months, Ernst & Young lowered its forecast for GDP growth in the country to 3.1 percent in 2012 (previously 4.5 percent). Infrastructure bottlenecks are expected to contribute to this slowdown.

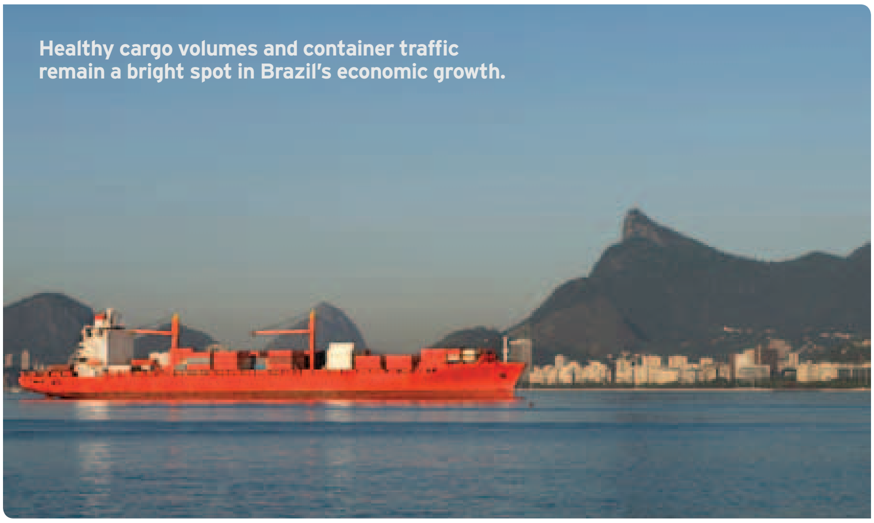
Trade with China, which has become Brazil's largest individual trading partner, is credited with providing a major boost to the country's economy. China's share of Brazil's total goods exports has risen from less than two percent in 2000 to more than 17 percent in 2011. It's not surprising that commodities are driving this strength in bilateral flows.

Brazil is also a significant importer from China, bringing in a diverse range of basic consumer products that China can often make more competitively than many of Brazil's own industries. But Brazil still runs a significant trade surplus with China—US $11.5 billion in 2011—representing almost 39 percent of the country's annual total trade surplus of US $29.7 billion.

It is also worth emphasizing that Brazil's trade with the rest of Latin America is now substantial, accounting for US $57 billion (more than 22 percent) of its exports.

In terms of cargo volumes, the country posted a record year for general cargo and container handling at its ports in 2011, reports Brazil's Agencia Nacional de Transportes Aqaviarios. Container traffic rose nearly 34 percent.

From a supply chain perspective, finding experienced talent in Brazil remains a challenge. "The labor market is very hot and it's tough to find and retain top talent—especially at higher managerial levels," Herrick reports.


Healthy cargo volumes and container traffic remain a bright spot in Brazil's economic growth.

COLOMBIA. Colombia is the big turnaround story in Latin America. Over the past decade, the country has transformed itself from a crime-ridden, drug cartel-dominated nation to a progressive trade economy with robust growth.

The Colombian government's ongoing economic reforms and deregulation, and attempts at reforming the legal system combined with its pro-business stance, are also reducing the economic risk associated with investing in Colombia.

Although 2012 growth is likely to slow to 3.8 percent due to the weaker global outlook, inflation will remain below four percent. The country is set to benefit from higher trade flows associated with U.S. Congress' ratification of the long-delayed free-trade agreement. This will help to support GDP growth averaging four percent per year over the medium term.

"Much of Colombia's economic and GDP growth can be attributed to an explosion in foreign direct investment due to the government focusing on creating a favorable trade climate," Ernst & Young says. Unlike its neighbors Venezuela and Bolivia, Colombia has differentiated itself from other nations in the region by looking favorably upon foreign investment.

Colombia still poses security risks. Organized crime groups, urban street gangs, and armed neo-paramilitary gangs continue to operate in the country. But, "these issues tend to affect the social climate to a greater extent than the investment and business climate," Ernst & Young observes.

In terms of physical infrastructure, Colombia still faces substantial problems, especially relating to roads, ports, and transportation. For example, it takes more than 10 hours to travel from Bogota to Medellin by road, a journey of only 152 miles. The country recognizes this problem, and has allocated $3 billion to improving roads and transport infrastructure.

MEXICO. Mexico is the United States' third-largest trade partner and second-largest export market for U.S. products. U.S.-Mexico bilateral trade increased from $88 billion in 1993 (the year before NAFTA), to $460 billion in 2011, an increase of 423 percent. In 2011, Mexico-U.S. bilateral trade increased by 17 percent from 2010 levels.

The country's economy grew 4.6 percent in the first three months of 2012 over first-quarter 2011; higher than analysts and authorities expected. Mexico's manufacturing sector posted 5.5-percent GDP growth in the first quarter of 2012 over the same period in 2011, greatly exceeding the expected four percent, according to the Mexican Statistics Agency, Instituto Nacional de Estadistica y Geografia. This growth reflects a reactivation of Mexican exports to the United States.

Mexico's strong maquiladora base currently provides U.S. businesses an alternative to Asia-based manufacturing, and


The new way to view your supply chain

opportunities to sell into the U.S. supply chain. U.S. exporters, however, often under-appreciate Mexico’s size and diversity. It can be difficult to find a single distributor or agent to cover this vast market.

Violence and security issues are raising logistics costs as carriers and shippers must institute technology and procedures to counteract hijacking, diversion, theft, and other security risks.

U.S. exporters continue to be concerned about Mexican Customs procedures, including insufficient notification of procedural changes, inconsistent interpretation of regulatory requirements at different border posts, and uneven enforcement of Mexican standards and labeling rules.

In terms of transportation infrastructure, Mexico changed its port policy in the early 1990s to act as the landlord—keeping control of management and planning—while encouraging the private sector to partner in construction, equipment, operation, and maintenance. This has spurred a much-needed quadrupling of investment in Mexico’s ports.

Third-party logistics providers and transportation companies are broadening their cross-border services to support this surge in volume. UPS, for example, recently introduced CrossBorder Connect, a premium ground freight service between the United States and Mexico designed to address the heavyweight freight challenges that still exist in U.S.-Mexico trade.

PANAMA. On June 28, 2007, the United States and Panama signed the United States-Panama Trade Promotion Agreement (TPA). Although Panama and the U.S. Congress approved the legislation, and President Obama signed it in October 2011, no date has been set for putting the agreement into effect.

When enacted, the TPA will result in significant trade liberalization, including financial services. It includes important disciplines relating to customs administration and trade facilitation, technical barriers to trade, government procurement, investment, telecommunications, electronic commerce, intellectual property rights, and labor and environmental protection.

Panama’s growth rate is among the highest in the region, largely owing to strong fundamentals and prudent policies. Real GDP growth has averaged eight percent over the past five years.

The government’s economic strategy for 2009-2014 aims at positioning Panama as a world-class financial and logistics hub. Cumulative public investment in physical and social infrastructure during this administration is expected to reach 50 percent of 2010 GDP by 2014. Tax reforms enacted in 2009-2010 are designed to increase tax revenue by about 1.4 percent of GDP by 2013. The Panama Canal expansion will double existing transit capacity and increase transfers to the budget.

–Lisa Harrington

H-E-B Reverses Course On Lázaro Cárdenas Experiment

When West Coast congestion and transportation costs became increasingly prohibitive in 2006, grocery store chain H-E-B sought an alternative solution at the Port of Lázaro Cárdenas, Mexico, according to a recent *San Antonio Express News* article.

The company operates 336 stores in Texas and North Mexico, and five million square feet of distribution/warehouse space. Each store receives about 40 weekly deliveries, so finding economies of scale and squeezing out transportation costs has always been a critical success factor.

While the San Antonio-based company had relied on Long Beach and intermodal transport to Texas, the Mexico landbridge option—Lázaro Cárdenas to Laredo, Texas, via Kansas City Southern Mexico rail service, then truck to area distribution centers—provided a less expensive, more efficient transportation option that allowed H-E-B to stock shelves at low prices.

The experiment worked for several years. Asian goods arrived at a five-percent lower cost and two to three days faster than through Long Beach. As the popularity of Mexico's back-door U.S. intermodal lane increased, however, so did ocean container rates. Inevitably, the cheaper option became less competitive.

Today, H-E-B is back using Long Beach for most of its Asian trade, while also pulling some volume through the Panama Canal to Laredo—a contingency for managing potential supply chain exceptions.

CN Looks to Reconnect With Shippers

A recent review by the Canadian government has provided impetus for CN, and the rail industry at large, to re-engage customers and improve service from one end of the supply chain to the other. "The major cause of rail service problems is railway market power, which leads to an imbalance in the commercial relationships between the railways and other stakeholders," the Rail Freight Service Review reports.

The service review pressed CN to initiate supply chain collaboration and service-level agreements with a wide array of stakeholders and customers, both large and small, covering a significant proportion of the railroad's revenue base in forest products, grain, metals, coal, and intermodal traffic.

Rail shipper representatives, however, have called upon the Canadian government to go even further and consider regulatory measures to facilitate service-level agreement negotiations and commercial dispute resolutions.

This current tension between Canadian railroad and shipper interests hearkens back to U.S. Senator Jay Rockefeller's (D-W.Va.) introduction of the Surface Transportation Board Reauthorization Act of 2009. The legislation proposed making the Surface Transportation Board an independent authority sanctioned to mediate disputes between railroads and shippers, as well as monitor operational performance on the tracks.

CN President and CEO Claude

The Rail Freight Service Review process prompted CN to improve customer service and supply chain collaboration.

Mongeau has publicly cautioned the government to "carefully weigh the future regulatory environment for Canada's rail industry.

"Make no mistake. The intrusive, regulatory-based approach to service demanded by shippers would be unprecedented in a market-based economy," he adds. "Such an approach would send mixed signals to customers and suppliers around the world about the government's approach to commercial markets for rail transportation in Canada."

Germany: A Model For Labor Reform

Leading economists are raising their forecasts slightly for German economic growth in 2012, from 0.8 percent to 0.9 percent, despite the ongoing European debt crisis. And they expect Europe's largest economy will return to more positive growth in 2013.

The news comes as Germany's unemployment rate continues to drop—a consequence that observers have termed the second "German miracle" following the country's post-World War II reconstruction effort. Labor market reforms over the past decade are now paying dividends as the country climbs its way out of Europe's economic doldrums and sets an example for its underwhelming EU peers.

"The power of unions and craft guilds was curtailed, making it easier for unskilled youth to enter the job market and for employers to hire and fire at will," wrote Donald L. Luskin and Lorcan Roche Kelly in a February 2012 *Wall Street Journal* article. "Germany's lavish unemployment benefits were sharply cut back. An unemployed person in social-democratic Germany today can draw benefits for only about half as long as his counterpart in capitalist America."

Low unemployment, which is expected to hit 6.2 percent by late 2013 from current seven-percent estimates, is making consumers more willing to spend money and helping to grow the country out of the current economic abyss.

This positive growth forecast is also having a direct impact on the transportation and logistics sector. Companies are expected to hire up to 50,000 workers in 2012, says German supply chain trade industry association BVL. Transportation is a key barometer of economic health, especially given Germany's manufacturing pedigree.

"Germany's top-notch infrastructure and its position at the center of Europe make it a key logistics destination," says David Chasdi, logistics expert at Germany Trade & Invest, a foreign trade and investment promotion agency. "Our ports, airports, highways, and railways are used to serve more than 500 million consumers across Europe, as well as markets in Asia."

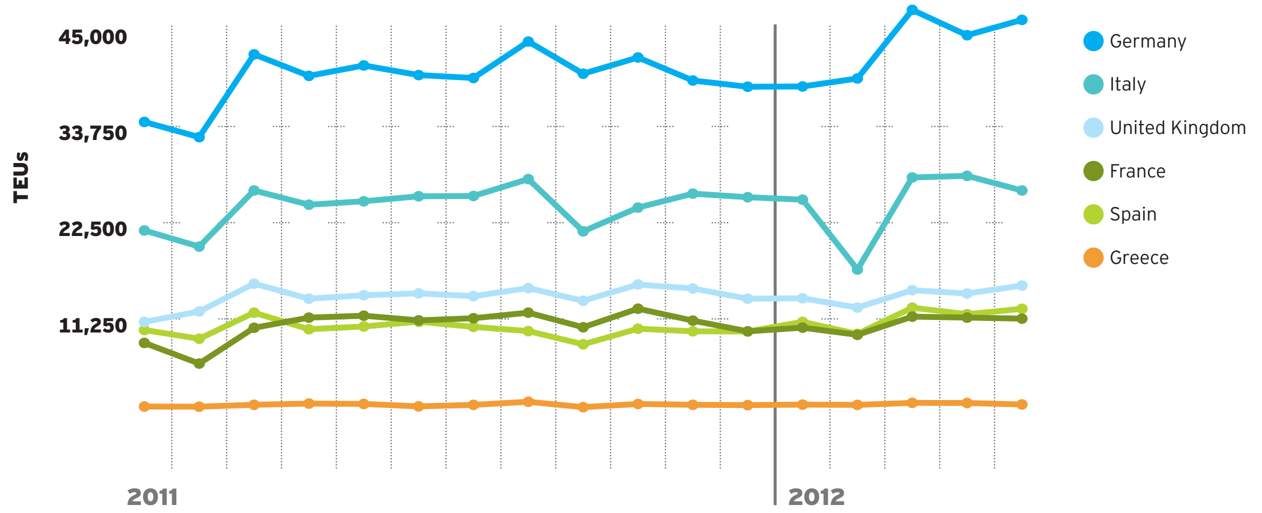
As a consequence, foreign investors are steadily gravitating toward Germany. Penske Logistics recently opened a new office in Düsseldorf to deliver logistics services to companies in the automotive, healthcare, manufacturing, and chemical sectors; Amazon will open two new facilities in 2012; and Swiss logistics giant Kuehne + Nagel broke ground on a facility in Duisburg, the world's largest inland port.

Arab Development Depends On Intra-regional Trade

At least two million jobs could be created across the Middle East and North Africa if export barriers are lifted to help stimulate stagnant regional trade. Currently, most Arab countries trade far more with Europe, the United States, and Asian countries than they do with each other. Only 11 percent of Arab non-oil exports are within the region, one of the lowest rates of intra-regional trade

U.S. Imports from Key EU Countries (in TEUs)

Even with the EU exhibiting shaky economic signs, several countries increased TEUs supplied to the United States in 2012 to date, compared to 2011. U.S. imports from Germany are up dramatically; imports from Italy have dipped.



Source: Zepol Corporation, www.zepol.com

RECEIVE FREE NO OBLIGATION GUIDANCE AND ADVICE www.inboundlogistics.com/3pl in the world, according to a report by the International Trade Center (ITC), a joint agency of the World Trade Organization and the United Nations.

Taxes on goods exported within the region have dropped in recent years under free trade agreements. But bureaucracy as it pertains to technical regulations, product standards, and customs procedures has multiplied for Arab companies looking to export to neighboring countries. One common trade barrier is the "rules of origin" provision, which requires exporters to produce extra paperwork if their goods contain ingredients from a third-party country.

Calls to renew focus on regional trade come as the Eurozone debt crisis and signs of slowing growth in China threaten the Arab world's leading trade partners. The ITC believes simplifying rules, and incentivizing more commercial activity between Arab countries, would have a positive effect throughout the region, boosting trade by 10 percent.

CBP Agreement Extends C-TPAT To Latin America

As U.S. companies locate more business in the Caribbean and Latin America, security is becoming a hot topic—especially as it relates to extending U.S. transportation security standards and policy to supply chain partners. A recent agreement between U.S. Customs and Border Protection (CBP) and the World Business Alliance for Secure Commerce Organization (World BASC) is one step toward addressing this concern.

Cartagena, Colombia-based World BASC is a non-profit global organization that establishes and administers supply chain security standards and procedures in cooperation with governments, companies, and authorities around the world.

More than 2,000 companies across the Caribbean and Latin America stated they would work with CBP to promote

FedEx Antes Up, Bets on Brazil

UPS went all in when it acquired TNT Express for $6.8 billion in March 2012–a play that unequivocally raises its stake in the European market. FedEx has since responded with three acquisitions of its own, the most recent of which expands its delivery profile in the burgeoning Brazilian market.

The Memphis-based expediter's purchase of Rapidão Cometa Logística e Transportes–a leading transportation and logistics company in Brazil–will allow customers access to Latin America's largest economy. FedEx will acquire 770 vehicles and trailers, about 9,000 workers, and 45 branches. The expediter expects to fully integrate Rapidão into its larger operation within two years.

The Rapidão move continues a trend that began in 2006 when FedEx went looking farther afield for complementary business pieces to expand its global presence. First it bought UK domestic express transportation company ANC Holdings, followed by Flying Cargo Hungary, China's Tianjin Datian W. Group, and India-based Prakash Air Freight in 2007. After a dormant period during the U.S. recession, FedEx picked up its global M&A pace with AFL and Unifreight India, and Mexico's Servicios Nacionales Mupa in 2011. It most recently acquired Opek in Poland and TATEX in France.

For a company that purposely contracted its branded name (Federal Express to FedEx) in 2000 so that it would translate easier phonetically in countries where it operates, its track record over the past six years has been consistent–suggesting that these most recent moves were a long time in planning and not just a reflexive response to UPS.

While the Opek ($70 million), TATEX ($188 million), and Rapidão (sale price not yet released) acquisitions are a drop in the bucket compared to UPS' $6.8 billion TNT Express haul, a pattern has emerged in terms of where FedEx is investing capital and looking to capture market share–a yet-to-be-fulfilled Eastern European market; India; and the gateway to South America, which is poised to host the 2014 World Cup and 2016 Summer Olympics.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and enhance supply chain security in their regions under the Customs-Trade Partnership Against Terrorism (C-TPAT) initiative. The C-TPAT program has been partnering closely with World BASC for more than 10 years. This recent agreement formalizes that relationship and challenges both parties to continue to work together to promote safe and secure world commerce.

Africa's Hazy Forecast

North Africa's "Arab Spring" signaled major political reforms across the continent, an upheaval that observers expected might trigger an economic awakening in the oil-rich region. But that revolution is on hold as Mediterranean neighbors Greece and Spain confront spiraling debt problems that threaten to sink Europe into further economic crisis.

Africa's 2012 economic growth forecast—pegged at almost five percent by the World Bank—is largely tied to the rich natural resources and oil reserves that BRIC countries have been increasingly exploiting. With foreign direct investment comes development, and inevitable improvements in transportation infrastructure and expertise to facilitate sourcing efforts. In fact, a recent McKinsey & Company research report posits that Africa's middle class is growing, and comparable to India's.

Still, major infrastructure gaps and social and political divisions—especially in the interior—must be plugged before Africa can truly compete on a continental and global scale.

"While keeping an eye on new economic storm clouds in Europe, Africa must keep its focus on reforms that encourage growth, and ease social tensions that set off the Arab revolutions and caused North Africa's GDP growth to decline by 3.6 percentage points to near stagnation in 2011," according to African Development Bank's recent economic outlook report.

Europe's current crisis is doing little to support Africa's progress, as demand for exports shrinks and investment dries up. This "shadow" is also complicating the recovery of North African countries such as Egypt, Tunisia, and Libya following their political uprisings.

"The shadow comes from a worsening debt crisis in Europe that is causing lower global growth. This would further weaken Africa's export markets, depress commodity prices, and undermine Africa's recovery," the report summarizes. [ ]

Siemens Says U.S.-EU Trade Pact Would Set Good Example

The United States and the European Union (EU) could become a beacon of global trade collaboration if they continue on a path toward a comprehensive trade pact, says Germany-based electronics and engineering juggernaut Siemens.

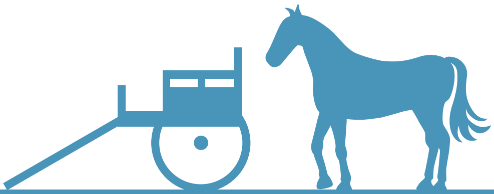
"Sending the wrong signals from the United States and Europe to emerging countries such as Brazil, which has always been somewhat shaky on global trade agreements, would be a devastating message," says Siemens CFO Joe Kaeser.

Officials from both countries recently released an interim report on the potential scope of a deal, including reducing tariffs and service and investment trade barriers. Such an agreement could also stem China's role in influencing global trade rules, analysts add.

The United States and the EU already have the world's largest bilateral economic relationship, and account for about one-third of total trade flow, according to the European Commission. And U.S. trade in goods with the EU totaled $636.9 billion in 2011, estimates the U.S. Census Bureau. While the transatlantic partners have worked for decades to establish closer ties, they have often been stymied by issues including agricultural policy, and establishing a common set of standards for products such as machinery and appliances.

Current election-year politics will likely stifle any significant momentum until 2013, but EU officials are hopeful that something could happen by 2014. The pact's specific goals include eliminating all bilateral trade duties, providing more service transparency, establishing a forum for resolving health and sanitation issues, and improving businesses' access to government purchases.

A proposed agreement to liberalize trade between the U.S. and the EU would set a good example for other nations to follow, says Joe Kaeser *(left)*, CFO of Siemens.






LOGISTICS knowledgebase©

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Think Outside the Border

Companies of all sizes are benefitting from international trade, and those that don't are getting left behind. Whether your company is small, mid-sized or a global multi-national, there is a way for you to get in the global trade game.

GLOBAL SOLUTIONS FOR GLOBAL COMPANIES

For large North American companies operating in multi-national markets, moving products around the globe is a complicated endeavor. It requires staying current in the ever-changing world of trade compliance, enhancing visibility up and down the supply chain, making the right sourcing decisions, leveraging free trade agreements, minimizing duty costs, preventing delays, and staying compliant.

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INDIVIDUAL SOLUTIONS FOR SMALL AND MID-SIZED ENTERPRISES

Livingston conducted a survey earlier this year with import-export professionals at 500 small and mid-sized enterprises (SMEs) in the United States. More than 60 percent say they are concerned that their organizations lack knowledge about clearing goods for international trade.

But SMEs that don't feel equipped to explore international markets needn't miss out on significant global opportunities. Companies can protect their investments by aligning with a partner like Livingston International.

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Global Product Management. When you partner with Livingston to manage and maintain your global product database and classification process, you get world-class services backed up by ISO-certified processes, experienced staff, and a complete audit trail.

U.S.-Mexico Border Management. Let Livingston coordinate all the third-party vendors you need for warehousing, drayage, Mexican and U.S. customs brokerage, and freight forwarding.

Export Operations. Livingston oversees your daily export processes, ensures you're compliant with foreign regulations, and helps you avoid the huge costs of non-compliance. We become an integral part of your team, managing all export documentation and restricted party screening needs.

SUCCESS STORIES

A global automotive supplier sought to leverage its working capital while remaining compliant with evolving government regulations. More than $100 million in annual duty payments were avoided. The company achieved an average at-time-of-entry NAFTA efficiency of 95 percent or greater, generating cash flow savings and significantly reducing the collection of documentation after border crossings.

A telecommunications supplier looked for efficiencies in managing a complex supply chain as part of a large-scale corporate reorganization. Centralized data management led to better control of cross-border trade, drove efficiencies and improved the use of working capital, giving the company a 75 percent reduction in storage, document turnover and brokerage fees. As a result of supply chain efficiencies, 99 percent of exports were screened within four hours, and 98 percent of imports were cleared for same-day entry.

A retailer operating nearly 8,500 sites in 15 countries wanted to improve documentation of its production costs and manufacturing records. Enhanced documentation avoided $40 million in annual duty fees, minimized product cost fluctuation, and validated the company's eligibility for duty-minimization programs.

Whatever your international trade management challenges, look to Livingston International for your solutions – outside the border and beyond. Visit our website at www.livingstonintl.com, connect with us on LinkedIn, and follow us on Twitter @livingston_intl.

[VIEWPOINT]

BY KEVIN DOHERTY
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Ports Can Help Ensure Ship-Shape Supply Chains

As shippers see their business volumes increasing even as revenues lag, it becomes more important than ever for ports to focus on reliable and prompt service. Shippers are entitled to a high level of service, and they should be able to expect that their ports of call will take a proactive role in managing the supply chain so it runs as efficiently as possible.

Areas that are ripe for improvement include: dwell time (the average time it takes for a container to be placed on a railcar after being discharged from a vessel), turn-around time (the time a truck is within a terminal as well as the time a trucker spends on public roads to get to and from terminals), and flexibility in scheduling warehouse deliveries. Proactive, progressive marine terminals recognize they are in a unique position to monitor and manage freight transport and delivery efficiency even after shipments leave their port.

Vessels may be unloaded soon after arriving at the terminal, but if the boxes' arrival and collection are not precisely coordinated, valuable time is lost. In some instances, trucks and railways will only take out a container when they are already bringing one in.

This policy means that if an export container arrives at the terminal but the inbound container is not there, the truck or railcar will not wait or make an additional trip until it is bringing in another inbound container. This results in import containers being stored at the terminal for a dwell time of five to eight days.

Many warehouses only allow trucks to deliver containers between 8 a.m. and 5 p.m., putting the supply chain at the mercy of traffic during the busiest times of day, and creating added delay.

Delivering the Goods

By bringing together leadership from ports, railways, trucking companies, and receiver warehouses, terminal operators can facilitate a discussion that will lead to better solutions. All parties working collaboratively can collect and examine their metrics, then uncover ways to transform the way they work together.

Parameters to set include: when the railways deliver railcars; how frequently trucks pick up at the terminals; when railcars are placed at the port's terminals and how long it takes; the timeframe for terminals loading railcars; and when warehouses receive deliveries.

Ship-shape Supply Chain

If the supply chain is working as it should, shippers can expect that ships arriving on Monday morning will finish unloading and back loading by Tuesday night. In nearly all cases, the cargo can begin to move by late Monday and be 98-percent complete by Wednesday. Depending on the final destination, containers can then reach receivers during the next 24 to 36 hours.

The goal is a clockwork operation in which containers move out of the terminal faster and more fluidly, and consistently reach their destination without delay.

Great shipping leaders are outspoken about the importance of reliability and service, but they are still only part of the chain. By holding their marine terminals more accountable for the remaining links, and making this style of proactive management a prerequisite in the selection process, shippers can leverage their weight to yield greater stability for their industry, while having a positive impact on international commerce. ■

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TAPA Standards Safeguard Cargo

Cargo theft is a major concern for high-value, high-risk product manufacturers and their logistics service providers. In the third quarter of 2011 alone, 263 cargo thefts of building/industrial, electronics, and consumer care products occurred in the United States, according to logistics security firm FreightWatch International.

One way to help ensure cargo safety in storage facilities and during transit is certification to the Transported Asset Protection Association (TAPA) standards. TAPA unites global manufacturers, carriers, insurers, and service providers to reduce the risks of criminal activity against high-value cargo in the transportation supply chain.

TAPA offers two types of certification to manufacturers and logistics companies: Freight Security Requirements (FSR) and Trucking Security Requirements (TSR). The FSR certification includes standards that provide at least the minimum level of security for products during storage and transit. It evaluates specific factors, including:

- Perimeter security such as fencing and gates, closed-circuit TV (CCTV) systems, lighting, alarms, and facility openings.
- Facility dock/warehouse access, including escorted visitors, CCTV resource access, recording and archiving, high-value storage area cages and vaults, and motion detection alarms.
- Security procedures such as background checks and terminated employee handling.

The certification is applied at the facility level, and typically involves a one- or two-day facility inspection, followed by a company's self-assessment, which occurs over a three-year period.

The TSR certification standards provide at least the minimum level of security in trucking and associated operations. TAPA recommends these standards become an essential part of shipper-carrier relationships, because more than 85 percent of cargo theft in North America involves trucks.

The TSR standards address the following factors:

- Security procedures such as load collection and vehicle sealing, delivery operations, route scheduling, incident reporting, vehicle maintenance, and secure parking.
- Security systems, including satellite tracking systems, navigation and route-deviation alerting, and home base/third-party alerting systems.
- Driver training, such as security awareness, collection/delivery handover procedure training, and robbery response preparation.

TAPA grants TSR certification to trucking companies that meet the required policy, procedure, and practice standards under the TSR, and to logistics service providers who meet all the requirements and have formal contracts with one or more carriers meeting the practice standards. The TSR certification is valid for three years and requires a company's self-assessment in the interim period.

Discover the Benefits

Security-conscious manufacturers, shippers, and logistics professionals should consider working with TAPA-certified service providers. TAPA certification signifies that the facility or carrier took a number of precautions to minimize the probability of theft, and provide customers a level of assurance. Additionally, the TAPA community features open communications and shares valuable information with its members.

TAPA standards are relatively simple to implement, making the certification cost readily affordable. The standards fit well with other security management systems, and many leading North American shippers have adopted them as best practices. ■

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BY FABRIZIO BRASCA
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Containerization's Benefits Can't Be Contained

Today's leading companies are reexamining their supply chain operations, and implementing new strategies and technology to improve performance and enhance efficiencies.

Moving cargo in containers, or containerization, is one area of opportunity shippers can leverage, not only in downstream transportation and logistics functions, but also in unexpected upstream supply chain planning functions.

In its simplest application, containerization allows shippers to maximize cargo loading efficiency by optimally building out a space while respecting constraints such as orientation, crush factors, and stacking rules.

Containerization is especially useful for companies that move products in varying weight categories. Heavy and light freight can be shipped together to utilize all available container capacity, resulting in increased resource utilization, and fewer containers required to move the same volume of goods.

In addition to configuring loads, shippers can leverage containerization in other applications, working alone or in cooperation with other optimization capabilities to solve problems. Here are a few ways shippers can use containerization to drive performance and supply chain improvements:

■ **Take TMS to the next level.** Incorporate containerization capabilities into end-to-end transportation and logistics management to get better results from transportation management systems (TMS). Shippers can use containerization as part of a dynamic routing solution to ensure multi-stop routes maximize asset utilization.

Containerization enables companies to confidently build loads that use 100 percent of available container capacity, instead of estimating and leaving a safety buffer that results in underutilizing shipping space. The ability to ship more merchandise in a single container facilitates the routing process, and may enable shippers to include extra stops.

■ **Split distribution orders as an extension of the fulfillment plan.** Shippers can apply the containerization concept upstream in supply chain planning by splitting distribution orders into shipments that take into account both date constraints and inventory policies.

■ **Eliminate high-level capacity assumptions from order management.** Companies fulfilling customer orders frequently offer advantageous pricing for full truckload purchases, but determining when an order meets a legitimate full truckload is difficult without data visibility. The common remedy is to establish an assumptive truckload threshold based on a designated order amount, but this imprecise method means companies often end up leaving money on the table by discounting less-than-truckload orders. Containerization eliminates uncertainty about when the shipment reaches the full truckload threshold.

■ **Optimize ocean container use.** A common port scenario is a mismatch between freight forwarder and shipper incentives. While freight forwarders simply charge by the container, it is in a shipper's best interest to ensure the container is full. Adding containerization capabilities to the process ensures maximum capacity utilization.

By incorporating containerization into downstream transportation and upstream supply chain workflows, companies can improve asset utilization, use fewer trucks, drive fewer miles, reduce fuel costs, and enhance distribution center operations. ■

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Don't Be Afraid Of Product Lifecycle Assessment

Sustainability, carbon footprint, and lifecycle assessment (LCA) are becoming common discussion topics in the boardroom. These terms often generate fear as well as discussion, as executives worry about how their company will stack up against competitors, how much an environmental impact analysis will cost, and whether the measurements will be accurate.

The benefit of analyzing supply chain sustainability, however, is often reaped from the journey, rather than the final number generated. And avoiding LCA can cause organizations to miss the opportunities this analysis can bring.

For example, according to LCA data, the lifecycle carbon footprint of an average ready-to-eat lasagna is 10 pounds of equivalent carbon emissions. This number doesn't mean much to most people. It is neither good nor bad, and does not create a judgement about the lasagna, the manufacturer, or the process.

Today it is just a number. But in arriving at that measurement, a few key discoveries gave the lasagna maker real-time empirical evidence to help make intelligent decisions about operations along its supply chain.

First, the data immediately discredited the assumption that the lasagna packaging—comprising layers of plastic, plastic-coated paper, aluminum, and cardboard—was an environmental trouble spot. In fact, packaging materials accounted for only eight percent of the product's total impact.

The analysis also showed that the tomatoes—which had been traditionally sourced as canned—had a much higher carbon footprint and cost than fresh tomatoes shipped from a greater distance.

Second, many operations along the supply chain evolved organically. For example, the layers of plastic around a crate could have been set by the manufacturer when the packaging equipment was installed 15 years ago. Now that the roads are resurfaced and the lasagna maker's distribution center is closer, it is possible to decrease the number of layers—saving money and plastic, and reducing environmental impact.

Hundreds of anecdotal tales relate the efficiencies companies discover throughout their supply chains by tackling an LCA, which examines a product's entire lifecycle, rather than relying on energy totals generated by enterprise resource planning systems or utility providers.

Saving Money Through LCA

Some companies assume that LCA results in recommendations to change areas of their supply chain that are outside their control. Can a small manufacturer influence a much larger company's process? Can a cheesemaker influence what food farmers feed their cows? Maybe not. But the LCA journey will reveal other small factors that businesses *can* control, from energy use on the factory floor, to extra waste caused by a transfer between truck and warehouse, to an ingredient that can be sourced farther away with less expense and waste.

Reducing waste leads to reducing costs—and carbon emissions. Lifecycle analyses don't have to be expensive and time-consuming. The LCA playing field has evolved, and new tools and methodologies allow companies to create a lifecycle measurement in a few days, at a reasonable cost.

LCA is becoming democratized and more accessible to companies of all sizes. Get informed about your supply chain, and reduce your costs along the way. It will be worth the journey. ■

ECONOMIC DEVELOPMENT

BY KEVIN KEITH
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Blazing Trails from the Crossroads of America

Missouri's transportation system is an essential component of many industries, and the heartbeat of everyday life, working as a conduit between its rural areas and its big cities. But, because it's always there, it can be easy to take the state's transportation infrastructure for granted.

Sometimes we need to be reminded that transportation can–and does–make a difference for everyone. In fact, every dollar spent on transportation in Missouri generates four dollars in new economic activity.

The private sector consistently reports that two factors drive its decisions to relocate or expand: workplace quality and availability, and access to critical corridors. Transportation investment is a means to an end – growing the economy, creating jobs, improving the quality of life.

Consider Missouri's major highways. The businesses that flank them are there because of a need to ship goods, receive raw materials, and access customers. Every transportation project adds value for those businesses. But Missouri's companies are also increasingly interested in their connections to global markets, making transportation all the more important. Especially in the middle of the country, far from foreign markets, transportation plays a pivotal role in business success.

Missouri is uniquely positioned to maximize its geographic and natural resources with an integrated transportation system that creates an economic advantage for the state. Tying two major river systems together with two of the nation's largest freight rail hubs, 1,100 miles of interstate highway, and underutilized major airports gives Missouri opportunities that few states have.

The Road Ahead

Current transportation funding to support this infrastructure is unsustainable going forward. Relying on fuel taxes will be insufficient as people adopt more fuel-efficient vehicles. At the federal level, the Highway Trust Fund needed an infusion of $34.5 billion from general revenue in just the past two years.

This puts us at a critical time in transportation history. Like Missouri's geographical location at the crossroads of America, we're also at a crossroads of choice. The transportation policies we formulate today will have widespread ramifications, both for ourselves and for the next generation.

But Missouri has what it takes. After all, its transportation system was made possible by visionary leaders willing to make hard decisions in tough times. We still have the will to make hard decisions now–to step up and solve the transportation funding problem with a heightened understanding of policy, and an honest look at the costs and consequences of maintaining and improving the network.

Some say the only differences between first-world and third-world countries are sanitation and transportation. The United States learned that lesson long ago, and became the most powerful country on earth. Emerging countries such as China and India learned from our experience, and their commitments to their transportation systems have spurred rapid growth.

We can't afford to sit on the shoulders of others and watch the world speed by. We need to blaze trails as our forefathers did, using our resources, partnerships, and innovations to keep our lifeline strong, and to show the world all Missouri has to offer. ■

CARRIERS CORNER

BY SIMON KAYE
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Sophisticated Innovations Enhance Supply Chain Security

The global economy relies on moving goods securely and efficiently through an increasingly extended multimodal transport system. Aggressive thieves with sophisticated techniques have spurred innovations in shipment processes, technology tools, and regulatory compliance to enhance logistics security efforts.

As a framework for better security processes, the International Organization for Standardization (ISO) 28000 standards on supply chain security management address theft, terrorism, fraud, and piracy issues.

Shippers, however, must customize how they apply these standards to each transport mode. For truck shipments, for example, they should place security seals on the trailer/container, because intact seals generally indicate to drivers and terminal personnel that the shipment hasn't been compromised.

Truck/rail intermodal shipments involve more handoffs, requiring special security steps. Loads should travel in an ISO container instead of a more vulnerable trailer, and inspectors and rail police at selected checkpoints should ensure that containers have not been compromised during the slower rail transport process.

Using ISO intermodal freight containers has required advances in electronic, computer, and satellite technology. The most sophisticated electronic shipment tracking systems, for example, go beyond standard track-and-trace programs to manage and direct freight shipments.

These systems can create individual shipment "watch lists," which include progress indicators and automatic email notice of transportation milestones. As a result, shippers always know the status of their shipments, and can immediately identify any disruption that requires remedial action.

Technology Tools

Geofencing technology supports such tracking by creating a virtual "fence" around the transport route from pickup to delivery. Global Positioning System tracking devices allow carriers and shippers to follow loads along the route. The system alerts all parties the moment a load veers off the planned route or the device is impacted.

Security procedures added to Customs and trade regulations aim to prevent terrorist attacks. Three federal government programs illustrate the effort to enhance cargo security:

1. The Customs-Trade Partnership Against Terrorism (C-TPAT) is a cooperative cargo security effort between U.S. Customs and Border Protection (CBP) and all key supply chain players. CBP asks businesses to ensure the integrity of their security practices, and communicate and verify their business partners' security guidelines covering imports from any country, by any transport mode. C-TPAT-certified shipments move through Customs more efficiently, while maintaining full security integrity.

2. U.S. government standards mandated 100-percent security screening of all cargo transported on aircraft as of August 2010. More recently, the Transportation Security Administration announced that it will begin screening all cargo arriving from international passenger flights as of Dec. 3, 2012.

3. For ocean cargo, CBP Importer Security Filing rules require importers to submit security-related shipment data at least 24 hours before goods are loaded.

These initiatives integrate processes, technology, and regulations to create the control necessary for secure shipping. ■

3PL LINE

BY RAJIV SAXENA
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Managing Global Complexity: The Right Tools for the Job

Henry Ford is popularly quoted as saying that his customers could have any color Model T they wanted – as long as it was black.

For years, global logistics professionals using optimization could relate to Ford's quote, because they could apply this highly respected engineering practice to virtually any shipping challenge they faced – as long as they were content with a single-faceted, sub-optimized result.

But cars and times have changed. Today, new optimization tools allow shippers to address multiple global freight challenges at once.

Mode and Route Selection

Although most international shipments travel via sea, determining the best mode and route is rarely as simple as booking space on a containership. From multiple sourcing origins and delivery doors to airports or seaports with varying regulations and risks, the global element adds many variables.

For example, when making an Asia-to-U.S. East Coast shipment, companies can choose from the following methods:

- **Air.** Swift and direct, but usually the last resort due to its high expense.
- **Air-sea or sea-air options.** Requires determining which seaports or airports offer the best transloading costs, availability, and connectivity.
- **All-water to the East Coast.** Involves myriad load/discharge port options, and can be direct or indirect.
- **Water to the West Coast combined with a transload.** Another alternative that can be direct or indirect, and includes myriad load/discharge port options.
- **West Coast mini landbridge.** Involves all the standard transload elements, along with the incremental complexity of adding another transport mode and more carriers.

Shippers must also choose from among the hundreds of regularly scheduled liner and air shipping services that serve a particular route. With global optimization tools, shippers can filter through these options, readily identifying the shipping scenario that best meets their key parameters and business rules.

Case-by-Case Space Utilization

The standard size of ocean containers ranges from 20 to 53 feet, and shipping options include a choice between full containerload or less-than-containerload. There are also several approaches to loading containers at origin and unloading them at destination, including single-country consolidation, multi-country consolidation, co-loading, expedited ocean shipping, deconsolidation, and distribution center bypass.

Each option offers distinct advantages in cost, consistency, and overall transit time. Yet time and resource constraints frequently prevent shippers from weighing these elements as often or as creatively as they should. As a result, they miss a range of possibilities for grouping and ungrouping their products, configuring their container size mix, and maximizing space – and the potential time- and cost-savings that could result.

New global optimization tools eliminate those constraints. Companies can select the best combination of options based on shipment compatibility within stockkeeping units, container tonnage and dimension limits, and other predefined rules.

World-Class Timing

Shipment timing requires greater levels of precision when global suppliers and transits are involved. One small glitch early in a finished good's

production cycle may result in a company missing a pre-booked vessel's sailing date, having to change to a more expensive transportation mode, or losing a valued customer due to a delivery delay.

On the other hand, having goods produced and ready to ship before they're needed can create higher inventory carrying costs and warehousing expenses.

Global optimization tools provide a date-based planning and scheduling function that creates a precise – yet realistic – production and origin logistics schedule for vendors, providers, and integrators to follow.

If a trade partner or service provider isn't able to follow the schedule, global optimization tools help adjust the plan. Taking into account the latest set of conditions—such as a supplier's delivery delay, a carrier's schedule change, or a cancelled order—these tools create a new "best possible" plan, even if it is vastly different from the original.

That flexibility also applies to shifting business rules. If a company finds itself with a huge surge in demand, it can use optimization tools to change the business rule for speed, then almost instantly convey and apply the new priority to its shipments throughout the world.

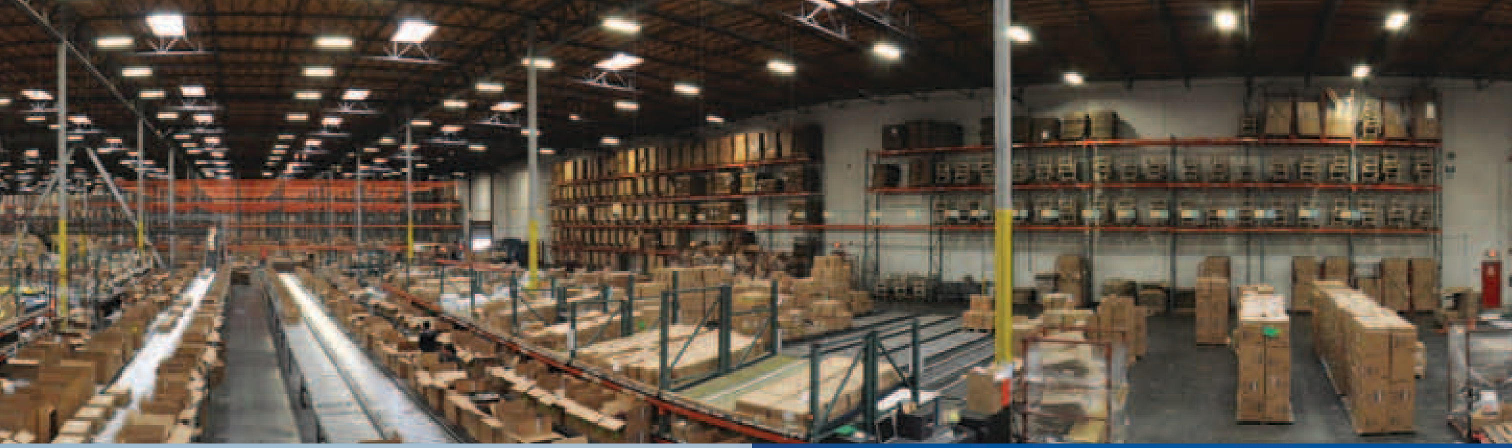
All of the Above

Finally, global optimization tools enable companies to weigh all these factors at once—without consuming too much of their time or engineering bandwidth.

For example, one international shipper now uses these tools to arrive at an optimal shipping plan in one fully automated run that takes approximately 90 minutes. By contrast, the shipper's old decision method required two days, multiple iterations, and significant human intervention.

That shipper's experience is not an anomaly. Regardless of companies' unique global shipping preferences, requirements, and constraints, new optimization tools are capable of considering all appropriate shipment flows, modes, routes, and cargo to come up with an ideal workable plan—as often as needed and any time things change.

If you think your company has tapped into all optimization has to offer just because you've used it before, think again – because this new model may just fit your company to a T. ■



FAILURE IS NOT AN OPTION

Questions and answers with Brian Hancock, president, Martin-Brower

As the world's largest distributor of products to the world's largest restaurant company, Martin-Brower is under extreme pressure to deliver to McDonald's accurately, on time, every time. *Inbound Logistics* met with Brian Hancock, president, North America, for Martin-Brower, to discuss the unique supply chain supporting the Golden Arches.

By Lisa Harrington

When you enter a McDonald's, you never question whether it will have hamburgers, French fries, or anything else on the menu. It just does. Always.

That's because McDonald's has one of the most sophisticated supply chains in the quick service business. The Martin-Brower Company LLC, under the leadership of Brian Hancock, president, North America, delivers product to nearly all 15,000 McDonald's restaurants in North America.

By his own account, Hancock has had a "great" career in supply chain management. "I've been fortunate to work in very different types of supply chains," he says.

Hancock joined Martin-Brower as the president of U.S. operations in February 2011, and was promoted to his current role in April 2012. Before joining Martin-Brower, he spent six years as the vice president of supply chain for Whirlpool Corp. When Whirlpool purchased Maytag Corp. in 2006, he oversaw the consolidation of the two supply chains.

Prior to joining Whirlpool, Hancock spent nine years at Schneider National in Green Bay, Wis. He was vice president and general manager of Schneider Logistics, and held multiple roles including vice president of automotive, general manager, director of operations, and account controller. During this time, he also served as chairman of the General Motors Supply Chain Council.

Before joining Schneider, Hancock worked in various roles at Honeywell Corporation. He graduated with an accounting degree from Brigham Young University, and received an MBA from Virginia Commonwealth University. He serves on the advisory board of the Marriott School of Management at Brigham Young, and earned a CPA certification. Oh, he also speaks Portuguese.

In April 2012, Martin-Brower became the largest distributor for McDonald's worldwide—a result of its acquisition of certain assets of Keystone Foods' distribution businesses in North America and acquired interests in distribution and logistics businesses in Europe, the Middle East, and Asia Pacific from Marfrig Alimentos S.A. The acquisition involves distribution operations in the United States, England, France, Australia, New Zealand, South Korea, Bahrain, United Arab Emirates, Kuwait, and Qatar.

Prior to this acquisition, Martin-Brower was the largest distributor to McDonald's in the United States, Canada, Ireland, and Latin America. Headquartered in Rosemont, Ill., the distributor employs some 8,000 people worldwide, and operates more than 55 distribution centers around the world. More than 14,000 McDonald's restaurants in the United States count on Martin-Brower for everything they need to run their business and serve customers—from beef, to fries, to operating supplies.

Martin-Brower is a wholly-owned subsidiary of Reyes Holdings, a privately owned food and beverage distribution firm. In addition to McDonald's, Martin-Brower's operation serves companies such as Chipotle and Subway.

The Martin-Brower of today got its start in 1934 as the Brower Paper Company. In 1956, Brower merged with the Martin Paper Company, and purchased a controlling interest in the National Paper Napkin Manufacturing Company, becoming the Martin-Brower Paper Company. 1956 was a pivotal year for the company for another reason: Ray Kroc selected it to supply the paper products for his first restaurant in Des Plaines, Ill.

Since the first McDonald's opened in 1956, the chain has relied on Martin-Brower as a supplier and partner.

As McDonald's grew, so did Martin-Brower. Following a string of acquisitions and consolidations, the company changed its name to The Martin-Brower Company, dropping the word "paper" from its name to better reflect its diverse range of products and services.

In 1972, Martin-Brower was purchased by the Clorox Company. But the biggest news that year was the launch of the first customized distribution program to support the McDonald's "Total Supply" concept—in which a single distributor would supply the restaurants with frozen and dry goods, as well as paper products. This concept required Martin-Brower to operate from a McDonald's-exclusive location with McDonald's-exclusive rolling stock. The concept was launched in Baltimore.

Inbound Logistics recently met with Brian Hancock to discuss his company's business, what it's like to serve a customer as demanding as McDonald's, and other supply chain matters currently top of mind.

Q What's the current state of the fast food restaurant industry, and how has it fared during the recent economic downturn?

A Given current economics, consumers have limited dollars to spend on restaurant food, so they are more selective about quality and price. That bodes well for the McDonald's business model, because of its value menu. When consumers make the decision about where to eat based on value, McDonald's is where they go. As a result, McDonald's has seen a resurgence in the past five years, and our business has benefited from that.

McDonald's also does well when the economy is booming. People always like value.

Q By all accounts, McDonald's is a demanding customer. What does it take to serve the company?

A Our business with McDonald's is tied to its fundamental business philosophy. McDonald's founder Ray Kroc's approach to building his business was based on relationships. 'None of us is as good as all of us,' Kroc said.

This partnership philosophy helped build one of the most integrated, efficient, and innovative supply systems in the food service industry. McDonald's supplier relationships have flourished over the decades. In fact, many McDonald's suppliers operating today first started business with a handshake from Ray Kroc. Martin-Brower is one such company.

Our 'handshake' with McDonald's occurred 45 years ago. Being part of the McDonald's system means you act fairly, honestly, and always watch out for the system as a whole. The system is more important than you are.

Martin-Brower is dedicated to three things: being the premier logistics service provider for restaurant chains around the world; creating an outstanding work environment for employees; and delivering unmatched value for customers while protecting their brands. Protecting our customers' brands is the most important thing we do.

We are responsible for delivering every single item to McDonald's restaurants. We are deeply engaged with every McDonald's supplier. We maintain significant relationships with beef, chicken, bun, French fry, and other suppliers.

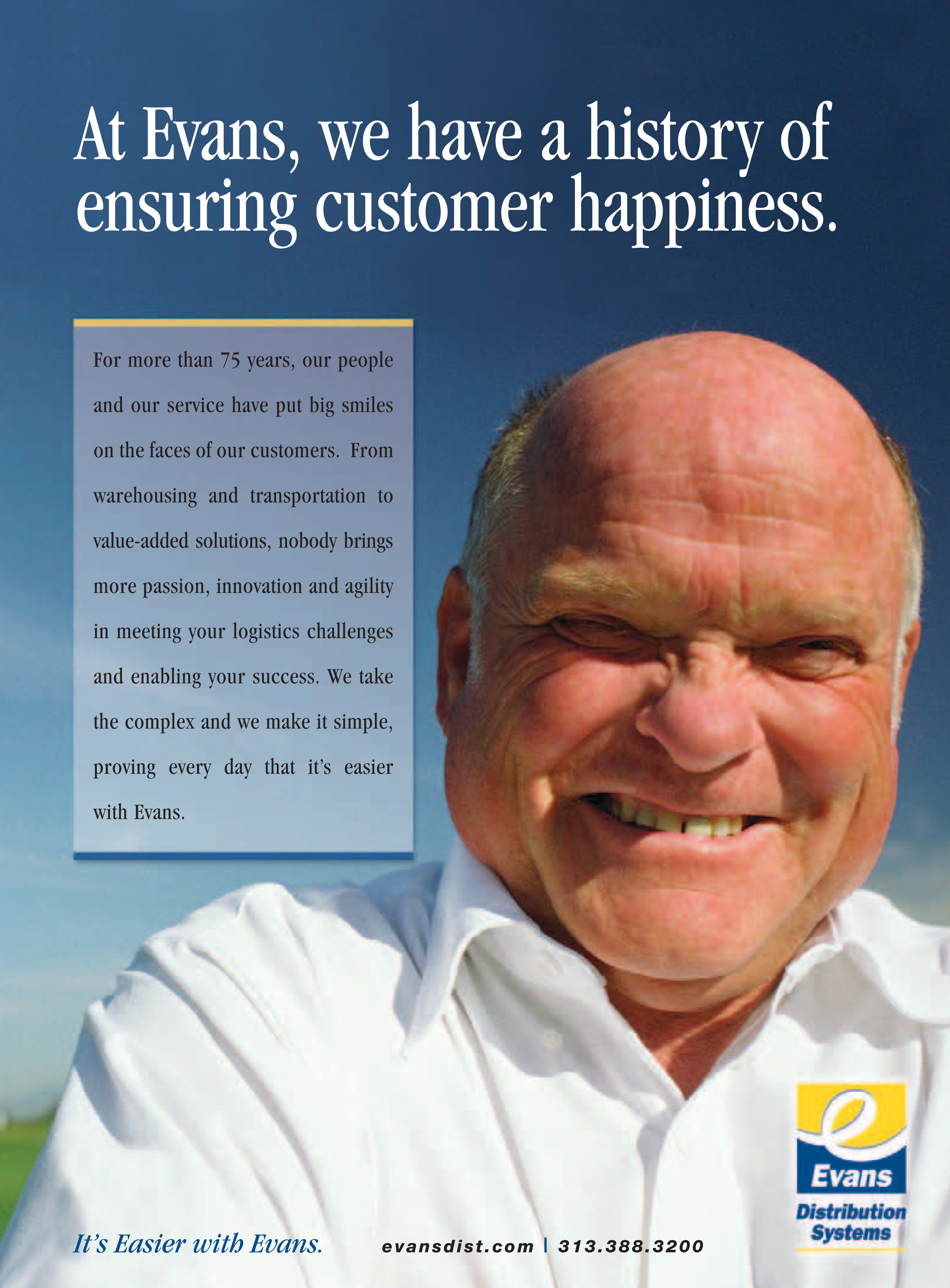
Martin-Brower's drivers call ahead when bringing a delivery so the restaurant's staff can be ready to quickly receive products.

Our facilities provide warehousing, transportation, and logistics services to restaurant owners, with each distribution center serving 250 to 700 restaurants. Our purchasing organization works with all McDonald's suppliers, and our customer service organization works directly with the restaurants.

Our delivery drivers play a critical role in our service. We move a high volume of items to the restaurants, so drivers handle huge deliveries. Our trucks run full—and, in most cases, a delivery literally 'packs' the restaurant. If customers drive up to a McDonald's and see a tractor-trailer on the lot, however, they may not stop. So we do not deliver during breakfast and lunch. We work around those peak hours.

Also, we constantly look at how fast our trucks can get on and off a restaurant lot. We make sure we have the right delivery equipment—for example, switching from roller and stand to delivery carts that wheel directly from the truck into the restaurant.

Most restaurants get two or three deliveries a week. We deliver to each store on a schedule. Drivers call from the road, so the store can schedule its people and get ready to take delivery. We've been able to reduce the time trucks sit in the lot by 10 to 20 percent as a result of these efforts.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Q Managing a complex supply chain for McDonald's involves many variables. What keeps you up at night?

A Worrying about food safety and protection, and supply chain disruptions. Next to employee safety, food safety and quality is the top issue we are concerned about. We and our customers are at the forefront of implementing the 2011 FDA Food Safety Modernization Act, which requires food traceability. Food terrorism, recalls—these are real issues we have to plan for.

The McDonald's brand stands for good quality food at a value price. It's our job to protect that brand—as we do for all our customers. Toward that end, our cleanliness, standard operating procedures, and food-handling processes have to be rigorous. McDonald's audits us every day. We might receive a phone call from its auditors 30 minutes before they show up at a facility. We can't let anything slip—even for one day.

Supply disruption is one of the biggest enemies we fight today. Preventing or managing disruption requires far more collaboration with suppliers and customers than ever before. If a problem is recurring, you can't call a customer for the first time in six months to tell them it's happening.

Contingency planning and response are critical. I've worked for many different supply chains, and in my opinion, McDonald's is among the best-prepared for contingencies.

Communities depend on McDonald's to always be up and running. That's their mission: to be the first business up after a disaster. So during the summer, for example, we plan our business around hurricanes and tornadoes. I have contact information for every employee; I know exactly what the emergency procedures are. We even have a portable restaurant that we can drive to a site and start serving the basics—burgers, fries, bottled water.

> "No one ever questions whether McDonald's will have hamburgers. **FAILURE IS NOT AN OPTION.** This isn't a space where you get to miss."

McDonald's is the most collaborative supply chain I've worked in. That makes it the most successful supply chain because every partner has to make money to make sure the system is always fair. In some supply chains, each partner is out for themselves—they don't care if others don't make money.

We turn our inventory every four days. We can move that fast because people trust each other. But as complexity and speed increase, risk rises. Because we move so fast, our contingency plans have to be that much better. Failure happens all over the world, every day. The companies with the best contingency plans and flexibility are winning. If Martin-Brower had a problem buying beef, not a single McDonald's customer in the world would know.

In today's world, companies cannot do business without being close to their customers. The best supply chain companies are extremely collaborative with both suppliers and customers. They have to be—there's not enough waste in the system to operate any other way. Working capital is managed much more tightly. In the past, when inventory sat around, companies could get away with not collaborating closely and covering up problems. They can't do that today.

No one ever questions whether McDonald's will have hamburgers. Failure is not an option. This isn't a space where you get to miss.

Q Going forward, what other issues do you see shaping your business—and supply chains?

A Sustainability is one big issue. Sustainable supply chains, fuel usage—we need to address and find solutions to these issues. Energy independence is possible if we stay the course and figure out how to use energy more effectively. We need to apply 'lean' thinking to the issue—we can't waste any energy, whether it's nuclear, fossil, or natural gas. We've got to find a way to use them all that allows supply chains to be more sustainable.

Sustainability is a priority for McDonald's. The company's goal is zero waste coming out of its restaurants. That means zero waste coming out of our facilities. How do we accomplish that? We are working on not only recycling, but also food loss, proper waste-management assurance, and packaging redesign. How do we find tractors that use alternative fuels, but have enough torque to haul a food truck? We spend a great deal of time grappling with these issues.

The McDonald's sustainability team is working on how to improve fleet miles per gallon, be more efficient in pick-pack-load inside facilities, and manage fuel usage around refrigerated equipment. Sustainability is critical to all our customers, and our progress in this area enhances their brands.

Q If you had to quickly sum up supply chain management today, what would you say?

A The supply chain industry is a dynamic business. It moves so fast, and offers so much career opportunity. I often say to people I work with, 'This is the slowest day for the rest of your life.' ■

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SOUTHEAST PORTS:

WHAT'S ON THE HORIZON?

Looking out to 2015, anticipation is swirling about the Panama Canal's expansion and impact on U.S. trade. Among southeastern ports and shippers, that wave of anticipation has already made landfall.

by Joseph O'Reilly

Port of Miami

In a 2006 national referendum, voters in Panama overwhelmingly approved plans to expand its Canal – an effort that will construct a deeper and wider third set of locks, and double capacity through the century-old gateway. The vote set in motion a publicity machine that has been working in overdrive ever since.

Memorandums of understanding between the Panama Canal and U.S. port authorities stoked anticipation and excitement. Then, as construction commenced and images of dry excavations began circulating, the celebratory smoke gave way to a clearer picture of what the expansion project might mean for global trade.

Today, less than three years from completion, alarm bells are ringing as port authorities seek to secure last-minute funding, enhance infrastructure, and fine-tune existing operations. Shippers and consignees are similarly evaluating their supply chain networks and investing in new distribution centers (DCs) to capitalize on the economies of larger New Panamax vessels.

As the Panama Canal expansion deadline looms, the U.S. transportation and logistics sector anxiously awaits that first surge of Asian-origin containers. But in the U.S. Southeast, that swell of anticipation has already arrived.

With the Panama Canal expansion, Port Everglades has considerable interest in capturing Asia-to-U.S. East Coast container traffic.

The 2002 West Coast port strike shut down trade for 10 days in October during the peak holiday shipping season. Many companies lost money, recalls John Wheeler, director of trade development for the Georgia Ports Authority.

"The strike created an undeniable paradigm shift from West Coast intermodal to direct discharge at East Coast ports, closer to consuming population centers," he says.

Then, in 2005, congestion became another concern as West Coast ports struggled to handle the volume of Asian-origin containers flooding terminals. For the Georgia Ports Authority and others it meant record growth. "Georgia's ports averaged 11.5- percent container growth annually over the past decade," adds Wheeler.

To put this in perspective, consider the current hierarchy of U.S. ports. Los Angeles and Long Beach remain the top two gateways for North American container traffic, followed by New York/New Jersey and Savannah, according to the American Association of Port Authorities' (AAPA) 2011 rankings. The West Coast still overwhelmingly drives capacity.

But breaking down ports by geography reveals a telling sign. Five West Coast ports—Los Angeles, Long Beach, Oakland, Seattle, and Tacoma—rank among the top 20 container gateways in North America. The U.S. Southeast has six in the top 20—Savannah, Hampton Roads, Charleston, Miami, Jacksonville, and Port Everglades.

After most ports hit record container peaks between 2005 and 2008, the bottom dropped out of the market during the recession. Only now is the industry showing signs of recovery (*see chart, page* 78).

In fact, the East Coast's two largest ports hit their container peaks in 2011. Savannah hasn't slowed down, adding more than one million TEUs over the past seven years at a remarkable 55-percent growth in container throughput. So, too, has Jacksonville. New York/New Jersey and Port Everglades also recorded marked gains.

On the U.S. West Coast, it's a different story. Los Angeles gained back some market share after topping out at 8.5 million TEUs in 2006, and both Oakland and Seattle have kept pace with their peak volumes. Long Beach and Tacoma, however, experienced noticeable drop-offs.

This cannibalization of West Coast container volume is expected to continue as the charter date for the Panama Canal's expansion nears and Southeast ports head for a dead reckoning with New Panamax vessels capable of ferrying 10,000-plus TEUs in a single calling.

But a more compelling factor is the sheer pace of development in the Southeast. It's arguably the fastest-growing region in the country—comparable to western states such as Arizona and Utah—but its population density is far greater. Forty-four percent of Americans reside in the Southeast, and that number is growing.

Florida is the poster child for population growth. It's the fourth-largest state economy by GDP, and the population is expected to reach 23 million by 2020. More importantly, "Eighty-one million people visit Florida every year; it is truly a consuming state," says James Hertwig, president and CEO of Jacksonville-based Florida East Coast (FEC) Railway.

A population boom and gantry crane booms stretching farther than ever act as welcome signs for ports and retailers. Many are reconsidering global sourcing strategies and domestic distribution networks as they look to capitalize on the Southeast's fast-changing port complexion.

Ace Hardware Bets on Virginia

In July 2012, Oak Brook, Ill.-based Ace Hardware opened a 336,000-square-foot import redistribution center (RDC) in Suffolk, Va. As the first tenant to settle into the 900-acre CenterPoint Intermodal Center, which will eventually feature more than 5.8 million square feet of industrial

space, the home improvement chain is counting on this new facility to become an important cog in its U.S. supply chain.

Currently, Ace Hardware operates 14 retail support centers (RSCs) and two RDCs—the second in Kent, Wash. The Suffolk facility specifically supplies eight support centers in New York, Virginia, Ohio, Georgia, Alabama, Florida, Arkansas, and Texas. The Kent RDC services the remaining six centers that stretch west from Illinois.

"Prior to the Suffolk facility, our Kent facility handled the majority of import product," says Tim Duval, supply chain director at Ace Hardware. "The Suffolk RDC cuts our transportation cost to RSCs, while also cutting overall transit time and reducing inland transit times for product held in the facility."

Most freight coming through the Suffolk operation originates in Asia and moves all-water to the Port of Virginia. The decision to locate near the port was predicated in part by the Panama Canal's expansion and larger vessels calling on the port.

"We investigated several cities on the Gulf and East Coasts to find the ideal location to allow us to reduce costs and provide optimum service to our retailers.

Ace Hardware sited a redistribution center in Suffolk, 30 miles from the Port of Virginia, to reduce costs and provide exceptional service to its retail stores.

Suffolk is only 30 miles from the Port of Virginia," says Lori Bossmann, senior vice president, supply chain and retail support, Ace Hardware. "We also have the capability to expand our new facility up to 500,000 square feet to accommodate growth."

The Port of Virginia—which features facilities in Hampton Roads, Norfolk, and Portsmouth—is already well-equipped to manage the expected container volume surge. At 50 feet, it is one of only two ports on the U.S. East Coast (the other is Baltimore) currently capable of accommodating 10,000-plus TEU vessels. About 30 international steamship lines service the port, and both Norfolk Southern and CSX offer on-dock, double-stacked intermodal service inland.

Continuing development of the Heartland Corridor, a $150-million public-private partnership between Norfolk Southern and the Federal Highway Administration, will increase intermodal capacity and facilitate freight movement between Virginia; Columbus, Ohio; and Chicago. Rail accessibility also played a

Container Volumes: A Tale of Two Coasts

The past seven years have seen a clear swing in container volumes. While West Coast ports still dominate the trade in terms of total volume, East Coast ports show great promise, with New York/New Jersey, Savannah, and Jacksonville just hitting their peaks.

	PORT	2011 TEUs	2005 TEUs	% CHANGE 2005-2011	PEAK (YEAR)	PEAK vs. 2011
EAST COAST	New York/New Jersey	5,503,485	4,785,318	15%	5,503,485 (2011)	N/A
	Savannah	2,944,678	1,901,520	55%	2,944,678 (2011)	N/A
	Hampton Roads (Port of Virginia)	1,918,029	1,981,955	-3%	2,128,366 (2007)	-10%
	Charleston	1,381,352	1,986,586	-31%	1,986,586 (2005)	-31%
	Miami	906,607	1,054,462	-14%	1,054,462 (2005)	-14%
	Jacksonville	899,258	777,318	16%	899,258 (2011)	N/A
	Port Everglades	880,999	797,238	11%	985,095 (2008)	-11%
	COMBINED	14,434,408	13,284,397	9%	15,501,930	-7%
WEST COAST	Los Angeles	7,940,511	7,484,624	6%	8,469,853 (2006)	-6%
	Long Beach	6,061,091	6,709,818	-10%	7,312,465 (2007)	-17%
	Oakland	2,342,504	2,272,525	3%	2,390,262 (2006)	-2%
	Seattle	2,033,535	2,087,929	-3%	2,087,929 (2005)	-3%
	Tacoma	1,485,617	2,066,447	-28%	2,067,186 (2007)	-28%
	COMBINED	19,863,258	20,621,343	-4%	22,327,695	-11%

Sources: American Association of Port Authorities Container Traffic North America, 1990-2009; and North American Container Traffic, 2011

role in Ace Hardware's Suffolk site selection decision.

"Approximately 15 percent of our freight moves via intermodal," says Duval. "We take that into consideration for any operation we look at.

"Each year, we engage our carriers in a Request for Proposal (RFP) process, and consider the transportation mode per lane in the overall analysis, along with cost and the effect on inventory levels," he adds. "Having intermodal availability as an option at the Suffolk facility provides us with greater choices during the RFP process."

Optimizing Port Operations

With infrastructure on solid footing, the Port of Virginia is now looking to optimize existing operations in anticipation of future growth. For example, intermodal chassis management has become a terminal concern after the Federal Motor Carrier Safety Administration (FMCSA) began enforcing its "Roadability Rule" in 2009 and 2010. The mandate places more responsibility on chassis owners and trucking companies to properly inspect and maintain roadworthy equipment. Many steamship lines, which historically have supplied their own chassis, swiftly exited the business following the FMCSA's ruling, casting uncertainty on how ports and shippers would manage this void moving forward.

The Port of Virginia, by contrast, has operated its own chassis pool with a third-party partner for eight years—a consequence of wanting to free up on-site space and help truckers expedite turns.

"Some of our old aerial photos show a huge swath of land dedicated to chassis. It's remarkable the amount of productive space we were losing," says Joe Harris, spokesperson for the Port of Virginia. "Now we stack chassis vertically in a one-acre corral. Truckers drive in from one side, chassis stackers unload units and put them on the ground, drivers back up and pick out the 20- or 40-footers they need, then exit the other side. We ensure roadability for all chassis."

The Port of Virginia expects to continue tweaking its pool, but doesn't anticipate any problems some other gateways are just beginning to encounter. In fact, its chassis program has had a marked impact on terminal efficiency and asset utilization. Before the port started the equipment pool, about 22,500 chassis were on terminal. Today, that number is 11,300. "In terms of freight, we doubled volume on half the number of chassis," says Harris.

Elsewhere, the Port of Virginia is conducting a holistic review of its operations as part of a multi-year project with the Global Institute of Logistics—a membership organization for global port communities founded by the late Robert Delaney—to pursue total quality port certification.

"The review analyzes every step a unit of cargo takes through the Virginia Port system to find out how efficient it is," Harris explains.

The objective is to guarantee specific service and performance standards that are continuously benchmarked and measured, much like ISO standards. Eventually, the port will extend this review to its Richmond inland facility, and include barge service as well as rail/intermodal jumps.

Because it is equipped with the transport infrastructure to handle New Panamax vessels, The Port of Virginia could be a big winner when the Panama Canal expansion is complete.


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IKEA Finds Balance in Savannah

As the fourth-largest containerport in the United States, Savannah increased volume more than any other major U.S. port over the past seven years—and it shows. It has attracted big-box retailers the likes of Lowes, Home Depot, Dollar Tree, Walmart, and Target.

In 2007, Swedish home furnishings retailer IKEA opened a 785,000-square-foot (with potential to expand to 1.7 million square feet) distribution facility at the Savannah River International Trade Park. Accessibility to the Southeast market's future store openings and proximity to the port were important factors in the site selection. IKEA's DC is located four miles from Savannah's Garden City Terminal.

"When we evaluated locations for a southeastern DC, we saw the potential for expansion in Savannah—from the port's perspective, as well as our own. We have the opportunity to double our size here," says Joseph Roth, IKEA's director of public affairs.

IKEA opened the Savannah DC to serve retail locations in Atlanta, Dallas, Houston, and Round Rock, Texas, which was then under construction. Five years later, it opened three stores in Florida and one in Charlotte—all supported by the Savannah distribution operation.

Since 2007, IKEA has gradually expanded its U.S. distribution footprint to match the growing presence of retail sites throughout the country. It recently opened a DC in Tacoma, Wash., to replace a leased facility in Vancouver, B.C. Together with an existing facility in Tejon, Calif., the DC serves West Coast store locations. IKEA also consolidated a leased DC in Bristol, Pa., into its larger Perryville, Md., operation. All told, the company will have six U.S. distribution centers (including Westhampton, N.J.) when it eventually brings a new Midwestern hub on line in Joliet, Ill.

Like the aesthetics of the products it sells, IKEA's distribution design is discreet, balanced, and easy to put together. The company values regional DCs near major ports of call and in areas with existing and future demand. While the majority of its product is manufactured in Europe, volume also comes from Asia and, increasingly, U.S. suppliers.

Home furnishings retailer IKEA values regional DCs near major ports of call and in areas with existing and future demand.

All Asia-origin freight moves through either Tacoma or Tejon, so the Panama Canal has had little influence on supply chain machinations to date. Still, Roth acknowledges, "if issues arose with West Coast ports, such as the strike in 2002, the Panama Canal could be an alternative if we had to move goods from Asia to the East Coast. Our network is flexible enough to do that."

That says a lot. In 2002, many U.S. consignees importing Asian freight to the West Coast had little recourse when labor strife hit the ports, delaying shipments and orders. IKEA's current network, with established DCs in all four corners of the United States, guarantees faster speed-to-market times while creating necessary flexibility and contingency options if and when exceptions occur.

While the Panama Canal is a blip on the horizon for IKEA, it understands that supply chain partners have a stake in what's going on. "We focus on port expansion efforts where we operate," says Roth. "Savannah is in the process of finalizing dredge plans, and we support that."

A Port for All Trades

The Port of Savannah's harbor deepening project is already underway, with work scheduled to begin in the fourth quarter of 2012. The four-year process to dredge Savannah's channel to 47 feet will follow the completion of the Panama Canal's expansion project—a reality that obscures what's already happening, says John Wheeler.

"A cascade of larger vessels is already coming to the U.S. East Coast today via the Suez Canal," he notes. "When 14,000-TEU ships come into service, the steamship lines have to do something with their 8,000-TEU vessels. The second largest trade lane in the world is Asia to the United States, and we're seeing those ships right now."

The Mediterranean Shipping Company (MSC) recently added Savannah to its Golden Gate service originating in Shanghai. The service transits the Suez and utilizes ships in excess of 9,000 TEUs. The string also includes New York/New Jersey, Norfolk, Baltimore, and Charleston.

Savannah's stature as a logistics hub played a large role in MSC's decision to add the port to its rotation—particularly because so many proprietary beneficial cargo owners and distribution centers are located in the area.

A few years ago, the thinking was that an East Coast surge would have to wait until the Panama Canal expanded, says Wheeler, but that has gone by the wayside. Rather, an evolution in supply chain strategy has been happening for some time.

"Transit time isn't as important any more; cost is," Wheeler explains. "Big-box retailers want the best rates. And shipping lines want their costs to be as low as possible, too, so they are migrating to larger vessels. An 8,000-TEU ship is a 40-percent savings per slot over a 4,500-TEU ship.

"Even though transit times may be

longer, shippers are migrating toward larger vessels because it's cheaper," he adds. "And all carriers are moving to slow steaming due to the high price of bunker fuel."

The easy solution for many ocean carriers is to put the smaller containerships on the Suez route. Newer, larger vessels will service the Panama Canal when that volume spikes. East Coast ports have an existing value proposition for attracting more Suez trade.

"Total capacity from Asia to the U.S. East Coast via the Panama Canal is 64,360 TEUs per week. By comparison, transits via the Suez Canal account for 55,496 TEUs per week," says Wheeler. "That's closer to a 50/50 percentage than you might think. Seven years ago, that balance would have heavily favored the Panama Canal."

Even if transit times are less important because of better supply chain visibility and demand forecasting, transportation connectivity and intermodal efficiency have conversely grown in significance. Regardless of where ports are pulling container volumes from, U.S. distribution follows a more predictable course.

Savannah is keeping ahead of the demand curve in terms of transportation accessibility in and out of its terminals. The port is 10 minutes from both I-16 and I-95, and offers on-dock rail/intermodal service with Norfolk Southern and CSX.

"A container can be off the ship on Monday, at the intermodal yard that night, and on its way to destination Tuesday morning," Wheeler says. "It's cheap and quick because it's right here at our facility."

As West Coast ports struggled to handle Asian-origin containers flooding terminals in 2005, the Georgia Ports Authority and other Southeast ports netted record growth.

Florida's New Reckoning

While Virginia and Savannah have solidified their reputations as key gateways to the Southeast—with intermodal inroads into the U.S. heartland—Florida's container ports have predominantly served the Florida market. Given the state's population density and tourism industry alone, that could be a positive.

But 45 percent of containers consumed in Florida come through non-Florida ports, according to research by economic consultant John Martin in collaboration with Port Miami. That figure jumps to 52 percent for Asian-origin containers—despite the fact that Miami handles much of that cargo already. A large volume of this freight moves West Coast intermodal or through Savannah, which creates low-hanging fruit ripe for picking, according to Martin.

With the Panama Canal expansion, Port Everglades and Port Miami have interest in capturing Asia-to-U.S. East Coast container traffic. Because both ports are strong Latin American gateways, transshipment potential abounds. New Panamax vessels will only feed that demand.

Ideally, when a 10,000-TEU ship comes into Miami or Port Everglades direct from Asia through the Panama Canal, it will unload shipments for the U.S. and local Miami market, and for transshipment south, then turn around.

"The large ships can't call multiple ports. Carriers lose all economies of scale once they start doing milk runs," says Martin. "The advantage of operating bigger ships is that savings occur on a line-haul basis. Capital costs are high, so carriers must keep vessels deployed all the time."

Miami already participates in the Asia trade as a first U.S. inbound port of call. But larger vessels, fully laden, will naturally attract further transshipment activity. The most important requisite is having a 50-foot-deep harbor capable of accommodating these ships. This is also a consideration for export trade. As a last outbound call, ports with sufficiently deep berths can siphon more cargo from other ports that have draft restrictions.

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The challenge for Port Everglades and Port Miami is to make South Florida a viable distribution hub for the Southeast market—not just an entry point for Florida-consumed goods, a gateway to Latin America, or a destination for cruise ships. Florida East Coast Railway will play a big role in making this objective a reality.

Jim Hertwig, who joined FEC in 2010 after serving in a similar capacity at CSX Intermodal, also brought with him 30-plus years of working exclusively on the trucking side. So he understands the importance of rail/intermodal service and how FEC can compete against, and partner with, the trucking industry to help make Florida's transportation system more competitive. For Port Everglades and Port Miami, this is a game changer.

FEC "owns" Florida's Atlantic coast, and it's the most direct means of transporting freight to and from the state's growing ports and broader southeastern region. In fact, 100 percent of CSX and Norfolk Southern intermodal business going to South Florida comes to FEC in Jacksonville.

Unlike most Class 1 railroads that haul unit trains, FEC's freight mix is varied. Durable concrete-tied mainline track, relatively flat terrain, and consistent speeds running well below capacity make transport reliable and efficient. It can run automobiles, carloads, and intermodal containers all day on the same tracks, and still make intermodal scheduled delivery times.

Keeping the Trains Running

"One competitive advantage of multiple intermodal departures in each direction is surface lead time," notes Mark Yoshimura, vice president logistics-transportation for FEC. "If a beneficial cargo owner or shipper can't make that first cutoff time, additional trains are still running that can usually make it to the destination in time to meet local deliveries—especially competing against truck."

In addition to its carload and intermodal container rail business, FEC's owner-operator highway services division delivers door-to-door throughout Florida and beyond. Several dedicated intermodal services connect South Florida to markets as far afield as Atlanta, Chicago, and New York/New Jersey. Also, recognizing that the railroad can only pull in a finite amount of business, FEC is working with trucking companies to populate the system with more freight.

"The high number of DCs in Savannah creates an abundance of outbound loads," explains Hertwig. "We set up a drop lot in Savannah where truckers can unhitch a unit, pick up an empty, and make a pick-up, thereby reducing deadhead miles.

"From Savannah, we connect with our train in Jacksonville, which continues on to South Florida," he continues. "It's an overnight service."

Additionally, smaller motor freight carriers bring units into Jacksonville and FEC ferries them to South Florida via rail, makes the deliveries, then returns the empties. They use the railroad's yard as their own de facto terminal.

This type of flexibility and efficiency

The Seven-Year Switch

Even as the pull of New Panamax capacity draws interest and investment to Southeastern ports, West Coast intermodal transportation is still the go-to route for most Asian-origin container volume. In some cases, even importers that have tested all-water routings from Asia to the U.S. East Coast still prefer the U.S. landbridge option.

In 2005, high-end patio furniture importer Summer Classics was working with Averitt Express International to manage Asian-origin shipments, some of which were transiting the Panama Canal.

The Montevallo, Ala.-based company supplies U.S. dealers and retail outlets including Brookstone, Home Depot, Crate & Barrel, and Neiman Marcus. It also has a retail presence in the Southeast.

At the time, Summer Classics was transshipping freight through the West Coast ports of Long Beach, Los Angeles, and Tacoma. Closer to home, it made arrangements with some Florida customers to take direct container shipments from Asia through the Canal. Summer Classics also had freight coming into the Port of Charleston that moved by rail to Atlanta, and was then drayed to Birmingham.

With West Coast port congestion an emerging concern, and because Summer Classics was controlling inbound transportation from Asia through its third-party partner Averitt, it had the flexibility to reroute shipments accordingly.

Fast-forward seven years, and Summer Classics' sourcing and distribution footprint has changed considerably. The importer still works with Averitt as its sole logistics provider, but the nature of its transportation and distribution network has evolved.

"We are bringing in roughly 800 to 900 containers per year now, compared to 350 in 2005, and opened a 45,000-square-foot distribution center in Los Angeles," says Andy Kennedy, logistics manager, Summer Classics. "We bring all containers through Long Beach to our DC."

The company still direct-ships containers to East Coast customers via the Panama Canal – anywhere from 50 to 100 containers per year – but not nearly as many since the 2008 economic downturn.

"We had a good thing going for a while, bringing containers into the Port of Mobile. But service times eventually lengthened and our carrier of choice pulled out vessels," Kennedy says. "The current problem with going all-water to the East Coast is the outrageous end-drayage cost to Alabama. If fuel prices continue to drop, we may change the way we bring in some containers. But currently, all freight will go West Coast, then on to Alabama."

has attracted a slew of customers, including Seaboard Marine, UPS, and Walmart. The big-box retailer operates a DC six miles from FEC's Fort Pierce ramp, and works directly with the railroad.

"Walmart's private fleet drivers bring units out of the system in Jacksonville, and FEC runs them to Fort Pierce and back," says Hertwig. "People will say you can't do short-haul intermodal. But I'll tell you we do—147 miles with Walmart."

FEC's capabilities are a big reason why South Florida ports are bullish about their chances of competing for Asian-origin container volume when the Panama Canal expansion is complete. But there's also a measure of reciprocity. FEC is equally dependent on Port Everglades and Port Miami to execute their expansion plans, and bring more freight into the pipeline. Currently, southbound and northbound container volume runs at a 4:1 ratio. FEC and the ports hope that will balance out.

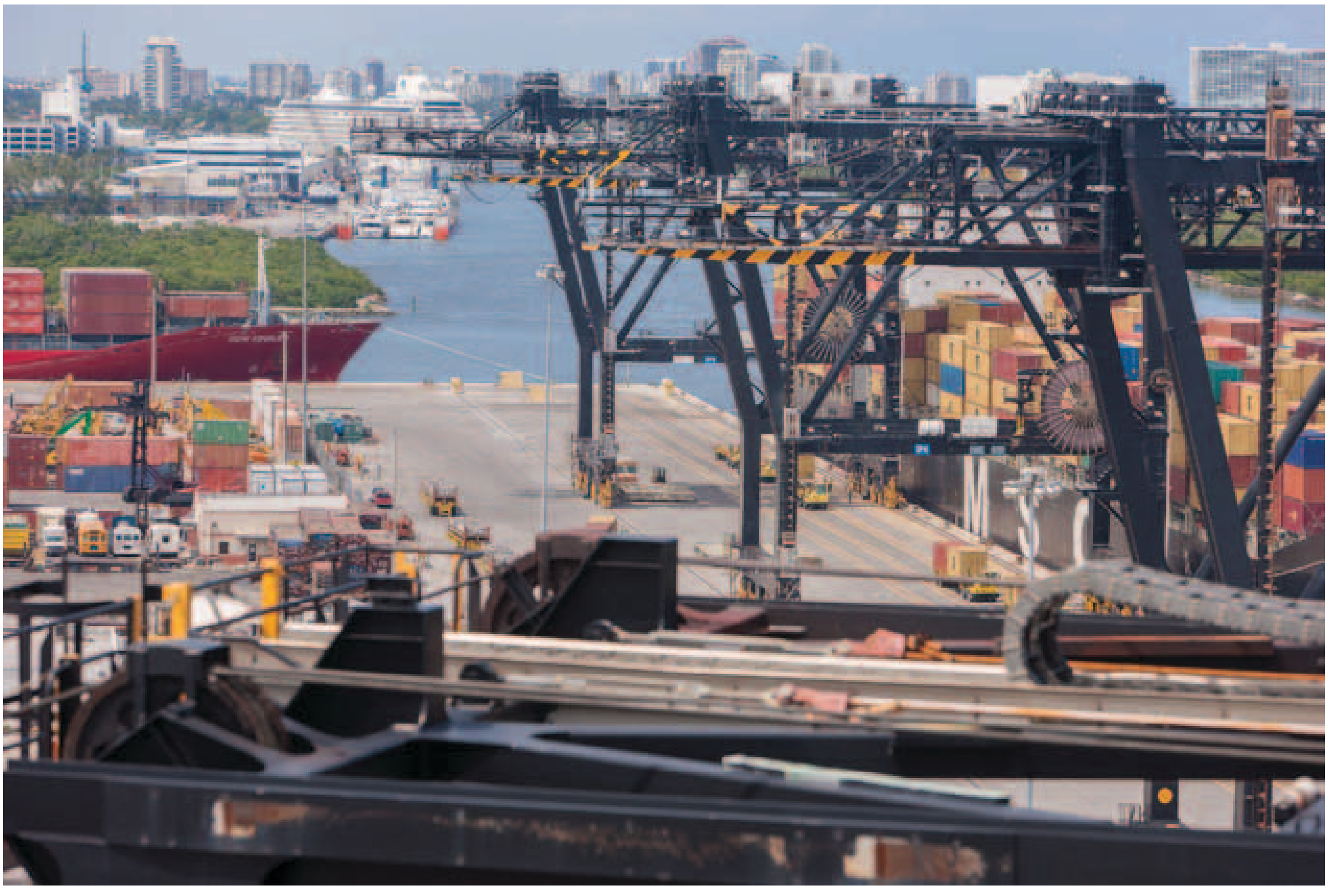
Miami is in the process of completing three major projects: a $915-million Port of Miami Tunnel to provide a direct connection between the port and the interstate, while reducing congestion downtown; a $225-million harbor-deepening project; and a $23-million TIGER II grant with FEC to rehab track, build sidings, reconstruct a bridge into the port, and upgrade downtown intersections. When complete, FEC's on-dock rail/intermodal presence will feature three 3,000-foot spurs capable of pulling half-mile trains in and out of the port.

Port Everglades is making similar efforts to optimize and expand its terminal capacity. A $120-million channel deepening and widening project is in the works, and should be complete by 2017, says Steven Cernak, director of Port Everglades.

The $321-million Southport Turning Notch expansion will lengthen the existing deepwater turning area for steamship lines from 900 feet to 2,400 feet, providing five additional cargo berths.

This project is important because, while ports can manage shallower drafts by partially loading ships—as Port Everglades currently does—there's nothing they can do about vessel size. As part of this effort, which will eliminate 8.7 acres of a mangrove conservation easement, the port is enhancing 16.5 acres nearby with 50,000 new mangroves and plants.

Finally, Port Everglades is building a $72-million intermodal container transfer facility (ICTF) as part of a public-private partnership with FEC.



Port Everglades is banking on intermodal as one key to future growth. An FEC rail hub is located nearby, and an Intermodal Container Transfer Facility is under construction.

"The ICTF will process domestic and international intermodal containers, as well as eliminate highway drayage and reduce congestion," says Cernak. "The ICTF will help improve throughput by getting freight in and out of the port more easily."

In addition to its collaboration with Port Everglades and Miami, FEC is making its own investments. Flagler, a real estate affiliate of the railroad, is developing the South Florida Logistics Center, a 400-acre complex adjacent to the Miami International

Airport at FEC's Hialeah railyard. The plan is to create a multi-use warehouse environment that connects all transport modes in the area.

All these developments at the ports and on the rail feed one succinct value proposition that Hertwig believes will favor Florida in the long run. "By the time a ship gets up the river to Savannah, we'll have the cargo at its destination," he says.

A New Panamax Horizon

On March 1, 2012, the Port of Virginia bid adieu to the 9,178-TEU capacity *MSC Roma*, a vessel deployed on the steamship line's Golden Gate service. The ship was so heavy it required 48.5 feet of draft—a high water mark for East Coast ports.

The occasion offers a sign of things to come, as well as a reminder of ports recently passed. Savannah welcomed the *MSC Roma* in February 2012, one month earlier, but it was partially loaded and on an incoming tide. On this latest turn, the Port of Virginia was the vessel's final U.S. outbound call.

Emerging rivalries among East Coast ports is good for business. A "draft race" is clearly unfolding as ports aim to stack decks higher and faster than their peers. Intermodal connectivity will also be a competitive differentiator.

In the Southeast, the stakes are higher, given the growing consumer demand that is up for grabs. Established container ports such as Savannah and Virginia face new competition in Florida. The Panama Canal expansion will open up Asian trade, and sophisticated supply chains that can account for longer transit times will likely test all-water sailings to the U.S. East Coast if they can reduce total logistics costs.

Other variables are at play. The Caribbean and Latin America are emerging nearshore locations for U.S. manufacturing and sourcing. Eastern Europe is still considered a future offshore target, and Africa will eventually follow suit. East Coast ports are positioned for sustained growth from one direction or another.

But all these considerations can't obscure the reality that the U.S. West Coast still dominates the container trade. And China isn't going anywhere. Los Angeles and Long Beach have market share, and intermodal landbridge transit times from west to east are generally faster and more competitive. The extent to which the Panama Canal expansion impacts Asian-origin transportation routings and carrier rates—both on the ocean and trucking side—remains to be seen.

West Coast ports, too, may find new transshipment opportunities into Latin America. And if U.S. manufacturing makes a rebound, they will be well-positioned to feed Asia's growing consumer base while turning full containers.

One certainty is that the next few years will be an exciting time for the East Coast port industry, and the Southeast specifically. Development will be rampant and rapid. Shippers and consignees—especially retailers—will be keeping tabs as they consider their own future growth initiatives.

Panama Canal charter has been building for six years. The Asia-U.S. East Coast dialog has lingered even longer.

Coming soon in 2015 will be a cathartic ending to a script that has everyone buzzing in anticipation. ■

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GREAT PARTNERSHIPS

3PLs & SHIPPERS

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GREEN HORNET & KATO
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SEARS & ROEBUCK

ODDY
ER
GGS
BERT

Many companies have traded old-style transactional relationships with 3PLs for **collaborative partnerships** that stand the test of time.

by Merrill Douglas

If you don't have a green thumb, you might hire someone to mow your lawn, trim the shrubs, water the flowers, and ward off Japanese beetles.

Or you might find an expert who helps you choose plants tough enough to thrive in your difficult climate and turf that takes abuse from kids and dogs. He recommends flowers that the deer won't eat, and teaches you to attract the kinds of birds that eat the bugs that kill tomatoes.

He does such a good job, eventually it takes him fewer hours to handle everyday maintenance. And that might hurt him in the wallet, except that the two of you keep thinking up new projects to work on together.

What's true for your yard might also be true for your supply chain. Like the homeowner and traditional lawn and garden service, many shippers and their third-party logistics providers (3PLs) engage in purely transactional relationships: the shipper buys a service, the 3PL provides it, and money changes hands.

But a growing number of shippers and providers are forming more collaborative partnerships, focused not just on delivering service for a fee, but on shaping a shipper's long-term success.

"At some point, you say to your service provider, 'Here are my needs. What is the best way to meet them?' instead of, 'Give me a price for this service,'" says Craig Boroughf, senior director, indirect sourcing and transportation at Chicago-based USG Corporation.

Mike Marlowe, vice president of operations at Kane is Able, a 3PL in Scranton, Pa., cites a concept called vested outsourcing, developed at the University of Tennessee by a team of researchers led by Kate Vitasek. "Vested outsourcing tries to break down the walls of the typical relationship between a 3PL and a buyer, moving away from the transactional approach to look at the bigger picture, then determine how to work together to take cost out of the network," he explains.

Call it what you will, some shippers and 3PLs are working closely to create a lusher landscape for everyone concerned. Here's a look three such partnerships.

KIMBERLY-CLARK NORTH AMERICA & KANE IS ABLE

COLLABORATION IS NOTHING TO SNEEZE AT

Kimberly-Clark North America, the producer of popular consumer packaged goods (CPG) brands such as Kleenex, Scott, and Huggies, has started to explore the collaborative approach with Kane is Able. Kane provides distribution and contract packaging services for Kimberly-Clark's Consumer Products and KC Professional divisions from three regional facilities. It also provides regional transportation support.

Kimberly-Clark's supply chain team has determined that collaborating with service providers helps the company gain better service and higher-quality, lower-cost solutions for the entire supply chain. "If we don't take advantage of our partners' capabilities and insights, we'll continue to sub-optimize the supply chain, as each individual focuses only on their own best interest," says Todd Armstrong, director of distribution operations for Kimberly-Clark North America.

Kane and Kimberly-Clark are still working out the details of their budding partnership. But they have already worked together to change the process for designing the packaging that Kane assembles.

A Package Deal

Traditionally, CPG manufacturers have created packaging in stages, with each stage performed in its own organizational silo. The marketing department determined how the packaging should look and feel. The packaging group then sourced the materials, choosing products that would get the job done at the best possible price. Then a contract packager such as Kane assembled the units and stored them in the distribution center (DC).

Standing at the end of the process, Kane often ran into problems that had their origins farther up the line. "Sometimes packaging was not designed to optimize storage space, so we saw more damage and less cube utilization in the DC," Marlowe says.

That was bad enough, but the impact could be even worse when it came to the assembly process. "The designers may have created a great-looking container that was fairly inexpensive, but the cost to assemble it in the contract packaging operation was excessive," he adds.

Kimberly-Clark was spending too much on package assembly because it didn't seek Kane's advice on design. Collaboration changed all that. "Once we engaged Kane, and asked them to come back with an end-to-end solution, we found ways to design and manage the base supply so they could assemble it more efficiently," says Armstrong. The packaging materials might cost a bit more, but the savings on assembly make up for that expense.

One tactic that helped in the effort to reduce package assembly cost was a workshop that Kimberly-Clark convened, focused on three product displays. Members of the manufacturer's sales, packaging design, and distribution teams met with the vendor that builds the company's in-store displays and with Kane, the contract packager. Then the entire team started to redesign each display unit.

"They were able to pull unnecessary materials out of the display," Armstrong says. Carrying the new designs into a mobile workshop parked outside, the display vendor created some prototypes. Trying them out, the team found that those new units were indeed easier to assemble than the original versions.

"During the single-day event, the team was able to modify the displays to achieve double-digit cost reductions, while still delivering on marketing and sales expectations," Armstrong says.

Moving Forward Together

As Kimberly-Clark makes decisions on the design of future packaging, Kane expects one of its own engineers to be involved. Marlowe would also like an executive from Kane to participate in key discussions at Kimberly-Clark on strategic issues that affect the supply chain.

Those decisions might include how to

Kimberly-Clark and Kane is Able collaborated on a new package assembly design that streamlined the end-to-end process.

design the distribution network, and what kind of technology to deploy. Technology is a big concern, because many large CPG companies have been working to install the same technology at all their sites for the sake of consistency.

But trying to do the same thing in the same way at every location also may pose problems. "If you're too consistent, you're not allowing the 3PL to push ideas, technology, and innovation," Marlowe notes.

Ensuring Engagement

As they work out further details of their partnership, one major question that Kimberly-Clark and Kane must resolve is how to design the right kinds of incentives for the 3PL. In a traditional, transactional relationship, the more work a 3PL does for a shipper, the more money it earns. But what happens when a 3PL's good ideas streamline a process so much that the service partner actually has less work to do?

"In a purely transactional relationship, the 3PL gets paid when it finishes specific work," says Marlowe. "There's not a lot of incentive to offer savings and innovations, or to make investments in engineering and resources to try to slim operations."

One long-standing alternative is gainsharing, which rewards contractors by awarding them a portion of any savings they help customers achieve. Another option might be to give the 3PL a stake in the customer's business, so any success the customer attains becomes a success for the service provider as well.

Armstrong agrees that old compensation models won't work in a new collaborative relationship. "If we just keep doing the same thing, we're not going to incent the 3PL to help us be as efficient and effective as we could be," he says. "So we have to come up with some new key performance indicators that focus on not only whether we're thinking innovatively, but whether we're implementing and getting the results we expect."

EBRO NORTH AMERICA & THE JACOBSON COMPANIES

COMMUNICATE EARLY AND OFTEN

Kimberly-Clark's packaging experiments teach a vital lesson about collaborative outsourcing: engage your partner early. By taking part in decisions about package design, Kane is Able helped its customer find savings farther downstream in package assembly.

Another shipper, Ebro North America, also made gains by involving a logistics partner in supply chain decisions as early as possible.

A business unit of the Spanish company Ebro, Ebro North America manufactures pasta in Winchester, Va.; Fresno, Calif; St. Louis; and Montreal. It also makes rice products in Memphis. Before 2007, Ebro distributed through 16 public warehouses and one company-owned DC, with pasta and rice in separate facilities.

When Ebro decided to bring rice and pasta together in a smaller number of DCs run by 3PLs, it awarded its first contract to The Jacobson Companies, a Des Moines, Iowa-based 3PL. Jacobson's initial job was to consolidate some of Ebro's rice and pasta distribution into a DC in Mechanicsburg, Pa., close to Ebro's offices in Harrisburg.

Today, Ebro North America's distribution network comprises five DCs, three of them run by Jacobson and two by Saddle Creek Logistics Services.

The partnership between Ebro and Jacobson succeeds because of close, consistent communication. "We work together in terms of understanding Ebro's objectives, its acquisitions strategy, and the challenges it faces," says Stan Schrader, Jacobson's executive vice president of business development for contract logistics.

"When we have acquisition targets, or enter new businesses, we bring Jacobson into the loop early in the process," says Joe Marelli, vice president of supply chain for Ebro North America. Ebro also holds an annual business review with each of its 3PLs. The main topics at those meetings are the past year's performance and objectives for the coming year.

"We try to plan around both companies' budget cycles," Marelli says. "We incorporate strategic initiatives into the forward view, so we're prepared for them."

Filling in the Blanks

When Ebro has an acquisition in the works, it gives Jacobson basic data such as the size of the business and the product volume it ships. That information helps the 3PL craft strategies for handling the new volume. Jacobson also determines whether it can manage expansion with existing resources, or if it will need to add more capacity.

Logistics providers who serve as partners help companies gain greater insights into their own supply chains. "Jacobson brings a list of questions, which prompts our organization to investigate those points," says Marelli.

Such conversations help the manufacturer avoid costly mistakes as it expands

operations. "The worst thing a company can do is take on a new business or launch a new product without thinking through logistics execution," he adds.

This kind of collaboration helped both partners in late 2011 as Ebro was relocating its largest DC and integrating the business of two companies it had recently acquired. It accomplished all that growth without any service interruptions and while shipping record volumes. "We were only able to achieve those results because both organizations were sharing information and providing project updates daily and weekly," Schrader says.

Focus on Fact Gathering

Shippers forging collaborative partnerships with 3PLs should gather as much operations information as possible, such as business size, metrics, and volume patterns. Both shipper and 3PL need that data before they can create a solution that delivers seamless service to customers. "If any of that information is wrong, it will create problems, and that's going to cause friction in the relationship," Marelli notes.

One way to ensure you're gathering all the critical data is to ask your 3PL partner what information it needs to make the solution work.

Communicating early and often is essential. "If the two sides share information and are honest about concerns and capabilities, and how each can leverage the other's strengths, the relationship and alignment can grow, and the shared objectives work together for both companies' success," Schrader says.

Shippers should also remember that the lowest-cost 3PL doesn't necessarily make the best partner. "A provider can bring to the table skills, services, and core competencies that require investment in systems or tools," Marelli says. "Those cost money and could add to the solution's total cost. If you choose your 3PL partners based on price, you're going to be disappointed."

USG & TRANSPLACE

KEEPING QUESTIONS OPEN-ENDED

USG Corporation has had more than a decade to transform a traditional relationship with a 3PL into a deeper strategic partnership. As North America's leading producer of gypsum wallboard, joint compound, and other construction products, USG is well-known for its Sheetrock brand gypsum panels and Durock brand cement board. USG operates more than 75 production facilities around the world, posting annual revenues of more than $3 billion.

USG first contracted with Transplace for logistics services in 2001. "We collectively decided this relationship was important to both parties when we completed our first three-year term, and were renewing our master contract," says Matthew Menner, senior vice president at Transplace, a Frisco, Texas-based 3PL.

Once the two companies acknowledged the key role each played in the other's business, the terms of their engagement started to change. Transplace increased its staffing on the USG account and, for several years, located a general manager in USG's offices.

A traditional shipper-3PL relationship

Construction products manufacturer USG gained supply chain insight from shipment and delivery data collected by Transplace's Business Intelligence tools.


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focuses on meeting contractual obligations, and each company looks out for Number One. "Both parties can be very good, even excellent partners," says USG's Boroughf. "But both are working at maximizing their interest in the relationship."

In a strategic partnership, the shipper and 3PL get together to review their goals. "Then the parties work to align those goals to provide the maximum benefit for both," Boroughf says. If they work well together, each gains greater benefits than it would if it were pursuing only its individual interests.

Collaboration begins when a shipper invites more open-ended conversations with the 3PL. Rather than hand the 3PL a list of services it must provide, the shipper states its higher-level needs, which gives the 3PL a chance to devise creative solutions. "Service providers can usually meet the need and offer more value when shippers don't give them both the question and the answer," says Boroughf.

Building Business Intelligence

One example of close collaboration between USG and Transplace is the role USG played in helping develop Transplace's Business Intelligence (BI) offering. About five years ago, Transplace built a new set of reporting and analytics solutions, using the Microsoft Business Intelligence suite as its development platform.

"USG was one of the early adopters of this solution," Menner says. "It worked very closely with our development team to ensure what we built fully aligned with its requirements and delivered significant analytical insights to its transportation networks."

USG's goal was to collect more real-time information about its shipments, to help improve on-time deliveries to customers while managing costs, Boroughf says. USG employees helped develop BI's concept and design from the start.

Today, USG uses BI to create custom reports that give the company deep insights into its transportation operations. Because USG was involved in shaping BI, it gained a tool that is particularly tailored to its needs. "We saw the immediate value and were able to use it right away," says Boroughf. "At the same time, Transplace made sure the offering would work for all its customers."

USG's annual procurement truckload transportation procurement also illustrates the nature of the partnership that has developed between the manufacturer and its 3PL.

"USG and Transplace had worked closely over the years on annual transportation services sourcing engagements, employing an internally developed and supported optimization model that solved the assignment problem," says Menner.

But according to Boroughf, that process didn't entirely suit USG's needs. Specifically, he wanted his team to retain full knowledge about the carriers that were bidding on the company's business. Transplace's process didn't allow for that.

About four years ago, Transplace formed a strategic partnership with CombineNet—an online procurement solutions vendor. With support from its own engineering services organization, Transplace started offering CombineNet to its entire customer base, including USG. "Using CombineNet for the last three sourcing engagements was a logical progression of our partnership," Menner notes.

The progression suited USG well. "Transplace was still providing and supporting the technology tools," says Boroughf. "And we were still engaging their consulting services. But my team was keeping the knowledge that was very important, and utilizing the technology in a more enhanced way." ■

WHAT ABOUT YOU & THEM?

Of course, not every relationship is destined to grow into a strategic partnership. One sign that indicates whether you and your 3PL are ready to collaborate is how well your teams get along.

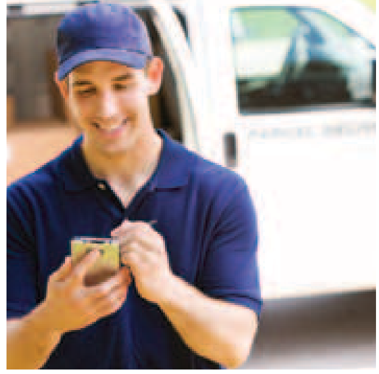
"Do you enjoy working together?" asks Todd Armstrong, Kimberly-Clark. "If you butt heads every time you meet, and can't agree on expectations or outcomes, or how to get there, and you don't like spending time with each other, the partnership is not worth pursuing."

It's also important to learn how big a role your business plays in your service provider's success. "Any vendor or supplier will tell you, 'You're our partner,'" says Craig Boroughf, USG. But the companies with real partner potential are the ones that consider you so strategic, they'll go above and beyond to meet your needs—even your quirkier ones.

When you know you can rely on your 3PL to help no matter what, you can launch new initiatives with confidence. "You don't want to be in wait-and-see mode," Boroughf says. "You want to be in let's-pop-in-the-answer-and-keep-going mode."

With a relationship like that, it's a lot easier to grow partnerships that will last.

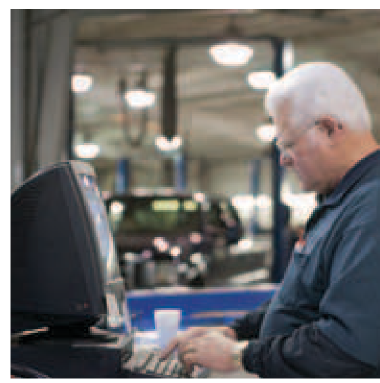












3PLs & SHIPPERS

PERFECT TOGETHER

Inbound Logistics' eighth-annual 3PL market research report demonstrates how 3PLs and shippers are connecting to confront existing challenges and capitalize on new opportunities.

by Joseph O'Reilly

In the supply chain, some things just go together, beginning with the most obvious—supply and demand. Demand directs supply in an endless cascade of order and shipment transactions, manufacturing, transportation, and warehousing/ distribution processes, and countless functional synapses firing every which way between. Everything occurs in harmony with demand. For many companies, it's all a purposeful blur.

But connectivity is paramount in today's supply chain. Nowhere is this more important or apparent than in the synergy that exists between companies and their third-party logistics (3PL) providers. Pairing third-party with logistics creates a modicum of objectivity in the middle of the buyer and seller relationship. Tactically, the 3PL can fill a very basic asset need. Strategically, its detached perspective offers the clarity and oversight necessary to orchestrate and execute myriad transportation and logistics actions along the supply chain.

3PL PERSPECTIVES METHODOLOGY

Every year, *Inbound Logistics* solicits questionnaires from more than 400 3PLs detailing the services they provide and their areas of expertise. We also ask service providers to augment this data with their insight about business during the past year, relationships with customers, and emerging outsourcing trends.

In addition, we poll more than 5,000 targeted shippers with similar questions to gain a counter-perspective of the different forces driving 3PL action and shaping the industry.

Inbound Logistics' 3PL Perspectives report juxtaposes these two points of view to provide a robust overview of trends impacting the 3PL space, and how shippers and service providers are responding.

3PL and shipper partnerships have always shared these features to a certain degree. But the maturation of value-added logistics capabilities beyond transactional services, the emergence of gainsharing strategies, and economic crisis have collectively upped the ante for outsourcing collaboration. This reality has become abundantly clear over the past few years.

GROWTH & DEVELOPMENT

Demand for transportation and logistics outsourcing remains on a solid arc as shippers look to divest non-core functions and focus on their own unique value propositions and growth efforts—especially as the U.S. economy slowly digs out of an entrenched recession. Businesses understand the growing importance of properly managing supply chain functions, and have targeted 3PLs to fill this corporate need.

Mirroring last year's numbers, third-party logistics providers responding to the 2012 3PL Perspectives questionnaire report a steady stream of new customers, with 88 percent growing their client base by at least five percent—compared to 89 percent in 2011 and 73 percent in 2010. By contrast, only two percent cite business attrition, compared to seven percent just two years ago.

While transportation and warehousing is still core, 3PLs continue to adapt as shipper demands evolve. Today's service provider is capable of piecing together and integrating multiple transportation and logistics disciplines—from playing freight broker and providing managed TMS services, to operating co-shared distribution facilities and pooling freight. Increasingly, investments in proprietary technologies offer additional incentives for shippers to partner with 3PLs. This allows outsourcers to tap best-of-breed solutions without the cost and liability of constantly updating and upgrading systems.

At the same time, 3PLs remain committed to filling core needs, especially equipment, freight capacity, and warehouse space. When the market eventually recovers and shippers start looking for available trucks, asset-based logistics service providers will once again find themselves in a position of strength.

Customer demand has yielded considerable returns over the past year in both sales and revenue growth. Ninety-two percent of 3PLs grew sales by at least five percent (91 percent in 2011). By comparison, 81 percent report profit growth in excess of five percent, down from 90 percent last year.

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This revenue anomaly is largely due to the increase in fuel costs, which began a steep and sustained climb in early 2011, and have remained relatively high ever since. Only recently did prices fall below February 2011 figures.

Still, 3PLs have been profitable. Both warehouse and trucking capacity have tightened after prolonged softness in the market, allowing some asset-based providers to recapture lost gains. The supply chain upsell has been a familiar and successful tactic for 3PLs that are shifting outsourcing business from traditional transactional relationships to more integrated partnerships.

Not only are integrated partnerships a means to expand and retain existing business, they also help justify outsourcing's value proposition. 3PLs can mine greater efficiencies and economies when they have more control over a customer's operation. Many are encouraging sales teams to cross-sell different functional capabilities. For example, integrated logistics services are becoming much more prevalent. Eighty-five percent of 3PLs report having this capability, compared to 79 percent in 2011.

Perhaps more telling, service providers overwhelmingly attribute growth to organic selling (82 percent), and a combination of organic selling, and mergers and acquisitions (18 percent). For the first time in eight years of research, no respondents cited M&A alone as a means for growth (two percent in 2011)—suggesting there are ample opportunities to sell both existing and new customers.

Alternatively, economic unpredictability and demand variability continue to challenge businesses, while strengthening the business case for outsourcing. When it comes to putting the right amount of inventory in the right place at the right time, 3PLs prove their value.

ANATOMY & PHYSIOLOGY

Over the past 10 years, 3PL anatomy has transformed noticeably as non-asset-based providers continue to emerge and compete with traditional warehousing and trucking-based solutions providers. Even as recently as 2007, there was a relative balance between companies that identify themselves as non-asset-based and those that pass as both asset- and non-asset-based—44 percent and 42 percent, according to *IL's* 2007 3PL Perspectives. But that divide is widening.

In 2012, 47 percent of surveyed 3PLs indicate they operate as non-asset-based service providers, with 37 percent reporting their business structure as both asset-light and non-asset-based. Comparable to last year's numbers, 16 percent are purely asset-based operations.

Given the fact that 3PLs are hyper-sensitive to market demand, the capacity to morph between carrying assets and providing objectivity has become a successful ploy for navigating good times and bad. Many smaller trucking and warehousing companies inevitably went out of business during the recession. Others quickly jettisoned assets to reduce operational costs. Some invested in value-added logistics capabilities to expand their operational breadth.

Non-asset-based 3PLs with functional areas of expertise—freight bill audit and payment, freight brokerage, import/export, and customs brokerage—are looking at ways they can expand their value proposition through technology and talent investment, or even vertical specialization.

For example, the e-commerce boom has generated demand for third-party logistics services that cater specifically to fulfillment. Even big-box retailers are getting into the game now by driving sales through their online channels, often vetting vendors and testing new products prior to rolling them out to brick-and-mortar stores. As a testament to this trend, 48 percent of surveyed 3PLs provide direct-to-home delivery services. In 2011, that number was 26 percent.

THE OLD & THE NEW

A number of new entrants have joined the 3PL party—traditional freight brokers, forwarders, consultants, IT companies, manufacturers, and even healthcare providers—at least in terms of how they are now casting their business proposition to prospective customers. Where there is functional need, and companies have the resources and networks to manage transportation and logistics, shippers inevitably follow.

For the 3PL sector, technology has become both a selling point and a means to better service. When asked to name the most important challenges facing the third-party logistics segment, 61 percent of 3PL respondents cite "technology investment"—second only to "rising costs." By comparison, only 15 percent of shippers see this as a challenge, likely because a wealth of affordable solutions are available to select from, and/or

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their 3PLs have already made that investment. This trend follows last year's research.

More than 50 percent of 3PLs are exploring investment in cloud-based solutions, reflecting both the efficacy of Software-as-a-Service deployments and their appeal to outsourcing customers. Specifically, 85 percent of logistics service providers are acquiring transportation management systems, up nearly 10 percent from 2011. Optimization technologies (63 percent) and warehouse management systems (56 percent) are other targeted areas—reflecting customer pain points.

FIGURE 1 **What strategies are shippers and 3PLs using to manage current challenges?**

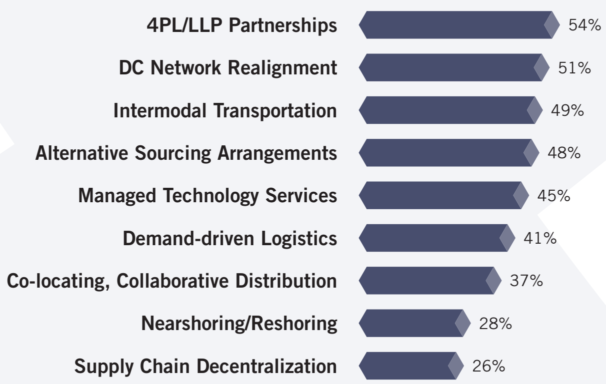
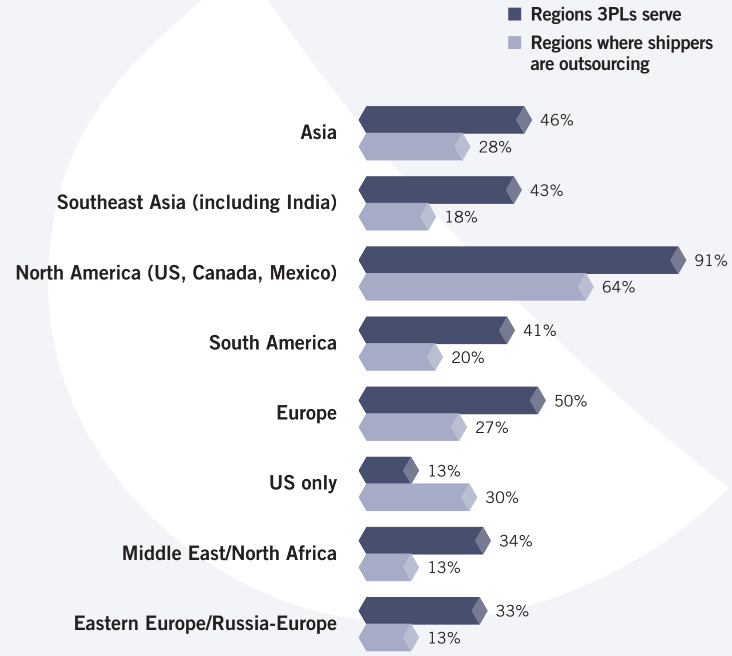


FIGURE 2 **Geographic scope**



Many 3PLs are partnering with IT vendors or even logistics service providers to acquire these types of solutions. Others have developed their own proprietary solutions. On the TMS side especially, more 3PLs are providing managed transportation services that leverage technology sophistication and business process execution in a revenue-sharing arrangement. Forty-five percent of surveyed 3PLs see this as a strategy that lets them help shippers address current challenges *(see Figure 1)*, compared to 36 percent last year.

Managed technology services are an emerging twist in the outsourcing paradigm, placing non-asset-based 3PLs in direct competition with traditional IT vendors. The upside for shippers is considerable. Service providers are using TMS solutions to become more integrated with their customers. Sophisticated analytics allow 3PLs to understand where problems are occurring at the local level, as well as upstream and downstream in the supply chain. Combining this data with strategic business process improvements addresses recurring problems at their root cause. This enables 3PLs to grow their business organically and cross-sell solutions across more functional areas.

OFFSHORING & NEARSHORING

Global supply chain management is one area where many 3PLs have already extended their reach with great success. A decade of offshoring demand has given the third-party logistics sector considerable penetration in developing Asian and Southeast Asian markets, and emerging outsourcing locations such as South America and Eastern Europe. Global coverage is an afterthought for many 3PLs. Only 21 percent of those surveyed indicate global logistics as a challenge, down from 23 percent in 2011.

Outsourcing ultimately begins at the point of demand. Building on last year's data, 91 percent of surveyed 3PLs serve the North American market, while only 13 percent operate exclusively in the United States *(see Figure 2)*. Shippers exhibit a similar and expected pattern, with 64 percent (51 percent in 2011) outsourcing in North America and 30 percent (43 percent in 2011) in the United States alone. The respective increase and decrease in North American and U.S. outsourcing activity indicates that domestic shippers are increasingly operating across borders—a positive sign for NAFTA trade, especially after the United States

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and Mexico finally came to resolution regarding cross-border truck movements.

Farther afield, Europe is now the top offshore target among 3PLs (50 percent), displacing Asia (46 percent), and outdistancing Southeast Asia and India (43 percent), and South America (41 percent). Europe's recession has triggered a number of high-profile acquisitions—UPS and FedEx among the more active companies—which may signal further growth opportunities for North American 3PLs looking to establish a presence in the profitable Asia-European trade.

Among surveyed shippers, the hierarchy of global outsourcing locations remains largely unchanged—with one notable exception. While 28 and 27 percent of respondents identify Asia

THE INS & OUTS OF 3PLS

Inbound Logistics' annual 3PL Perspectives market insight report gathers a wealth of information about logistics service providers. What began nearly 30 years ago as a functional warehousing and transportation sub-sector has now morphed into a multi-billion-dollar hyper-industry spanning all areas of the supply chain.

3PLs have proven their value by adeptly responding to shipper demand – whether it's squeezing out costs in times of economic distress, accessing capacity in a tight market, divesting non-core business functions to focus on corporate growth efforts, or simply tapping global expertise and resources to allay risk. Unique 3PLs have their own strengths. Some are asset-heavy and provide commodity-type capabilities. Others focus development on human talent, technology, and value-added services. In between, there are countless options.

As the following charts suggest, it is difficult to typecast third-party logistics service providers. But this information provides a snapshot of how 3PLs have evolved and where they are migrating. More telling, this representation offers insight into the challenges shippers face in today's market, the types of services and qualities they expect from third-party partners, and areas showing room for improvement.

ASSET-BASED OR NON-ASSET-BASED:

Non-asset-based	47%
Asset-based	16%
Both	37%

INDUSTRIES SERVED:

Manufacturing	99%
Distributors/Wholesale	94%
Retail/e-Business	89%
Service Industries/ Government	72%

CERTIFICATIONS:

SmartWay	62%
ISO	46%
C-TPAT	45%
Lean	24%
Six Sigma	24%
LEED	11%

VERTICAL SPECIALIZATION:

Consumer Product Goods (CPG)	84%
Electronics	73%
Food & Beverage	73%
Automotive	70%
Construction & Building Materials	64%
Healthcare	63%
Footwear/Apparel/Textile	62%
Furniture	56%
Chemicals	54%
Pharmaceuticals	52%
Grocery	52%
Cosmetics	45%
Agriculture	42%
Renewable Energy (Wind & Solar)	35%
Aerospace	34%
Oil & Gas	30%
Trade Show	28%

and Europe, respectively, as places where they use 3PLs, South America has climbed eight percent since last year (20 percent), topping Southeast Asia (18 percent). This is a clear indication that some industries are locating more offshore activities in the Latin American market—a consequence of secondary sourcing strategies, cheaper total landed logistics costs, and faster speed to market.

One other telling detail: while only 28 percent of 3PLs document nearshoring/reshoring as a shared strategy to help customers manage supply chain challenges, 48 percent include alternative sourcing arrangements in that conversation. In effect, one is a subset of the other. But this anomaly suggests nearshoring decisions are very much demand-driven.

LOGISTICS SERVICES & CAPABILITIES:

Inbound Logistics	96%
Integrated Logistics	85%
JIT	74%
Inventory Management	73%
Lead Logistics Provider/4th-Party Logistics	71%
Vendor Management	70%
Logistics Process Reengineering	66%
Payment Auditing/Processing	52%
Shared Services (co-locating, collaborative distribution, etc.)	52%
Global Trade Services	44%

WAREHOUSING SERVICES & CAPABILITIES:

Crossdocking	82%
Pick/Pack, Subassembly	69%
Fulfillment	69%
DC Management	65%
Vendor Managed Inventory	64%
Location Services (site selection, real estate)	56%

TECHNOLOGY/WEB SERVICES & CAPABILITIES:

EDI	99%
TMS	85%
Visibility	84%
Customer/Supplier Relationship Mgmt.	70%
WMS	64%
Wireless/RFID	61%

TRANSPORTATION SERVICES & CAPABILITIES:

Truckload	95%
LTL	93%
Intermodal	84%
Air Cargo	69%
Rail	74%
Dedicated Contract Carriage	67%
Ocean	63%
Small Package	53%
Bulk	50%
Final Mile	49%
Equipment/Drivers	40%
Fleet Acquisition	22%

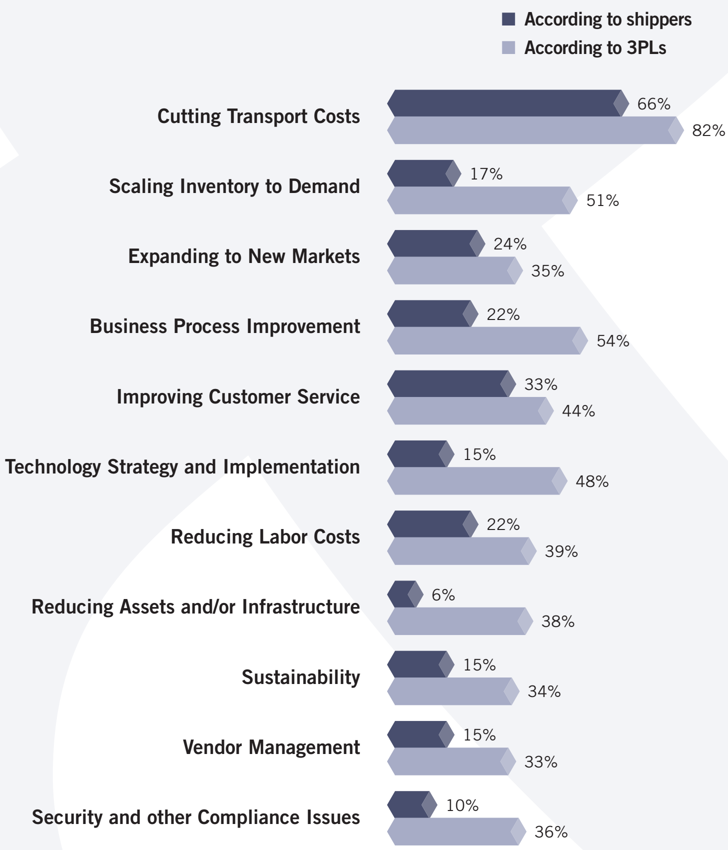
SPECIAL SERVICES:

Logistics/Transportation Consulting	93%
Direct to Store	79%
Reverse Logistics/Product Lifecycle Management	75%
Import/Export/Customs	71%
Marketing/Customer Service	47%
Contingency/Crisis Planning	43%
Labor Management	37%
Global Expansion (sourcing and selling)	25%
Direct to Home	48%
Security Analysis	22%
Sustainability/Green Logistics	57%

Shippers have capitalized on 3PL inroads in global areas where they source, manufacture, or sell into. This leverage is increasingly relevant as economic recession in Europe sweeps eastward into Asia, adding more volatility to global supply chains. Manufacturers are especially sensitive to the type of political and social upheaval that inevitably befalls developing countries stressed by economic crisis. Labor unrest threatens parts availability, which, in turn, can shut down supply lines.

Add the threat of natural disasters to a complex supply network, and risk assessment and management become a priority. Forty-four percent of surveyed 3PLs see this as a challenge for their customers. Interestingly, only 13 percent of logistics service providers identify contingency planning as a challenge within their own industry. For smaller service providers without expansive networks and redundancies built into their operational footprints, this may be a cause for concern—especially for an outsourcing customer that is counting on its third-party partner to allay such risk.

FIGURE 3 **What is the greatest challenge shippers face?**



For shippers, expanding into new markets for both selling and sourcing purposes is also a challenge, according to 24 percent of shipper respondents *(see Figure 3)*. 3PLs that have established local networks and assets on the ground are well-positioned to help companies penetrate new countries or regions without the risks and start-up costs of going it alone. Forty-four percent of service providers offer global trade services, while 71 percent have import/export/customs capabilities.

3PLs are critical links in global supply chains, whether operating co-managed warehouse facilities in the Netherlands, coordinating inbound transportation in coastal China, or expediting cross-border freight between the United States and Mexico. Given market fluctuations in Europe, a weakened U.S. dollar, and Asia's increasing appetite for U.S.-produced goods, new export demands are emerging. U.S. East Coast ports have already witnessed a shift in import/export balance favoring the latter. Beyond this, the Panama Canal's 2015 deadline for adding a third set of locks, and doubling throughput capacity, is expected to shake up global sourcing and domestic distribution dynamics.

U.S.-anchored supply chains will have to adjust and react to new growth opportunities. 3PLs will be front and center as importers and exporters consider their next moves.

SHIPPER YIN & 3PL YANG

Last year in 3PL Perspectives we noted, "on the whiplash end of a devastating recession, companies were still wary that an apocalyptic horseman might lay another one down on the U.S. economy." That hasn't happened yet. But U.S. economic unease is still top of mind for many companies.

3PLs arguably earn their keep in times of economic uncertainty—when shippers don't have a clear path toward future demand, and count on third-party counsel to guide decision-making. While technology investment and global coverage are important considerations, the true measure of successful partnerships ultimately lies in transportation and logistics minutiae.

For example, "cutting transport costs" remains the top challenge for shippers, according to 66 percent of shipper respondents, followed by "improving customer service" (33 percent).

3PLs share their customers' pain. Eighty-two percent see "cutting transport costs" as the most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important challenge shippers face. "Business process improvement" (54 percent), and "scaling inventory to demand" (51 percent) follow accordingly. Interestingly, in 2011, 42 percent of surveyed 3PLs identified business process improvement as a shipper challenge. Managing inventory was more important.

By contrast, only 22 percent of shippers see business process improvement as an area of need; inventory management (17 percent) ranks just below.

PROCESSES & PLATFORMS

Clearly, 3PLs now see opportunities where their customers can better manage inventory and transportation costs by embracing more sophisticated supply chain processes, such as vendor-managed inventory, pool distribution, and inbound logistics. Shippers might not have the wherewithal to consider these initiatives without a 3PL's guidance. And logistics service providers are building a technology and service platform that allows them to penetrate customer supply chains deeper than ever before. The new outsourcing paradigm is a far cry from transactional relationships bought and sold on capacity and price alone.

Inventory management is still a problem for shippers that are fixated on rising costs and can't forecast variable demand. While consumer spending has picked up, some retailers are still wary about replenishing more at the risk of carrying too much stock. Some are counting on wholesalers and suppliers to hold inventory farther upstream until orders drop. Alternatively, 3PLs are capable of mediating this variability in-house, through leased facilities, or by managing company-owned facilities.

Also, given constant changes in sourcing and selling locations, and the cost of transportation, 3PLs are better equipped to help customers realign their distribution networks—especially where demand may be speculative—and even provide managed or co-managed warehouse services as needed. For example, the Panama Canal's expansion project is already impacting where U.S. retailers locate stores and DCs in the fast-growing U.S. Southeast. Fifty-one percent of 3PLs identify DC network realignment as a viable strategy to help shippers mediate these demand fluctuations.

Outside the four walls, shippers may eventually find themselves looking to 3PLs when capacity tightens and a dormant driver shortage resurfaces. Apart from rising costs, third-party logistics providers count "capacity" (55 percent), "staffing, training, and other HR issues" (40 percent), and "government regulation and compliance" (39 percent) as outstanding concerns. Much of this apprehension is due to the U.S. Federal Motor Carrier Safety Administration's Compliance, Safety, Accountability (CSA) and Hours of Service requirements, which have yet to be enforced. Given the attrition of qualified drivers, and the standards that will be required to qualify drivers—who will have fewer hours to work— shippers, carriers, and 3PLs share many transportation concerns.

But there is also reason for optimism. In 2012, 84 percent of surveyed 3PLs indicate they offer intermodal services. More telling, 74 percent provide rail-specific capabilities, compared to 68 percent in 2011. As a strategy to help shippers circumvent looming capacity issues, 49 percent of 3PLs view intermodal transportation as an appropriate call to action.

Intermodalism is the path of least resistance as U.S. highway infrastructure and congestion constraints continue to raise burrs in the U.S. Congress—without any long-term resolution in sight. As long as capacity, transportation costs, and sustainability remain latent concerns, and railroads, carriers, and 3PLs continue investing in the necessary infrastructure to make transshipment between modes more seamless, multi-modal solutions will grow.

ONE & DONE?

Identifying how and why 3PL arrangements work is no easier than figuring out what leads to broken relationships. When asked to choose, 79 percent of shippers prefer 3PLs that can deliver customer service over cost. It's a popular answer that speaks to the partnership many companies have developed with their third-party logistics partners over the past few years.

The number-one reason for failed outsourcing partnerships among shippers is "poor service" (50 percent), followed by "failed expectations" (24 percent), "cost" (10 percent), "more competitive options" (seven percent), and "loss of control" (six percent). Cultural dissimilarities and lack of communication make up the difference *(see Figure 4, next page)*.

3PLs, naturally, see things differently. They blame "failed expectations" as the number-one


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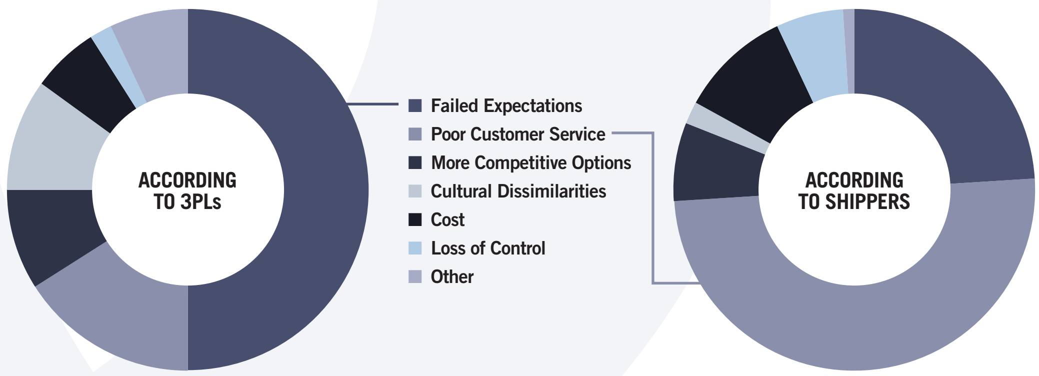
FIGURE 4 **What is the number-one reason for a failed 3PL partnership?**



reason partnerships don't succeed (50 percent), with "customer service" still a distant second at 16 percent, and "cultural dissimilarities" at 10 percent. "Cost" is only a contributing factor, according to six percent of 3PL respondents.

There will always be a disconnect between what 3PLs and shippers view as the discriminating factor in failed partnerships. That's to be expected. Often the problem is derivative of poor alignment at the outset of a contract—whether it's a matter of cultural incompatibility or a failure of one or both parties to understand the needs and/or expectations of the other.

As much as 3PLs relish the opportunity to grow their business with existing customers—becoming more involved in their operations and cross-selling services and capabilities across different functional areas—there is also recognition that the 3PL industry has evolved to a point where unique providers offer best-of-breed solutions. Increasingly, one 3PL is not capable of meeting the specific needs of a customer, especially across lengthening supply chains.

In 2012, 89 percent of 3PLs (the same as 2011) indicate customers should consider partnering with more than one service provider, while only 11 percent feel customers should work with one partner. Two years ago, 81 percent leaned toward multiple partners.

Shippers have greater flexibility and opportunity to localize specific needs and compartmentalize outsourcing activities and partners accordingly. This trend will likely pave the way for more lead logistics and fourth-party logistics arrangements, where one service provider orchestrates operations among the others. Fifty-four percent of surveyed 3PLs identify 4PL/LLP partnerships as a growing strategy; 71 percent currently offer that capability. ■

INBOUND LOGISTICS' 2012 TOP 100 3PL PROVIDERS

The Top 100 3PL Providers list, as selected by *IL* editors, is the appropriate companion piece to 3PL Perspectives. From a sweeping overview of the industry, this annual compendium celebrates logistics service providers that are at the top of their game, reflecting a broad prism of transportation and logistics capabilities that match unique shipper demands. As an information source, this directory provides need-to-know data that outlines 3PL services.

Pulling together this roster of Top 100 3PLs demands a great deal of due diligence. More than 250 companies submitted questionnaires for consideration this year, and *IL* editors conducted a careful analysis of surveys, phone interviews, and online research to qualify and vet these selections.

After you process 3PL Perspectives and pick apart the Top 100 list, we would like to know what you think. Does the information we provide serve as a resource for your business? Does this information support trends you see in your own day-to-day operations? Email us: editor@inboundlogistics.com

INBOUND LOGISTICS

TOP 100 3PL PROVIDERS 2012

ASSET/AREA KEY

A	Asset-based
N	Non-asset Based
B	Both
◗	Asia Only
■	Europe Only
◆	U.S. Only

CONTACT INFO	ASSET- OR NON-ASSET-BASED	SMARTWAY TRANSPORT PARTNER	ISO CERTIFIED	AREAS SERVED: ASIA/SOUTHEAST ASIA/INDIA	MIDDLE EAST/NORTH AFRICA	EUROPE/EASTERN EUROPE/RUSSIA	SOUTH AMERICA	US/CANADA/MEXICO	MARKETS SERVED: MANUFACTURING	RETAIL/E-BUSINESS	DISTRIBUTORS/WHOLESALE	SERVICE INDUSTRIES/GOVERNMENT	VERTICAL SPECIALIZATION(S)	LOGISTICS SERVICES: LLP/4TH PARTY LOGISTICS	INTEGRATED LOGISTICS	JIT	GLOBAL TRADE SERVICES	INBOUND LOGISTICS	LOGISTICS PROCESS REENGINEERING	PAYMENT AUDITING/PROCESSING
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A&R Logistics 815-941-6556 www.artransport.com	B	●	●	●	●	●	●	●	●	●	●	●	AGRI, CHEM, CONS, CPG, ENER, F&B, FURN, GROC, HEALTH, OIL	●	●	●	●	●	●	●
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ADS Logistic Services 877-237-1330 www.adslp.com	B							●		●	●		APP, AUTO, COS, CPG, ELEC, F&B, FURN	●	●			●		
AFN 866-766-8348 www.loadafn.com	N	●						●	●	●	●		APP, AUTO, COS, CPG, ELEC, F&B, GROC					●		
Agility 714- 617-6300 www.agilitylogistics.com	N			●	●	●	●	●	●	●	●	●	AERO, AGRI, APP, AUTO, CHEM, CONS, COS, CPG, ELEC, F&B, FURN, GROC, TRADE	●	●	●	●	●	●	●
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AmeriCold Logistics 888- 808-4877 www.americold.com	A		●	◗			●	●	●	●	●	●	AGRI, CPG, F&B, GROC, PHARMA	●	●	●	●	●	●	●
APL Logistics 602-586-4800 www.apllogistics.com	B	●		●	●	●	●	●	●	●	●	●	AERO, APP, AUTO, CHEM, CONS, COS, CPG, ELEC, ENER, F&B, FURN, GROC, HEALTH, PHARMA	●	●	●	●	●	●	●
Bender Group 800-621-9402 www.bendergroup.com	A	●						●	●	●	●	●	APP, AUTO, CONS, CPG, ELEC, ENER, F&B, FURN, HEALTH, PHARMA		●	●	●	●	●	
Big Dog Logistics 713-996-8171 www.bigdoglogistics.com	B	●	●	●	●	●	●	●	●	●	●	●	AERO, APP, AUTO, CONS, COS, CPG, ELEC, ENER, HEALTH, OIL, PHARMA	●	●	●	●	●	●	●
BNSF Logistics 817-310-3268 www.bnsflogistics.com	N	●		●		■	●	●	●	●	●	●	AERO, AGRI, CONS, CPG, ENER, F&B, FURN, HEALTH, OIL	●	●	●	●	●		
C.H. Robinson 952-683-3950 www.chrobinson.com	N	●	●	●	●	●	●	●	●	●	●	●	AERO, AGRI, APP, AUTO, CHEM, CONS, COS, CPG, ELEC, ENER, F&B, FURN, GROC, PHARMA, TRADE	●	●	●	●	●	●	●
Cardinal Logistics Management 704-786-6125 www.cardlog.com	B	●						◆	●	●	●		AGRI, AUTO, CHEM, CONS, CPG, ELEC, F&B, FURN, GROC, HEALTH, PHARMA		●	●		●	●	●
CaseStack 479-856-6140 www.casestack.com	N	●						●	●	●	●		APP, COS, CPG, ELEC, F&B, FURN, GROC, HEALTH, TRADE		●			●		●

VERTICAL SPECIALIZATION KEY

AERO Aerospace
AGRI Agriculture
APP Apparel & Textiles
AUTO Automotive
CHEM Chemicals
CONS Construction & Building Mat'ls
COS Cosmetics
CPG Consumer Packaged Goods
ELEC Electronics
ENER Renewable Energy
F&B Food & Beverage
FURN Furniture
GROC Grocery
HEALTH Healthcare
OIL Oil & Gas
PHARMA Pharmaceuticals
TRADE Trade Show

			TRANSPORTATION SERVICES												WAREHOUSING SERVICES						SPECIAL SERVICES											TECHNOLOGY/WEB SERVICES					
INVENTORY MANAGEMENT	VENDOR MANAGEMENT	SHARED SERVICES	SMALL PACKAGE	AIR CARGO	LTL	TRUCKLOAD	INTERMODAL	OCEAN	RAIL	BULK	DEDICATED CONTRACT CARRIAGE	FLEET ACQUISITION	EQUIPMENT/DRIVERS	FINAL MILE	PICK/PACK, SUB-ASSEMBLY	CROSSDOCKING	DC MANAGEMENT	SITE LOCATION	VENDOR-MANAGED INVENTORY	FULFILLMENT	DIRECT TO STORE	DIRECT TO HOME	IMPORT/EXPORT/CUSTOMS	REVERSE LOGS/PROD. LIFECYCLE MGMT	MARKETING/CUSTOMER SERVICE	GLOBAL EXPANSION—SOURCING/SELLING	SECURITY ANALYSIS	CONTINGENCY/CRISIS PLANNING	LOGISTICS/TRANSPORT CONSULTING	LABOR MANAGEMENT	SUSTAINABILITY/GREEN LOGISTICS	EDI	WIRELESS/RFID	TMS	WMS	VISIBILITY	CUSTOMER/SUPPLIER MANAGEMENT
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INBOUND LOGISTICS

TOP 100 3PL PROVIDERS 2012

ASSET/AREA KEY

A	Asset-based
N	Non-asset Based
B	Both
◗	Asia Only
■	Europe Only
◆	U.S. Only

CONTACT INFO	ASSET- OR NON-ASSET-BASED	SMARTWAY TRANSPORT PARTNER	ISO CERTIFIED	AREAS SERVED: ASIA/SOUTHEAST ASIA/INDIA	MIDDLE EAST/NORTH AFRICA	EUROPE/EASTERN EUROPE/RUSSIA	SOUTH AMERICA	US/CANADA/MEXICO	MARKETS SERVED: MANUFACTURING	RETAIL/E-BUSINESS	DISTRIBUTORS/WHOLESALE	SERVICE INDUSTRIES/GOVERNMENT	VERTICAL SPECIALIZATION(S)	LOGISTICS SERVICES: LLP/4TH PARTY LOGISTICS	INTEGRATED LOGISTICS	JIT	GLOBAL TRADE SERVICES	INBOUND LOGISTICS	LOGISTICS PROCESS REENGINEERING	PAYMENT AUDITING/PROCESSING
CEVA Logistics 281-618-3100 www.cevalogistics.com	B	●	●	●	●	●	●	●	●	●	●	●	AERO, APP, AUTO, CONS, CPG, ELEC, FURN, HEALTH, OIL, TRADE	●	●	●	●	●		
ChemLogix 630-579-8200 www.chemlogix.com	N			●	●	●	●	●	●		●		CHEM	●	●		●	●	●	●
Choice Logistics 800-593-2108 www.choicelogistics.com	N		●	●	●	●	●	●	●	●		●	ELEC, HEALTH	●	●	●	●			
Columbian Logistics Network 616-514-6000 www.columbian.us	B	●						●	●	●	●	●	AUTO, CHEM, CONS, COS, CPG, ELEC, F&B, FURN, GROC, HEALTH, PHARMA	●	●	●	●	●	●	●
Corporate Traffic Logistics 904-727-0051 www.corporate-traffic.com	B	●		●	●	●	●	●	●	●	●	●	AGRI, APP, AUTO, CONS, COS, CPG, ELEC, F&B, FURN, GROC, HEALTH, PHARMA, TRADE	●	●	●	●	●	●	●
Crowley Logistics 800-342-8226 www.crowley.com	B	●	●	●	●	●	●	●	●	●	●	●	AERO, AGRI, APP, AUTO, CHEM, CONS, COS, CPG, ELEC, ENER, F&B, FURN, GROC, PHARMA	●	●	●	●	●	●	●
CRST Logistics 319-396-4400 www.crstlogistics.com	N	●					●	●	●	●	●	●	AGRI, APP, AUTO, CONS, CPG, ELEC, F&B, FURN, GROC, PHARMA, TRADE		●	●		●	●	
CT Logistics 216-267-2000 www.ctlogistics.com	B	●	●					●	●	●	●	●	AGRI, AUTO, CHEM, CONS, CPG, F&B, GROC, HEALTH, OIL	●	●	●		●	●	●
CTSI-Global 901-766-1500 www.ctsi-global.com	N			●	●	●	●	●	●	●	●	●	AGRI, APP, AUTO, CHEM, CONS, COS, CPG, ELEC, F&B, FURN, GROC, HEALTH, PHARMA, TRADE	●	●			●	●	●
Damco USA 973-514-5126 www.damco.com	B		●	●	●	●	●	●	●	●	●	●	AGRI, APP, CHEM, CPG, ELEC	●	●	●	●	●		
DB Schenker Americas 800-225-5229 www.dbschenkerusa.com	N		●	●	●	●	●	●	●	●	●	●	AERO, AGRI, APP, AUTO, CHEM, CONS, COS, CPG, ELEC, ENER, F&B, GROC, HEALTH, PHARMA, TRADE	●	●	●	●	●	●	
Dependable Distribution Centers 323-768-2626 www.godependable.com	A							◆	●	●	●		APP, AUTO, CONS, COS, CPG, ELEC, ENER, F&B, FURN					●	●	
Distribution Technology 704-587-5587 www.distributiontechnology.com	A			●				●	●	●	●	●	APP, AUTO, CHEM, CONS, COS, CPG, ELEC, ENER, F&B, FURN, GROC, HEALTH, PHARMA, TRADE	●	●	●	●	●	●	
DSC Logistics 847-390-6800 www.dsclogistics.com	B	●	●					●	●	●	●	●	APP, COS, CPG, ELEC, F&B, FURN, GROC, HEALTH, PHARMA	●	●	●	●	●	●	●
Dupré Logistics 800-356-3659 www.duprelogistics.com	B	●						●	●	●	●	●	AGRI, AUTO, CHEM, CONS, CPG, F&B, OIL	●	●	●		●	●	●
Echo Global Logistics 800-354-7993 www.echo.com	N	●		●	●	●	●	◆	●	●	●	●	AERO, APP, AUTO, CHEM, CONS, COS, CPG, ELEC, ENER, F&B, GROC, HEALTH, PHARMA, TRADE	●	●	●	●	●	●	●
England Logistics 801-656-4718 www.englandlogistics.com	B	●		●		■	●	●	●	●	●	●	AERO, AGRI, APP, AUTO, CHEM, CONS, COS, CPG, ELEC, F&B, GROC, HEALTH, OIL, PHARMA, TRADE		●	●	●	●	●	●
Evans Distribution Systems 313-388-3200 www.evansdist.com	B	●	●					●	●	●	●	●	AUTO, CHEM, CONS, CPG, ELEC, F&B, HEALTH	●	●	●		●	●	
Exel/DHL Supply Chain 800-272-1052 www.exel.com	N	●	●	●	●	●	●	●	●	●	●		AERO, AGRI, APP, AUTO, CHEM, CONS, COS, CPG, ELEC, ENER, F&B, GROC, HEALTH, OIL, PHARMA	●	●	●	●	●	●	●
Expeditors International of Washington 206-674-3400 www.expeditors.com	N	●	●	●	●	●	●	●	●	●	●	●	AERO, APP, AUTO, CHEM, CPG, ELEC, F&B, FURN, HEALTH, OIL, PHARMA, TRADE	●	●	●	●	●	●	●
FAC Food Logistics 800-285-7004 www.faclogistics.com	N	●						●	●		●		AGRI, F&B, GROC	●	●	●		●	●	

VERTICAL SPECIALIZATION KEY

AERO Aerospace
AGRI Agriculture
APP Apparel & Textiles
AUTO Automotive
CHEM Chemicals
CONS Construction & Building Mat'ls
COS Cosmetics
CPG Consumer Packaged Goods
ELEC Electronics
ENER Renewable Energy
F&B Food & Beverage
FURN Furniture
GROC Grocery
HEALTH Healthcare
OIL Oil & Gas
PHARMA Pharmaceuticals
TRADE Trade Show

			TRANSPORTATION SERVICES												WAREHOUSING SERVICES						SPECIAL SERVICES											TECHNOLOGY/WEB SERVICES					
INVENTORY MANAGEMENT	VENDOR MANAGEMENT	SHARED SERVICES	SMALL PACKAGE	AIR CARGO	LTL	TRUCKLOAD	INTERMODAL	OCEAN	RAIL	BULK	DEDICATED CONTRACT CARRIAGE	FLEET ACQUISITION	EQUIPMENT/DRIVERS	FINAL MILE	PICK/PACK, SUB-ASSEMBLY	CROSSDOCKING	DC MANAGEMENT	SITE LOCATION	VENDOR-MANAGED INVENTORY	FULFILLMENT	DIRECT TO STORE	DIRECT TO HOME	IMPORT/EXPORT/CUSTOMS	REVERSE LOGS/PROD. LIFECYCLE MGMT	MARKETING/CUSTOMER SERVICE	GLOBAL EXPANSION—SOURCING/SELLING	SECURITY ANALYSIS	CONTINGENCY/CRISIS PLANNING	LOGISTICS/TRANSPORT CONSULTING	LABOR MANAGEMENT	SUSTAINABILITY/GREEN LOGISTICS	EDI	WIRELESS/RFID	TMS	WMS	VISIBILITY	CUSTOMER/SUPPLIER MANAGEMENT
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INBOUND LOGISTICS

TOP 100 3PL PROVIDERS

2012

ASSET/AREA KEY

A	Asset-based
N	Non-asset Based
B	Both
◗	Asia Only
■	Europe Only
◆	U.S. Only

CONTACT INFO	ASSET- OR NON-ASSET-BASED	SMARTWAY TRANSPORT PARTNER	ISO CERTIFIED	AREAS SERVED: ASIA/SOUTHEAST ASIA/INDIA	MIDDLE EAST/NORTH AFRICA	EUROPE/EASTERN EUROPE/RUSSIA	SOUTH AMERICA	US/CANADA/MEXICO	MARKETS SERVED: MANUFACTURING	RETAIL/E-BUSINESS	DISTRIBUTORS/WHOLESALE	SERVICE INDUSTRIES/GOVERNMENT	VERTICAL SPECIALIZATION(S)	LOGISTICS SERVICES: LLP/4TH PARTY LOGISTICS	INTEGRATED LOGISTICS	JIT	GLOBAL TRADE SERVICES	INBOUND LOGISTICS	LOGISTICS PROCESS REENGINEERING	PAYMENT AUDITING/PROCESSING
FedEx SupplyChain 469-524-6938 www.fedex.com/us/supply-chain	B		●	●	●	■	●	●	●	●	●	●	AUTO, ELEC, HEALTH	●	●	●	●	●	●	●
Flash Global Logistics 703-835-0737 www.flashlogistics.com	A		●	●	●	●	●	●	●			●	AERO, CHEM, ELEC, HEALTH, OIL, PHARMA		●	●	●	●	●	
GENCO ATC 800-378-9671 www.gencoatc.com	N	●	●					●	●	●	●	●	APP, AUTO, CHEM, CONS, COS, CPG, ELEC, F&B, FURN, HEALTH, PHARMA		●			●	●	●
Geodis Wilson 732-688-7345 www.geodiswilson.com	N			●	●	●	●	●	●	●	●	●	AERO, APP, AUTO, CHEM, CONS, COS, ELEC, ENER, HEALTH, OIL, PHARMA	●	●		●	●	●	
Greatwide Logistics Services 877-355-6177 www.greatwide.com	B	●						●	●	●	●	●	APP, AUTO, CONS, CPG, ELEC, ENER, F&B, GROC, OIL, PHARMA	●	●	●		●	●	●
Inmar 866-440-6917 www.inmar.com	A							●	●	●			APP, AUTO, COS, CPG, ELEC, F&B, GROC, HEALTH, PHARMA						●	●
J.B. Hunt Transport Services 800-452-4868 www.jbhunt.com	B	●						●	●	●	●	●	AERO, AGRI, APP, AUTO, CHEM, CONS, COS, CPG, ELEC, ENER, F&B, GROC, HEALTH, PHARMA, TRADE		●	●		●	●	●
Jacobson Companies 800-636-6171 www.jacobsonco.com	B	●	●	●	●	●	●	●	●	●	●	●	AGRI, APP, CHEM, COS, CPG, ELEC, F&B, PHARMA	●	●	●	●	●	●	●
JTS (Johanson Transportation Services) 800-742-2053 www.johansontrans.com	N			●		■	●	●	●	●	●	●	AGRI, APP, AUTO, CHEM, CONS, COS, CPG, ELEC, ENER, F&B, FURN, GROC, HEALTH, PHARMA			●		●		●
Kane Is Able 888-356-5263 www.kaneisable.com	B	●	●					●	●	●		●	CPG, F&B, GROC, HEALTH, PHARMA		●	●		●	●	
Kelron Logistics 905-795-6402 www.kelron.com	A	●						●	●	●	●		AGRI, CHEM, CONS, CPG, ELEC, ENER, F&B, FURN, GROC, OIL		●			●	●	●
Kenco Logistic Services 800-758-3289 www.kencogroup.com	B		●					●	●	●	●		AGRI, APP, AUTO, CHEM, CONS, CPG, ELEC, F&B, FURN, GROC, HEALTH, PHARMA	●	●	●		●	●	●
Kuehne + Nagel 201-413-5500 www.kuehne-nagel.com	B	●	●	●	●	●	●	●	●	●	●	●	AERO, AGRI, APP, AUTO, CHEM, CONS, COS, CPG, ELEC, ENER, F&B, GROC, HEALTH, PHARMA, TRADE	●	●	●	●	●	●	●
Landstar System 877-696-4507 www.landstar.com	N	●	●	●	●	●	●	●	●	●	●	●	AGRI, APP, AUTO, CHEM, CONS, COS, CPG, ELEC, ENER, F&B, GROC, HEALTH, PHARMA, TRADE	●	●	●	●	●	●	●
LEGACY Supply Chain Services 603-792-2205 www.legacyscs.com	B		●	◗				●	●	●	●	●	AUTO, CONS, CPG, ELEC, F&B, PHARMA	●	●	●		●	●	
LeSaint Logistics 630-243-5950 www.lesaint.com	B		●					●	●	●	●	●	APP, AUTO, CHEM, CPG, ELEC, ENER, F&B, FURN, HEALTH, PHARMA	●	●			●	●	●
LINC Logistics Company 888-334-5462 www.4linc.com	B	●	●			■		●	●	●		●	AERO, AGRI, AUTO, CPG, ENER, HEALTH	●	●	●	●	●	●	
LMS Logistics 800-355-2153 www.lmslogistics.com	N	●	●					●	●	●	●	●	AGRI, CHEM, CONS	●	●	●	●	●	●	●
Lynden 888-596-3361 www.lynden.com	B	●		●	●	●	●	●	●	●	●	●	AGRI, APP, AUTO, CHEM, CONS, COS, CPG, ELEC, ENER, F&B, GROC, HEALTH, PHARMA, TRADE	●	●	●	●	●		●
LynnCo Supply Chain Solutions 866-872-3264 www.lynnco-scs.com	A	●	●					●	●		●	●	AERO, AGRI, APP, AUTO, CONS, CPG, FURN, OIL	●	●	●		●	●	●
Mallory Alexander International Logistics 800-257-8464 www.mallorygroup.com	N	●	●	●	●	●	●	●	●	●	●	●	AERO, AGRI, APP, AUTO, CHEM, COS, CPG, ELEC, ENER, F&B, FURN, GROC, HEALTH, PHARMA	●	●	●	●	●	●	

VERTICAL SPECIALIZATION KEY

AERO Aerospace
AGRI Agriculture
APP Apparel & Textiles
AUTO Automotive
CHEM Chemicals
CONS Construction & Building Mat'ls
COS Cosmetics
CPG Consumer Packaged Goods
ELEC Electronics
ENER Renewable Energy
F&B Food & Beverage
FURN Furniture
GROC Grocery
HEALTH Healthcare
OIL Oil & Gas
PHARMA Pharmaceuticals
TRADE Trade Show

			TRANSPORTATION SERVICES												WAREHOUSING SERVICES						SPECIAL SERVICES											TECHNOLOGY/WEB SERVICES					
INVENTORY MANAGEMENT	VENDOR MANAGEMENT	SHARED SERVICES	SMALL PACKAGE	AIR CARGO	LTL	TRUCKLOAD	INTERMODAL	OCEAN	RAIL	BULK	DEDICATED CONTRACT CARRIAGE	FLEET ACQUISITION	EQUIPMENT/DRIVERS	FINAL MILE	PICK/PACK, SUB-ASSEMBLY	CROSSDOCKING	DC MANAGEMENT	SITE LOCATION	VENDOR-MANAGED INVENTORY	FULFILLMENT	DIRECT TO STORE	DIRECT TO HOME	IMPORT/EXPORT/CUSTOMS	REVERSE LOGS/PROD. LIFECYCLE MGMT	MARKETING/CUSTOMER SERVICE	GLOBAL EXPANSION–SOURCING/SELLING	SECURITY ANALYSIS	CONTINGENCY/CRISIS PLANNING	LOGISTICS/TRANSPORT CONSULTING	LABOR MANAGEMENT	SUSTAINABILITY/GREEN LOGISTICS	EDI	WIRELESS/RFID	TMS	WMS	VISIBILITY	CUSTOMER/SUPPLIER MANAGEMENT
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INBOUND LOGISTICS

TOP 100 3PL PROVIDERS 2012

ASSET/AREA KEY

A	Asset-based
N	Non-asset Based
B	Both
◗	Asia Only
■	Europe Only
◆	U.S. Only

CONTACT INFO	ASSET- OR NON-ASSET-BASED	SMARTWAY TRANSPORT PARTNER	ISO CERTIFIED	AREAS SERVED: ASIA/SOUTHEAST ASIA/INDIA	MIDDLE EAST/NORTH AFRICA	EUROPE/EASTERN EUROPE/RUSSIA	SOUTH AMERICA	US/CANADA/MEXICO	MARKETS SERVED: MANUFACTURING	RETAIL/E-BUSINESS	DISTRIBUTORS/WHOLESALE	SERVICE INDUSTRIES/GOVERNMENT	VERTICAL SPECIALIZATION(S)	LOGISTICS SERVICES: LLP/4TH PARTY LOGISTICS	INTEGRATED LOGISTICS	JIT	GLOBAL TRADE SERVICES	INBOUND LOGISTICS	LOGISTICS PROCESS REENGINEERING	PAYMENT AUDITING/PROCESSING
Matson Logistics 925-887-6207 www.matson.com	B	●	●					●	●	●	●	●	CPG, ELEC, F&B		●	●		●	●	
MD Logistics 317-838-8900 www.mdlogistics.com	A	●		●	●	●	●	●	●	●	●	●	APP, CONS, COS, CPG, ELEC, HEALTH, PHARMA		●	●	●	●	●	●
Menlo Worldwide Logistics 866-466-3656 www.menloworldwide.com	N	●	●	●		■	●	●	●	●	●	●	AERO, APP, AUTO, CHEM, COS, CPG, ELEC, ENER, F&B, GROC, HEALTH	●	●	●		●	●	●
MIQ Logistics 913-696-7100 www.miq.com	N	●	●	●	●	●	●	●	●	●	●	●	AERO, APP, AUTO, CONS, CPG, ELEC, ENER, HEALTH, OIL	●	●	●	●	●	●	●
New Breed Logistics 866-463-9273 www.newbreed.com	N	●	●			■		●	●	●	●	●	AERO, APP, AUTO, COS, CPG, ELEC, HEALTH	●	●	●	●	●	●	●
Nexus 800-536-5220 www.nexusdistribution.com	B	●						●	●	●	●		AUTO, CONS, CPG, ELEC, F&B	●	●	●		●	●	●
NFI 856-219-7450 www.nfiindustries.com	A	●	●	●	●	●	●	●	●	●	●	●	AERO, AGRI, APP, AUTO, CONS, CPG, ELEC, ENER, F&B, FURN, GROC	●	●	●	●	●	●	●
Odyssey Logistics & Technology (OL&T) 866-487-7481 www.odysseylogistics.com	N	●		●		■		●	●				CHEM, CONS, COS, ENER, OIL	●	●		●		●	●
OHL 615-401-6400 www.ohl.com	N	●		●	●	●	●	●	●	●	●	●	AGRI, APP, AUTO, CHEM, COS, CPG, ELEC, ENER, F&B, FURN, GROC, HEALTH, PHARMA	●	●		●	●	●	●
OOCL Logistics (USA) 212-269-9010 www.ooclogistics.com	B			●	●	●		●	●	●	●		APP, AUTO, CHEM, CONS, CPG, ELEC, FURN	●	●	●		●	●	●
Panalpina 973-683-9000 www.panalpina.com	N		●	●	●	●	●	●	●	●	●	●	AERO, APP, AUTO, COS, CPG, ELEC, ENER, FURN, HEALTH, OIL, PHARMA	●	●	●		●	●	
Penske Logistics 800-529-6531 www.penskelogistics.com	B	●	●	◗		■	●	●	●	●	●		AGRI, APP, AUTO, CHEM, CONS, COS, CPG, ELEC, F&B, FURN, GROC, HEALTH, PHARMA	●	●	●	●	●	●	●
Performance Team 562-345-2200 www.ptgt.net	B	●		●				◆	●	●	●		APP, AUTO, COS, CPG, ELEC, FURN, GROC, HEALTH, PHARMA	●	●	●		●	●	
Pilot Freight Services 610-891-8170 www.pilotdelivers.com	N	●	●	●	●	●	●	●	●	●	●	●	AERO, APP, AUTO, CHEM, CONS, CPG, ELEC, ENER, F&B, FURN, HEALTH, OIL, PHARMA, TRADE	●	●	●	●	●	●	
Port Jersey Logistics 609- 860-1010 www.portjersey.com	N							●	●	●	●	●	APP, COS, F&B, FURN, GROC, HEALTH, PHARMA	●				●	●	
Port Logistics Group 973-249-1230 www.portlogisticsgroup.com	B	●						●	●	●	●		APP, CONS, CPG, ELEC	●	●	●		●	●	
ProTrans International 317-240-4100 www.protrans.com	N	●	●					●	●		●		AUTO	●	●	●		●	●	●
Regal Logistics 866-300-5580 www.regallogistics.com	A	●						●	●	●	●	●	APP, CHEM, CPG, ELEC		●			●	●	●
RMX Global Logistics 888-824-7365 www.rmxglobal.com	N	●						●	●	●	●	●	CONS, F&B, GROC	●	●	●		●	●	
RR Donnelley 888-744-7743 www.rrd.com	N	●	●	●	●	●	●	◆	●	●	●	●	APP, AUTO, CONS, COS, CPG, ELEC, ENER, F&B, FURN, GROC, HEALTH, PHARMA, TRADE	●	●	●	●	●	●	
Ruan 866-782-6669 www.ruan.com	B	●						●	●	●	●		AGRI, AUTO, CHEM, CONS, CPG, F&B, FURN, GROC, HEALTH	●	●	●		●	●	●

VERTICAL SPECIALIZATION KEY

AERO Aerospace
AGRI Agriculture
APP Apparel & Textiles
AUTO Automotive
CHEM Chemicals
CONS Construction & Building Mat'ls
COS Cosmetics
CPG Consumer Packaged Goods
ELEC Electronics
ENER Renewable Energy
F&B Food & Beverage
FURN Furniture
GROC Grocery
HEALTH Healthcare
OIL Oil & Gas
PHARMA Pharmaceuticals
TRADE Trade Show

			TRANSPORTATION SERVICES												WAREHOUSING SERVICES						SPECIAL SERVICES											TECHNOLOGY/WEB SERVICES					
INVENTORY MANAGEMENT	VENDOR MANAGEMENT	SHARED SERVICES	SMALL PACKAGE	AIR CARGO	LTL	TRUCKLOAD	INTERMODAL	OCEAN	RAIL	BULK	DEDICATED CONTRACT CARRIAGE	FLEET ACQUISITION	EQUIPMENT/DRIVERS	FINAL MILE	PICK/PACK, SUB-ASSEMBLY	CROSSDOCKING	DC MANAGEMENT	SITE LOCATION	VENDOR-MANAGED INVENTORY	FULFILLMENT	DIRECT TO STORE	DIRECT TO HOME	IMPORT/EXPORT/CUSTOMS	REVERSE LOGS/PROD. LIFECYCLE MGMT	MARKETING/CUSTOMER SERVICE	GLOBAL EXPANSION–SOURCING/SELLING	SECURITY ANALYSIS	CONTINGENCY/CRISIS PLANNING	LOGISTICS/TRANSPORT CONSULTING	LABOR MANAGEMENT	SUSTAINABILITY/GREEN LOGISTICS	EDI	WIRELESS/RFID	TMS	WMS	VISIBILITY	CUSTOMER/SUPPLIER MANAGEMENT
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INBOUND LOGISTICS TOP 100 3PL PROVIDERS 2012

ASSET/AREA KEY

A	Asset-based
N	Non-asset Based
B	Both
◗	Asia Only
■	Europe Only
◆	U.S. Only

CONTACT INFO	ASSET- OR NON-ASSET-BASED	SMARTWAY TRANSPORT PARTNER	ISO CERTIFIED	AREAS SERVED: ASIA/SOUTHEAST ASIA/INDIA	MIDDLE EAST/NORTH AFRICA	EUROPE/EASTERN EUROPE/RUSSIA	SOUTH AMERICA	US/CANADA/MEXICO	MARKETS SERVED: MANUFACTURING	RETAIL/E-BUSINESS	DISTRIBUTORS/WHOLESALE	SERVICE INDUSTRIES/GOVERNMENT	VERTICAL SPECIALIZATION(S)	LOGISTICS SERVICES: LLP/4TH PARTY LOGISTICS	INTEGRATED LOGISTICS	JIT	GLOBAL TRADE SERVICES	INBOUND LOGISTICS	LOGISTICS PROCESS REENGINEERING	PAYMENT AUDITING/PROCESSING
Ryder Supply Chain Solutions 888-887-9337 www.ryderscs.com	B	●	●	◗				●	●	●	●	●	AERO, AGRI, APP, AUTO, CHEM, CONS, COS, CPG, ELEC, ENER, F&B, FURN, GROC, HEALTH, PHARMA	●	●	●	●	●	●	●
Saddle Creek Logistics Services 888-878-1177 www.saddlecrk.com	B	●	●					●	●	●	●	●	AERO, APP, CONS, COS, CPG, ELEC, ENER, F&B, GROC, HEALTH,	●	●	●		●	●	●
SEKO Logistics 630-919-4800 www.sekologistics.com	N		●	●	●	■	●	●	●	●	●	●	AERO, APP, AUTO, COS, CPG, ELEC, ENER, F&B, FURN, HEALTH, OIL, PHARMA, TRADE	●	●	●	●	●		
Shippers Warehouse 214-275-1060 www.shipperswarehouse.com	B		●					●	●	●	●	●	AGRI, APP, AUTO, CHEM, CONS, COS, CPG, ELEC, F&B, FURN, GROC, HEALTH, PHARMA, TRADE	●	●	●		●		
TransGroup Worldwide Logistics 800-444-0294 www.transgroup.com	N	●	●	●	●	●	●	●	●	●	●	●	AERO, AGRI, APP, AUTO, CHEM, CONS, COS, CPG, ELEC, ENER, F&B, HEALTH, OIL, PHARMA, TRADE	●	●		●	●	●	
Transplace 972-413-9266 www.transplace.com	N	●		◗		■	●	●	●	●			APP, AUTO, CHEM, CONS, CPG, ELEC, F&B, FURN, GROC, HEALTH, OIL	●	●	●	●	●	●	●
Transportation Insight 828-485-5215 www.transportationinsight.com	N	●		●	●	●	●	●	●	●	●		AGRI, APP, AUTO, CHEM, CONS, COS, CPG, ELEC, ENER, F&B, GROC, HEALTH, OIL, PHARMA, TRADE	●	●		●	●	●	●
Tucker Company Worldwide 856-317-9600 Www.tuckerco.com	N	●	●	●		■	●	●	●	●	●	●	AERO, AGRI, CHEM, CONS, COS, CPG, ELEC, HEALTH, OIL, PHARMA, TRADE	●	●	●		●	●	●
UniGroup Logistics 800-241-1323 unigrouplogistics.com	B	●	●	●	●	●	●	◆	●	●	●	●	AERO, AUTO, CONS, CPG, ELEC, F&B, FURN, HEALTH, TRADE	●	●	●	●	●		
Union Pacific Distribution Services 402-544-7999 www.upds.com	N	●						●	●		●	●	AGRI, AUTO, CHEM, CONS, CPG, ENER, F&B, OIL	●		●		●		
Unyson Logistics 314-687-1270 www.unysonlogistics.com	N	●						●	●	●	●	●	APP, CPG, F&B, FURN, PHARMA,			●		●		●
UPS 800-PIC-KUPS www.ups.com	B	●	●	●	●	●	●	●	●	●	●	●	AERO, APP, AUTO, CONS, CPG, ELEC, ENER, F&B, FURN, HEALTH, OIL, PHARMA,	●	●		●	●	●	●
UTi Worldwide 562-552-9400 www.go2uti.com	N	●	●	●	●	●	●	●	●	●	●	●	AERO, AGRI, APP, AUTO, CHEM, CONS, COS, CPG, ELEC, ENER, F&B, GROC, HEALTH, OIL, PHARMA	●	●	●	●	●	●	●
Vantix Logistics 800-737-5423 www.vantixlogistics.com	B							●	●	●	●	●	AGRI, APP, CONS, CPG, F&B, GROC	●				●		
Verst Group Logistics 859-379-1204 www.verstgroup.com	A	●	●			■		●	●	●	●	●	AGRI, APP, AUTO, CHEM, CONS, COS, CPG, ELEC, F&B, FURN, GROC, HEALTH, OIL, PHARMA	●	●	●	●	●		●
Wagner Industries 816-918-5308 www.wagnerindustries.com	B	●						●	●	●	●		COS, CPG, ELEC, F&B	●	●	●		●	●	●
Weber Logistics 562-356-6458 www.weberlogistics.com	B	●						●	●	●	●	●	APP, AUTO, CHEM, CPG, ELEC, F&B, GROC, HEALTH	●	●	●	●	●	●	●
Werner Enterprises 800-228-2240 www.werner.com	A	●		●	●	●	●	●	●	●	●		AGRI, CONS, COS, CPG, ELEC, ENER, F&B, FURN, GROC, OIL	●	●	●	●	●	●	●
Wheels Group 905-602-2700 www.wheelsgroup.com	B	●	●	●	●	●	●	●	●	●	●	●	AERO, AGRI, APP, AUTO, CHEM, CONS, COS, CPG, ELEC, ENER, F&B, FURN, GROC, HEALTH, PHARMA	●	●	●	●	●	●	●
WSI (Warehouse Specialists Inc.) 920-731-3115 www.wsinc.com	B	●						●	●	●	●	●	AGRI, APP, AUTO, CHEM, CONS, COS, CPG, ELEC, ENER, F&B, FURN, GROC, HEALTH, TRADE	●	●	●	●	●	●	●
Yusen Logistics 201-553-3880 www.us.yusen-logistics.com	N	●	●	●	●	●	●	●	●	●	●	●	AERO, AGRI, APP, AUTO, CHEM, CONS, CPG, ELEC, ENER, F&B, FURN, GROC, HEALTH, PHARMA	●	●	●		●	●	

VERTICAL SPECIALIZATION KEY

AERO	Aerospace	**COS**	Cosmetics	**GROC**	Grocery
AGRI	Agriculture	**CPG**	Consumer Packaged Goods	**HEALTH**	Healthcare
APP	Apparel & Textiles	**ELEC**	Electronics	**OIL**	Oil & Gas
AUTO	Automotive	**ENER**	Renewable Energy	**PHARMA**	Pharmaceuticals
CHEM	Chemicals	**F&B**	Food & Beverage	**TRADE**	Trade Show
CONS	Construction & Building Mat'ls	**FURN**	Furniture		

			TRANSPORTATION SERVICES												WAREHOUSING SERVICES						SPECIAL SERVICES											TECHNOLOGY/WEB SERVICES					
INVENTORY MANAGEMENT	VENDOR MANAGEMENT	SHARED SERVICES	SMALL PACKAGE	AIR CARGO	LTL	TRUCKLOAD	INTERMODAL	OCEAN	RAIL	BULK	DEDICATED CONTRACT CARRIAGE	FLEET ACQUISITION	EQUIPMENT/DRIVERS	FINAL MILE	PICK/PACK, SUB-ASSEMBLY	CROSSDOCKING	DC MANAGEMENT	SITE LOCATION	VENDOR-MANAGED INVENTORY	FULFILLMENT	DIRECT TO STORE	DIRECT TO HOME	IMPORT/EXPORT/CUSTOMS	REVERSE LOGS/PROD. LIFECYCLE MGMT	MARKETING/CUSTOMER SERVICE	GLOBAL EXPANSION—SOURCING/SELLING	SECURITY ANALYSIS	CONTINGENCY/CRISIS PLANNING	LOGISTICS/TRANSPORT CONSULTING	LABOR MANAGEMENT	SUSTAINABILITY/GREEN LOGISTICS	EDI	WIRELESS/RFID	TMS	WMS	VISIBILITY	CUSTOMER/SUPPLIER MANAGEMENT
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READERS' CHOICE TOP 10 3PL EXCELLENCE AWARDS 2012

What elevates a relationship from a workable collaboration to a truly great partnership?

We try to describe this elusive state in so many ways:

"He just gets me."

"She's the yin to my yang."

"It's like he can read my mind."

Sometimes you work with someone and everything just clicks. In working relationships, this kind of understanding yields innovative ideas, streamlined workflows, and game-changing progress. For shippers building partnerships with third-party logistics (3PL) providers, this translates to efficiency gains and bottom-line benefits: "Ryder continually finds operational improvements and positively trending key performance indicators," explains P.S., manager, finance and logistics.

A great 3PL partner sticks with you when the going gets tough: "J.B. Hunt goes above and beyond for our company during perilous situations," states L.T., sourced products manager.

They share your burden so you can concentrate on the task at hand: "Menlo manages our inventory and quality issues along with our logistics requirements," says S.J., order fulfillment manager. "This makes my job easier and allows me time to focus on my customers."

And don't underestimate the importance of personal connections: "Our contacts at C.H. Robinson are more like a family than a business," says M.V., dispatcher. "They are all easy to work with and extremely pleasant."

True partners depend on each other, thrive on each other's successes, and share their appreciation for one another – which is where our 2012 Readers' Choice Top 10 3PL Excellence Awards come in.

Casting 8,638 votes, *Inbound Logistics* readers offered their input on the 3PL partners that rock their world – and 3,182 of those shippers took the time to offer examples and kudos. (*See Partner Appreciation, right, for just a few examples.*)

Respondents covered the supply chain spectrum – from shipping clerks to CEOs. They work for mom-and-pop shops and global leaders such as Home Depot, Halliburton, Coca-Cola, Avery Dennison, ConAgra Foods, Domino's Pizza, General Mills, Big Lots, and Toyota. They spend millions annually on a range of logistics services. (*See About the Survey Respondents, right.*)

Whether they've enlisted one 3PL partner or several, one trait shippers value is reliability.

"Transplace takes care of our freight, and takes care of us," says E.B., load coordinator.

"BNSF Logistics delivers with the fewest issues, and resolves them if any arise," states C.R., operations manager.

Other readers have great esteem for 3PLs that demonstrate agility. "Unyson Logistics adapts rapidly to changes that occur both internally and externally," reports J.P., logistics analyst.

AND THE WINNERS ARE

1. C.H. Robinson
2. Ryder
3. Menlo Worldwide Logistics
4. UPS SCS
5. J.B. Hunt (TIE) Landstar (TIE)
6. Unyson Logistics
7. UTi
8. BNSF Logistics
9. Echo Global
10. Transplace (TIE) Exel/DHL (TIE)

Above all, shippers appreciate 3PLs that deliver great customer service – and they're willing to pay for it. In fact, despite 66 percent of survey respondents citing cutting transport costs as their top challenge, 79 percent report they would choose a 3PL that delivers customer service over one that delivers cost savings. And half the survey respondents cite poor customer service as the primary reason 3PL partnerships fail.

"Echo Global meets our needs, along with our customers' needs," says D.S., business manager. "It is the most cost-competitive, flexible, friendly, and responsive provider."

A shipper who can speak that highly of its 3PL has found a true supply chain partner. On the following pages, we spotlight shippers' most valued partners – the 3PLs behind the scenes who help shippers succeed. Read on to find out which providers were voted this year's MVPs.

3PLs TO WATCH

Although they did not receive enough votes to appear on this year's Top 10, these 3PLs made a strong showing in our reader poll:

- Access America Transport
- Coyote Logistics
- FedEx SupplyChain
- Kenco Logistic Services
- Unishippers

ABOUT THE SURVEY RESPONDENTS

FUNCTION

Corporate Management	36%
Supply Chain / Purchasing / Supply Management	16%
Transportation / Traffic Management	18%
Logistics / Distribution	30%

INDUSTRY

Manufacturer	50%
Retail/Wholesale	37%
Services or Government	13%

TRANSPORT/LOGISTICS SPEND

More Than $50 Million	18%
$10-$49 Million	42%
$1-$10 Million	25%
Less than $1 Million	15%

SERVICES READERS BUY

Air Freight	53%
Motor Freight (TL/LTL)	79%
Ocean, Ocean Intermodal	41%
Rail, Rail Intermodal	42%
Small Package Delivery, Expedited, Express	70%
3PL, Contract Logistics	64%
Supply Chain Technology, Software/Systems	67%
Transportation Equipment	19%
Warehousing & DC Services	64%
Materials Handling Systems, Equipment, Forklifts	40%
International Shipping, Freight Forwarding	42%
Site, Port, or Facility Selection	32%

PARTNER APPRECIATION

A SAMPLING OF READER COMMENTS

"I have worked with many providers over the past 20 years. BNSF Logistics sets the bar that all others fall under." –**M.H.,** strategic alliance manager

"Our product is winter-related, and we must deliver no matter the weather conditions. Even when nobody else can make it happen, C.H. Robinson finds a way to get our product delivered." –**S.B.,** transportation & logistics supervisor

"Echo Global has provided excellent service to our company for the past three years. They provide competitive pricing and their customer service is unmatched." –**E.N.,** logistics manager

"With a company-wide Lean mentality, Menlo Worldwide strives to provide a mutually beneficial competitive edge to their customers. Menlo never punches out." –**C.H.,** logistics analyst

"We see Ryder as a strategic partner that shares our vision and goals. It is an important part of our supply chain, and provides outstanding customer service while aggressively attacking our shared cost structure." –**C.F.,** warehousing services manager

"We rely specifically on Transplace for most of our logistics requirements, and it has yet to fail us when called upon." –**M.H.,** vice president of purchasing

READERS' CHOICE

TOP 10 3PL EXCELLENCE AWARDS 2012

1 C.H. Robinson

WHY THEY WON: If anyone knows the value of nurturing shipper partnerships, it's this year's top-rated 3PL.

"C.H. Robinson is a long-term strategic partner that has continually provided a high level of service while improving our overall costs," says customer Scott Farmer, executive vice president of global purchasing, Berry Plastics Corporation.

The Eden Prairie, Minn.-based 3PL helps shippers take a big-picture view of their supply chain. "More opportunities exist today because of globalization," says **John Wiehoff, C.H. Robinson's CEO and chairman of the board**. "We help our customers by developing proprietary systems, strategies, and processes that allow them to accelerate their competitiveness in the global marketplace."

CLIENT ROSTER:

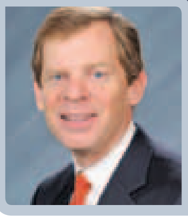
- Metalfrio Solutions
- Associated Grocers
- General Cable
- Jel Sert
- Harvest Time International
- ChemPoint.com
- Evergreen Packaging

CASE STUDY: METALFRIO SOLUTIONS

Metalfrio Solutions, a producer and marketer of plug-in food service refrigerators, employed multiple truckload and less-than-truckload (LTL) providers, but none supplied white-glove delivery services for in-store coolers. The company could not offer final-mile deliveries or handle other special customer requests.

C.H. Robinson established a strategic account manager for Metalfrio to handle all LTL, special handling, and truckload needs. In addition, the 3PL structured a more cost-effective U.S./Mexico cross-border program to improve shipping efficiency and reduce risk.

2 Ryder



WHY THEY WON: According to *IL* readers, Ryder's strengths include its "ability to adapt," "hard-working and driven employees," and "innovative and creative solutions."

Ryder customer Joe Smith, president of Alabama Metals Industries, shares this high opinion of the Miami-based 3PL: "We selected Ryder because of its proven ability to design, manage, and optimize transportation, resulting in reduced transportation costs and improved flexibility and customer service across all our locations."

Performance and innovation set Ryder apart, says **John Williford, president, Global Supply Chain Solutions, Ryder System Inc.** "Great execution comes from our well-trained and passionate employees, and a culture that emphasizes continuous improvement for all of our clients," he says. "We've been able to innovate by understanding the needs of clients in key industry groups, and investing in new capabilities and solutions for them."

CLIENT ROSTER:

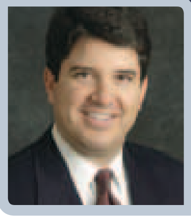
- Toyota
- CVS Caremark
- Bacardi
- Dean Foods
- Kraft
- PepsiCo
- Cisco Systems
- **Overhead Door Corporation**

CASE STUDY: OVERHEAD DOOR CORPORATION

Overhead Door Corporation, an integrated garage door systems manufacturer, used to wrestle with excessive product damage, and drivers who weren't invested in maintaining a high level of customer service.

Partnering with Ryder allowed the company to implement a solution that comprises a mix of inbound and outbound supply chain management and dedicated contract carriage. Ryder also put in place a progressive fuel program to reduce consumption and increase backhauls. With these solutions in place, Overhead Door Corporation realized immediate benefits. It reduced in-transit product damage, improved customer satisfaction by 10 percent, reduced fuel costs by three percent, cut transportation and distribution costs by four percent, and generated $1.5 million in third-party backhaul revenues.

3 Menlo Worldwide Logistics



WHY THEY WON: San Mateo, Calif.-based Menlo Worldwide Logistics makes itself an integral part of customers' business processes. "It's no longer good enough to provide a one-time reduction in costs or be really good at the discrete execution of a logistics function. Those are table stakes," says **Robert L. Bianco Jr.**, **president, Menlo Worldwide Logistics**. "We apply Lean principles to drive efficiencies, continuous improvement, and ongoing cost reduction. We focus on optimizing the flow of products through a supply chain. It's a continuum of repeatable process and action."

The 3PL's dedication to serving customer needs has not gone unnoticed. "Menlo goes above and beyond contractual obligations," says one reader.

Others praise Menlo's "outstanding, reliable, flexible service," "lean warehousing processes and thought leadership," and "quick response."

CLIENT ROSTER:

- Bobcat
- Caterpillar
- Cisco Systems
- Comcast
- Dow Chemical
- Electrolux
- Navistar
- **New Era Cap Company**

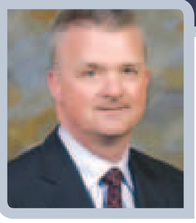
CASE STUDY: NEW ERA CAP COMPANY

New Era's warehouse challenges included insufficient capacity, constant SKU turnover, and shifting lead times for globally sourced products. It enlisted Menlo to help enhance inbound product delivery date visibility; improve service and reduce overall operating costs; and decrease New Era's involvement in distribution operations.

The 3PL consolidated New Era's warehouse operations; upgraded its enterprise resource planning systems; and integrated with Menlo's warehouse management system. Thanks to these improvements, the capmaker gained advanced visibility of inbound products and delivery dates, and improved fulfillment efficiency.

"Menlo has transformed from a commoditized distribution provider to a valued supply chain partner that continues to push the outsourcing envelope in new directions," says Jim Patterson, COO and senior vice president, New Era Cap Company.

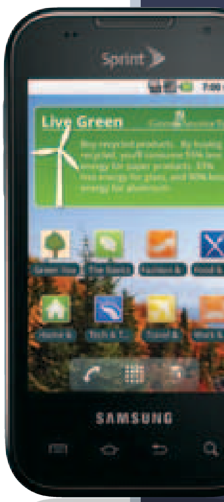
4 UPS Supply Chain Solutions



WHY THEY WON: *IL* readers value the Atlanta-based 3PL's "fast and efficient information flow" and "worldwide recognition."

"UPS' quality of products and services are highly regarded in the industry," notes one reader.

UPS returns its customers' high regard. "We've become one of the world's largest third-party logistics providers because we serve as an extension of our customers' business," says **Brad Mitchell**, **president, logistics and distribution, UPS**. "We make logistics a competitive advantage for our customers by developing flexible supply chain solutions, streamlining their operations, reducing their supply chain costs, improving their customer service, and helping them expand into new markets."



The 3PL's strategy works for customer Derek Brown of Sprint. "UPS Supply Chain Solutions has far exceeded my expectations in price, service, and quality, and has allowed me to meet my organization's budget goals," he says.

CLIENT ROSTER:

- March Networks
- **Sprint**
- Toshiba
- Philips Healthcare
- Embraer

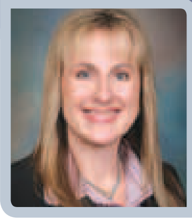
CASE STUDY: MARCH NETWORKS

March Networks, a global leader in intelligent IP video and business intelligence applications, partners with UPS on its global field stocking and repair operations, leveraging UPS' Louisville, Ky., warehousing and distribution facilities.

Previously, March Networks' global repair operations were located in Ogdensburg, N.Y., but relocating to the UPS Louisville facility reduced the overall time for products to be repaired and returned to the shelf from up to seven days to fewer than two.

UPS also worked with March Networks to establish its Global Advanced Replacement reverse logistics model for reclaiming millions of dollars worth of defective assets from the field. By reusing and recycling these assets, March Networks can prevent them from entering landfills.

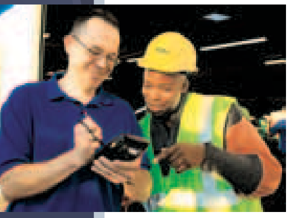
READERS' CHOICE TOP 10 3PL EXCELLENCE AWARDS 2012



5 TIE J.B. Hunt

WHY THEY WON: "We have never questioned our decision to award J.B. Hunt our business," says customer Ken Cromwell, senior logistics specialist, CertainTeed. "Its ability to manage our entire business from inventory management, on-time delivery, and commitment to safety continues to impress and add value – all of which is only possible through the efforts and dedication of the on-site staff."

The Lowell, Ark.-based 3PL makes it a point to look out for its customers' interests. "As shippers continue to face challenges ranging from fluctuating fuel prices to tight capacity, we provide capacity-oriented solutions centered on delivering customer value and industry-leading service," says **Shelley Simpson**, **president, Integrated Capacity Solutions, chief marketing officer and president, J.B. Hunt Transport Services**.



CLIENT ROSTER:

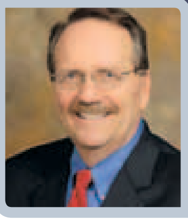
- Heinz
- Sports Authority
- Lowe's
- Anheuser-Busch
- Nestlé
- Coca-Cola
- Scotts
- Dollar General
- Amazon
- Sysco
- Certainteed

CASE STUDY: CERTAINTEED

When J.B. Hunt began working with building products manufacturer CertainTeed, staff at the company's New Jersey location unloaded about three rail flatcars of gypsum board daily. Trucked-in merchandise supplemented inventory shortages of up to 20 truckloads per week, resulting in hefty costs to the company.

Today, J.B. Hunt staff operates the entire supply chain, seamlessly functioning as an extension of CertainTeed's business. Production has doubled to about six rail flatcars daily – each the equivalent of four truckloads. The 3PL receives, unloads, warehouses, and ships product to job sites and retail locations.

J.B. Hunt's inventory management of the nearly eight million square feet of warehoused gypsum board has eliminated approximately 90 percent of the need to cover shortages with truckload shipments, cutting costs without sacrificing CertainTeed's focus on customer service.



5 TIE Landstar

WHY THEY WON: "Landstar is a true class-act company that honors its commitments," declares one *IL* reader.

"Landstar's unique operating model sets us apart from other 3PLs by coupling agents and technology to improve a customer's supply chain," says **Landstar Chairman, President, and CEO Henry Gerkens**.

Long-time customers come to rely on the Jacksonville, Fla.-based 3PL's resources. "Cooper Standard began developing a relationship with Landstar a decade ago," says Michael Silvio, director, supply chain management, for auto component producer Cooper Standard. "We knew inventories were going to be reduced, and the stresses of just-in-time operations made service a critical factor in developing the partnership.

"What keeps the relationship intact is the service our Landstar agent provides," he continues. "The 3PL has evolved from an expedited provider to an integrated part of our transportation and materials management strategy.

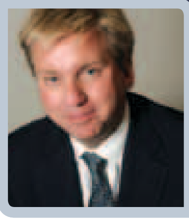
"Consultants often ask, 'What keeps you up at night?'" Silvio adds. "But when Landstar says my load is covered, I don't lose sleep."

CASE STUDY: A TOP-TIER AUTOMOTIVE SUPPLIER

A Tier-1 automotive supplier was looking for single-source premium freight management. The company wanted transactional visibility, as well as financial visibility and accountability for its expedited freight.

Landstar developed a customized, single-source solution that provided the supplier with a fixed pricing schedule for transportation services. The 3PL also created a team to implement processes for the customer, including pricing, and carrier procurement and management; recruited carriers to participate in the program; and trained workers at the customer's facilities on using Landstar's tools to set up and track shipments via the Web.

6 Unyson Logistics



WHY THEY WON: *IL* readers can't say enough about the Downers Grove, Ill.-based 3PL's service and dedication. "I always feel like I am Unyson's only customer," says one.

"Unyson has been a pleasure to work with," says customer Jennifer Parks, Owens Corning. "We get fast response and quick deliveries."

Taking a unique approach to each shipper's needs plays a key role in Unyson's service strategy. "We do not provide a cookie-cutter solution," says **Donald Maltby**, **chief supply chain officer, Unyson**. "Flexibility, commitment to savings, service, and visibility are the drivers of our success. We constantly communicate with our customers about market changes through routine e-mail blasts and customer quarterly reviews. These alerts keep our customers attuned to the market, and allow us to collaborate on strategies that mitigate any changes that may impact their network."

CLIENT ROSTER:

- Big Lots
- **Home Depot**
- Southeastern Container
- General Mills
- Toys "R" Us
- Hussmann
- Western Container
- WD-40
- Rexam Plastics

CASE STUDY: WD-40

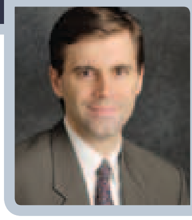
In early 2007, WD-40, maker of the household problem-solver, began searching for a third-party logistics partner to which it could outsource the tactical execution of its strategic transportation program. The company's 3PL to-do list included managing day-to-day transportation planning and execution of all shipments; providing transportation savings and driving total supply chain cost reductions; and offering strategic network design services.

Soon, WD-40 was working with Unyson's transportation management system to control shipments and optimize transportation through effective carrier/mode/service selection, pool distribution, and consolidation strategies.

Within months, WD-40 realized transportation savings of more than 18 percent, with a 20-percent increase in on-time customer deliveries.

"Unyson just makes things work," says Ryan Talbot, operations analyst, WD-40. "We can rely on them to handle our freight needs efficiently and reliably."

7 UTi



WHY THEY WON: "UTi is a critical part of our global logistics strategy, network development, and supply line management," says UTi customer Alan E. Wenzloff, senior operations manager, Veyance Technologies. "It has been a pleasure developing a relationship with a service provider we can trust to plan, execute, and perform at the service levels our business required."

Ed Feitzinger, **executive vice president, global contract logistics and distribution, UTi**, stands ready to help the Long Beach, Calif.-based 3PL's customers face the challenges of today's market. "In the past decade, most companies figured out landed costs and how to move production and warehouses to optimize their supply chain," he says. "Now that more companies have that expertise, they will react more quickly than they did before to changes in factors such as production and fuel costs."

CLIENT ROSTER:

- Ansell
- Diversey
- Elizabeth Arden
- **Panasonic**
- Veyance Technologies

CASE STUDY: VEYANCE TECHNOLOGIES

Veyance Technologies is the exclusive manufacturer and marketer of Goodyear Engineered Products. Faced with supply chain inefficiencies, Veyance created a plan to consolidate multiple distribution centers into a central facility servicing its North American customer base through a hub-and-spoke distribution network.

The change to a new distribution network required collaborating with a single provider, UTi, to execute Veyance's initiative, which included crossdocking, warehousing, sealed-loop backhauls, specialized services, transportation management, freight forwarding, light manufacturing, and postponement.

This supply chain transformation resulted in a 47-percent reduction in international trade lanes, a $50-million or 30-percent reduction in inventory, and a $14-million reduction in logistics services cost.

READERS' CHOICE

TOP 10 3PL EXCELLENCE AWARDS 2012

8 BNSF Logistics

WHY THEY WON: Readers who voted for Springdale, Ark.-based BNSF Logistics cited the 3PL's "philosophy of partnering," "consistent creative solutions," and "superior level of commitment to integrity at every level of the logistics chain."

Others praised the 3PL's dependability. "The staff goes beyond scheduling. They make sure the shipment is delivered on time, and are proactive in resolving any shipping issues," says one shipping and receiving manager.

For **BNSF Logistics President Ray Greer**, the 3PL's advantage lies in its commitment to exceeding customer expectations and maintaining a can-do attitude. "We have expanded our physical presence into seven new markets to get closer to clients and gain understanding of the challenges unique to their area of operations," he says. "We've also invested in greater shipment visibility and service reporting tools. Together with the customer, we can identify and address opportunities to continuously enhance service."

The 3PL helps its customers meet the challenge of maintaining leaner inventory levels, while ensuring they can meet their customers' service and supply requirements. "BNSF Logistics assists through design and deployment of more effective supply chain solutions, and managing a broad and diverse network of professional capacity providers who consistently deliver globally," Greer says.

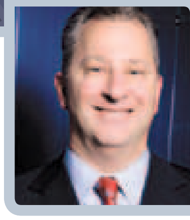
"We are investing in expanding our global reach – both through organic growth and acquisition – to better serve North American clients domestically and around the globe with a suite of multi-modal solutions spanning ground, rail, ocean, and air," he adds.

These efforts add up to customer satisfaction. "BNSF Logistics' commitment to customer service and drive to provide customers with the most reasonable prices and reliable service are why I consider them number-one," says one project manager.

CLIENT ROSTER:

- Gamesa
- Owens Corning
- Rio Tinto
- La-Z-Boy
- Schlumberger
- Amazon
- Home Depot
- **The Clorox Company**
- Pioneer

9 Echo Global



WHY THEY WON: Technology tools play a starring role in Echo Global's strategy for supporting shippers' supply chain success. "We help our clients simplify and streamline their transportation management process through our proprietary technology platform and significant buying power," says the Chicago-based 3PL's **CEO, Doug Waggoner**. "Our transportation management applications allow us to streamline that process by providing additional capacity, and giving our clients complete visibility into their transportation."

According to *IL* readers, these efforts are paying off. "Echo Global is an incredibly valuable partner to have in growing our business," says one.

As shippers continue to face a difficult market, Echo stands ready to help. "The economy has softened in recent months, but if there is suddenly a five-percent increase in GDP growth, it could pose a challenge for many shippers," Waggoner notes. "Tightened capacity is good for us, because one of our strengths is finding capacity in a tight market."

CLIENT ROSTER:

- Daymon Worldwide
- EcoWater Systems
- KX Technologies
- Daktronics
- **Surface Shields**
- Archway
- Culligan
- LKQ
- Samuel Strapping

CASE STUDY: CULLIGAN

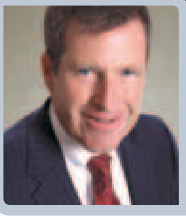
With roughly 800 franchise dealers in more than 90 countries, global water products company Culligan has a complex transportation setup that required a top-of-the-line logistics service. The initial wishlist Culligan presented Echo included trimming transportation costs, streamlining logistics operations, enhancing pickup and delivery accuracy, and improving documentation.

Echo has provided all that and more, taking the time to analyze Culligan's transportation flow and develop customized solutions for the company.

"Echo has brought a level of accuracy to our logistics that we had never experienced before," says Donald Avent, director of sourcing, Culligan.

10 TIE

Transplace



WHY THEY WON: Transplace customers appreciate the Frisco, Texas-based 3PL's "top-notch people, communication, and honesty," and determination to "help us achieve our goals at reasonable prices."

Providing innovative supply chain solutions is where Transplace excels, according to customer Rick DeVore, director of transportation planning and logistics for industrial and specialty chemicals distributor Univar. "Choosing Transplace as our transportation technology provider supports our core value that requires continuous improvement for our customers, improving results for all our stakeholders by doing the right things better every time," he says.

The 3PL strives to find creative solutions to shippers' challenges. "Transplace is a non-asset-based, multi-modal transportation management expert," says Transplace CEO **Thomas K. Sanderson**. "We find the best transportation solution for each customer, without prejudice in utilizing our own equipment. Our Lean Six Sigma approach to continuous improvement and our proprietary TMS SaaS technology, set us apart from other 3PLs, but our people are our ultimate differentiator."

CLIENT ROSTER:

- Anna's Linens
- Baker Hughes
- Huhtamaki
- Del Monte
- DIRECTV
- Elementis
- Intertape Polymer Group
- National DCP

CASE STUDY: HUHTAMAKI

For Huhtamaki, a Finland-based global supplier of consumer and specialty packaging, getting retail and food service products to customers and from suppliers around the globe is a challenge. The Transplace International team set out to identify business requirements, challenges, and opportunities. It established procedures and processes, and utilized its expertise to streamline and consolidate multiple components and vendors into a single system.

Transplace's ability to enhance Huhtamaki's program helped the company gain visibility to its logistics operation, allowing it to optimize. By merging Huhtamaki's information and logistics components, Transplace provided the power to make informed critical decisions, and created numerous opportunities to reduce costs, create efficiencies, and leverage Huhtamaki's spending power to realize better pricing.

10 TIE

Exel/DHL

WHY THEY WON: Exel's record of supply chain excellence goes a long way in inspiring customer confidence. *IL* readers call the Westerville, Ohio-based 3PL "a collaborative partner in rooting out waste," and applaud its "strong knowledge, experience, and wealth of resources."

A track record this strong doesn't happen by accident. "The customer is at the center of everything we do at Exel," says **Mike Gardner**, chief development officer, Exel. "We use specific processes and tools that allow us to understand and respond to their needs effectively – while retaining an unrelenting focus on operational excellence and core continuous improvement disciplines."

CLIENT ROSTER:

- DuPont
- ThinkGeek
- Chrysler
- Goodyear
- Johnson & Johnson
- Volkswagen
- John Deere
- **JCPenney**
- 7-Eleven
- Williams-Sonoma

CASE STUDY: THINKGEEK

ThinkGeek is a rapidly growing e-tailer that experiences an intense peak season. In order to position itself for growth, ThinkGeek partnered with Exel.

Exel's solution included implementing vertical mechanization so ThinkGeek could control costs and still meet peak volumes. Exel moved the operation from a distribution center in New Jersey to an existing shared-use DC in central Ohio that offered the needed scale, capability, and favorable location. The new facility's automated three-level pick towers reduce congestion by storing product up instead of out, which ensures efficiency during peak seasons.

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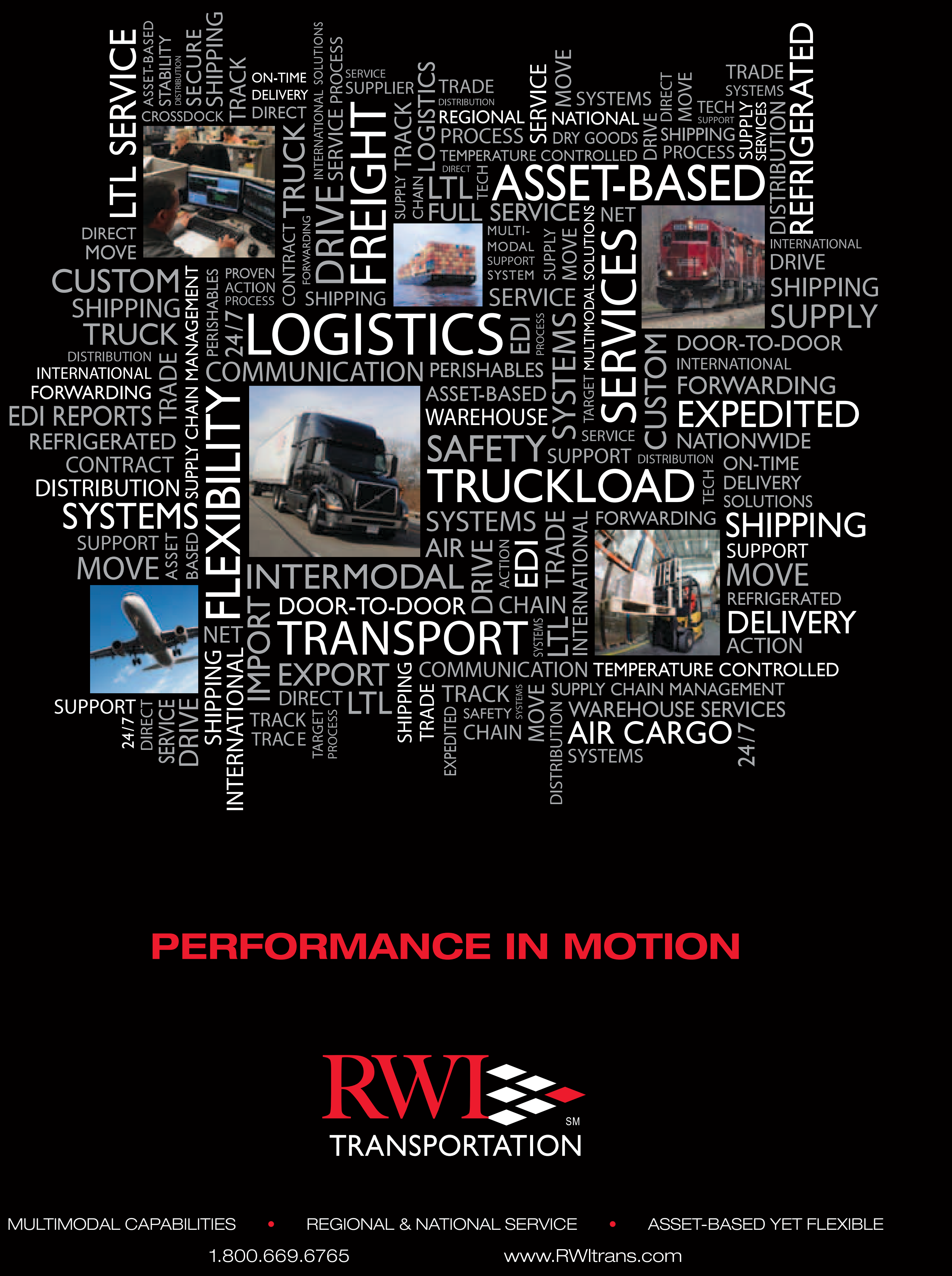

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Loading Dock Safety:

NO MORE RISKY BUSINESS

Busy loading docks can create a dangerous work environment. But recent advances in dock safety technology help keep workers safe on the job.

Safety is a key consideration in all parts of a distribution center, but one area typically concerns facilities managers the most: loading docks. In today's fast-paced logistics environment, loading and unloading semi-trailers can pose safety risks for everyone from forklift operators and dock attendants to service technicians and bystanders.

No across-the-board solution to loading dock safety exists because no two facilities are exactly the same. Several recent advances in dock safety technology, however, can help address the issue.

WHEEL CHOCKS AREN'T THE ANSWER

One common loading dock accident occurs when drivers mistakenly pull away while a forklift is still inside the trailer. Another common problem is "trailer creep," which happens when trailers (particularly those with air-ride suspension) gradually move away from the dock because of the ongoing impact and momentum of forklifts traveling in and around them.

In both cases, the first step in accident prevention is to secure the trailer to the dock using a locking device on either the trailer's rear impact guard (RIG) or rear wheel. Unfortunately, many loading docks still use old-fashioned wheel chocks in front of trailer tires as a means of restraint.

This approach can create a host of problems, including insufficient pullout resistance, chock slippage, and time and safety concerns related to placing wheel chocks by hand. Additionally, chocks don't have an embedded communication system to let the truck driver, lift operator, and dock personnel know they are in place.

RIG-based vehicle restraints may provide a better option. These restraints feature a full rotating hook that automatically locks to the trailer's RIG, using the backing trailer's energy. RIG-based restraints help prevent all types of trailer separation, including early departure, trailer creep, trailer tip-over from landing gear collapse, and trailer up-ending.

Most RIG-based restraints also incorporate communications systems that indicate when they are engaged and when it is safe to load and unload the trailer.

RIG-based restraints don't work in all situations, however. For example, the retail, beverage, and grocery industries operate docks that handle a large volume of trailers with hydraulic gates. They typically can't use RIG-based restraints because those gates block access to the RIG.

High-visibility green lights at the dock opening's corners and on the leveler indicate the trailer is locked to the dock and safe to enter. When it is unlocked, the lights switch to red.

International shipping container and intermodal chassis traffic is another consideration, particularly because volumes are expected to increase when the Panama Canal expansion is completed. Intermodal chassis often have RIG obstructions, but a new type of rotating-hook RIG-based restraint alleviates this problem. These newest models incorporate a "shadow hook" to offer another layer of protection, ensuring the chassis is secured to the dock.

For applications where RIG-based restraints are inappropriate, wheel-based restraints—which engage trailer wheels and secure vehicles in place—can provide a solution. They work with virtually any trailer, and, like RIG-based restraints, eliminate dangers associated with early departure and trailer separation. They also provide communication, using lights and audible alarms. Operators can select either automatic or manually operated units.

SHOW SOME RESTRAINT

Although automatic units are generally considered the safest and most productive option, many manual wheel-based restraints deliver safety and cost benefits similar to RIG-based restraints. Several types of manual wheel restraints are available, providing varying levels of protection.

One design uses a steel barrier positioned along a frame assembly in front of the trailer's tire. The barrier securely locks into place and doesn't require adjustments. This is the best option.

Another design uses an articulated arm with springs for positioning the barrier. The arm folds against the dock face when not in use. When a trailer is ready for service, one end of the arm is detached from the dock face and extended out to the trailer's rear tire. The barrier at the end of the arm is then placed on a grade-level plate located in front of a trailer's rear tire, where the barrier and plate engage to lock the wheel in position.

The articulated arm style does require adjustments, however, and dirt, debris, snow, and ice can prevent the teeth from properly engaging. Additionally, without a frame assembly, the barrier can disengage and move off to the side if the truck driver aggressively pulls the trailer away.

Integrated into most wheel-based restraints are systems that automatically and clearly communicate the status of the restraint so that both the lift truck operator and truck driver know when they can safely

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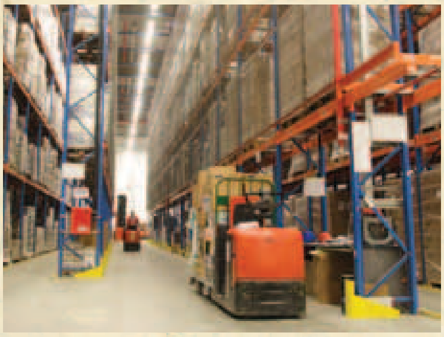

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CHOOSING MANUAL WHEEL RESTRAINTS

Facilities managers considering manual wheel restraints must take a number of factors into consideration when deciding which model to use. These factors include:

Trailer tire dimension. Trailer tire dimension influences barrier height because it is one of several factors that determine the restraining force required to securely lock the trailer in place. Advanced restraints are designed to match the latest tire diameter specifications, which range from 34.25 to 42.5 inches.

Axle configuration. Numerous axle configurations are used on different trailer types, including vehicles with single and multiple axles. A key factor incorporated into restraint design is the distance between the rear of the trailer and the front end of the tire where the barrier is positioned. Some wheel-based restraints provide a range of 43 inches to 12 feet to accommodate common axle configurations and virtually any other configuration encountered.

Trailer design. In addition to lift gates, trailers may include design features that can impact the restraint's ability to properly engage the tire, such as fenders, mud flaps, or hydraulic trailer jacks. The most recent restraint designs accommodate the widest possible range of issues associated with unique trailer designs.

Truck centering and side-to-side movement. Wheel-based restraints that incorporate the use of a frame assembly help the truck driver accurately and consistently center the trailer to the dock, which, in turn, ensures proper restraint engagement. The design also eliminates the potential for the barrier to pop out the side of the tire toward the operator or a bystander.

Barrier height. Another key variable is barrier height. The higher the barrier, the more force required to drive over it. Advanced wheel-based restraints are engineered so that the barrier height is at or close to the tire's center line. Some restraints feature barrier heights as high as 19 inches.

Pullout resistance. The energy required to pull over a barrier is referred to as pullout resistance. Though there is no standard for pullout resistance, 32,000 pounds is a frequently quoted guideline.

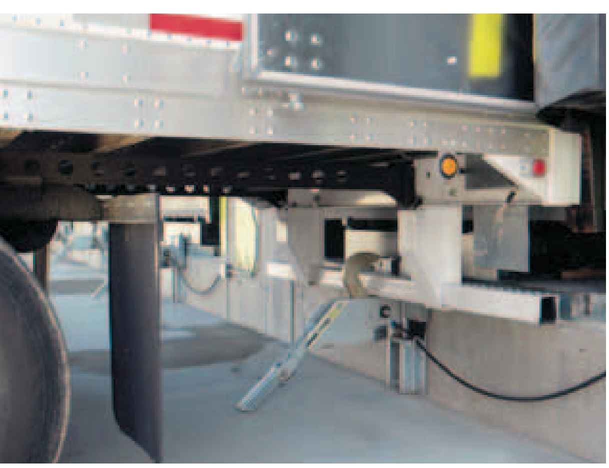
Weather resistance and visibility. Most restraints are designed to withstand the abuse of backing trailers, and incorporate a galvanized finish that holds up to extreme weather conditions. Many are also designed to be highly visible and allow for easy clearing of snow and debris.

Wheel-based manual restraints

perform their duties. The systems generally include sensors that detect when the trailer is present and the barrier is safely engaged; LED lights inside the dock that signal when the barrier is safely engaged, and it is safe for the lift truck operator to begin unloading or loading; and LED lights outside the dock that signal when the operator has finished loading or unloading, and it is safe for the driver to pull away.

THE IMPORTANCE OF COMMUNICATION

Communications systems follow a logical sequence that provides a clear, visual message to forklift operators and truck drivers. Once the restraint is safely engaged, the light on a control panel inside the dock automatically changes from red to green to indicate that trailer servicing can begin. The light outside turns red, signaling to the truck driver not to pull away.



Rotating-hook restraints feature a hook that locks to the trailer's rear impact guard. A lighted control panel communicates the trailer's locked status to forklift operators and truck drivers.

Some restraints can be equipped with advanced systems to enhance trailer loading and unloading safety. In addition to performing the same functions as a traditional communications system, the most recent technology uses lights around the corners of the dock doors to show restraint status directly in the forklift driver's line of sight, free from any visual obstructions. It also offers lights at the rear of the leveler to confirm the restraint's status to forklift operators where they are most at risk—inside the trailer.

Wheel-based restraints' communications systems are often incorporated into a single dock-control system that integrates multiple loading dock components, including the leveler and door. Interconnected or interlocked components ensure proper equipment sequencing for added safety and productivity.

Loading dock accidents happen every day, producing devastating consequences. Modern vehicle restraints with visual communications systems safely secure trucks so loading and unloading at the dock becomes a less risky procedure. ■

URBAN DELIVERY

GETTING INTO THE GRID

Traffic congestion and infrastructure limitations complicate delivery in major cities, but expedited carriers use network engineering, communication tools, and contingency planning to ensure they meet shipper needs.

By Joseph O'Reilly

URBAN DELIVERY

In the buildup to the 2012 Olympics and Paralympics, much discussion centered around how London, notorious for congestion, would manage an influx of visitors during the summer. For local businesses and transportation providers, it became a major obstacle—a logistics Olympiad.

For a company such as global expedited carrier DHL—which typically handles about 50,000 deliveries in the city each day—it was only natural to turn to runners for help. In May 2012, the expediter announced it was partnering with U.K. foot-courier JogPost to help carry critical parcel shipments during the Olympics—and perhaps beyond.

JogPost couriers helped DHL transport products on foot and via public transportation, making final-mile deliveries in areas left inaccessible by the Olympics route network or congestion—which the company expects to increase by 30 percent on London's core routes. In addition, DHL established a dedicated operations control center to monitor and adapt services for issues such as network changes and localized congestion.

Planning for any major event in an urban area is by no means business as usual. But the hyper-hurdles that inevitably surface bring to bear familiar challenges shippers and service providers encounter daily in major cities across the world. Network engineering, on-the-fly communication, and contingency planning are critical differentiators when time-sensitive shipments are on the line.

NOWHERE TO TURN

Concern about congestion around U.S. cities and ports has increased over the past two decades, but the focus has amplified considerably in recent years. Transportation infrastructure is failing, sustainability has become a rallying call, and traffic-related costs are accumulating. While the recession brought some repreive, researchers at the Texas Transportation Institute (TTI) see a daunting trend that began with the rapid growth, then decay, of President Dwight D. Eisenhower's U.S. Interstate System.

"The only way U.S. companies have been able to keep their products competitive in the face of increasing traffic congestion and rising transportation costs is to squeeze every ounce of efficiency they can out of their supply chain," says TTI research scientist David Ellis. "But efficiency has its limits, and without additional transportation capacity, freight costs will increase significantly. The result will be higher prices and lost jobs."

TTI's 2011 *Urban Mobility Report*, which has become the bible for urban logistics research since it debuted 29 years ago, details some troubling developments. In 2010, the congestion "invoice" for the cost of extra time and fuel in 439 urban areas reached $101 billion ($23 billion of which was due to trucks). By comparison, it was $79 billion in 2000 and $21 billion in 1982.

"Congestion is becoming a bigger problem outside of rush hour, with about 40 percent of the delay occurring in the midday and overnight hours, creating an increasingly serious problem for businesses that rely on efficient production and deliveries," the report states.

For these reasons, DHL's U.S. engineers spend a great deal of time and effort planning where best to locate service stations in urban areas. While the German conglomerate shuttered its U.S. domestic delivery operation in 2009—a consequence of the global economic downturn and a failure to compete with FedEx and UPS in the domestic express delivery market—it has since turned its attention to the international side of the business, which has always been a strength.

Today, DHL operates a hub in Cincinnati, five gateways (New York, Miami, Los Angeles, San Francisco, and Cincinnati), and 100 service centers.

"The first thing we look at when locating a station is how to take advantage of opposite traffic patterns," says Don

Parking on city streets can be challenging. UPS maintains good relationships with city officials, ticket agents, and even doormen so drivers can make their deliveries quickly.

McCutcheon, director of industrial engineering at DHL Express. "A major challenge in urban logistics is outbound and inbound traffic movement in the morning, and the reverse in the afternoon. We work to ensure locations in and around urban areas are positioned against those patterns."

DHL also studies data from external sources to identify the most efficient routes, and has invested in vehicle monitoring and communication technologies that enable stations to support drivers with up-to-date instructions and directions—which are especially critical when an exception occurs with a time-sensitive shipment.

But the greater challenge for any urban delivery company—and some commuters—is beating rush-hour traffic.

"The objective is to get into cities prior to main traffic congestions," explains McCutcheon. "That helps on all points, from delivering earlier to reducing carbon emissions. We use expedited shuttles to move shipments from our stations to certain meet points within the city. This reduces the number of vehicles in traffic."

Instead of sorting and dispatching five vans in the morning, DHL uses one shuttle for delivery. It can get that vehicle out earlier and faster in the morning because there is less individual driver preparation. The shuttle then moves to a central point where DHL vans can pick up loads. Apart from fuel cost savings, using a hub-and-spoke delivery model supports DHL's green efforts by reducing carbon-emitting vehicles that might otherwise sit in traffic.

"We also use walking routes in dense locations—generally major metro areas where you can park or move a shuttle to a central point, then have couriers make deliveries," McCutcheon explains. "But you need the right density to make that approach work."

SERVING THE BIG APPLE CORE

New York City has that kind of density. The metropolis is growing much faster than the infrastructure necessary to support it. "Urban area demand" in the New York City metro area is outpacing roadway growth by more than 30 percent, reports TTI. The Big Apple isn't alone—it shares that distinction with 39 other major U.S. cities.

"New York City's population is 8.2 million—2.2 times that of Los Angeles, the next-largest city," explains Chip Napier, director of engineering at UPS. "Population density is a challenge. The New York City area has grown

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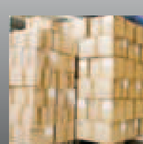


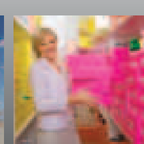
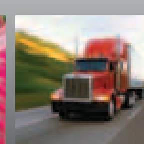

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9.4 percent during the past 20 years—the equivalent of 680,000 people—without many infrastructure changes.

"Compared to other cities, New York has an average geographical area—303 square miles. But it's far denser and more congested than most other cities in the world," he adds.

The Borough of Manhattan spans 23 square miles, and is home to 1.6 million people, which equates to 70,000 people per square mile. More than one million people visit the city daily, comprised of commuters and tourists. On average, 113,000 people per square mile occupy Manhattan on any given day. This type of density creates challenges.

UPS operates three facilities in Manhattan—one in midtown at 43rd Street, one called UPS Manhattan South, and another termed UPS Manhattan North. Every morning, each facility receives inbound tractor trailers, which are processed, then dispatched for delivery. The reverse process occurs in the evening.

While the north and south facilities are primarily used for local sorting, the 43rd Street operation is an eight-story hub that occupies one city block and employs 500 drivers. Five floors are operational, and UPS has the ability to unload and load tractors on multiple levels. Two other hubs are in close proximity—one on Long Island, and another across the Hudson River in New Jersey.

ACCESS: AN OBSTACLE

One unique obstacle UPS and other trucking companies encounter delivering freight to and from New York City is a lack of access points.

"The tractor-trailers in our feeder network can only go across the George Washington Bridge," says Napier. "Shorter trailers can go through the Lincoln Tunnel, but they can't use the Holland Tunnel or other area bridges. Ninety percent of our freight has to travel the George Washington bridge—the lone access point."

On Long Island, the Long Island Expressway is the only road UPS tractor-trailers can travel, because of overpasses. If a shipment is delayed 15 minutes in the morning, then gets caught in rush-hour traffic, the impact can be considerable—especially for time-sensitive shipments.

"Multiple contingencies are necessary," says Napier. "If a major accident clogs the Lincoln Tunnel, we have to divert trucks across the George Washington

To speed delivery on busy New York streets, DHL studies data to plan the most efficient routes, and equips drivers with up-to-date instructions and directions.

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Bridge. We need on-the-fly communication to make these changes."

When Therapath started operations on West 45th Street in Manhattan in 2004, it immediately began working with UPS. The company provides comprehensive diagnostic and consultative muscle, nerve, and neuropathology services to medical centers and practicing physicians across the United States. And New York City is home to some of the best in the world.

Each day, Therapath sends out specimen collection kits to customers and receives tissue samples in return. Deliveries and pickups occur in the morning and evening, respectively—via overnight delivery.

"Every evening, we receive a report from UPS detailing the next day's packages," says Sean Honahan, director of operations, Therapath. "When an air bill is activated, it shows up on the report. We review that overnight. Then, once the packages arrive in the morning, we inspect them, check tracking numbers, and match each one to the report. If a shipment doesn't arrive at our facility, we work with our local UPS representatives to find the package in the system."

Most packages are shipped in a Styrofoam cooler with a standard ice-pack. "We rarely receive dry-ice packages with flash frozen samples," says Geoff Whitehouse, manager of client services, Therapath. "We mostly deal with fresh tissue that we try to keep cool during transit. That's why we use overnight shipping."

The time-sensitive nature of Therapath's shipments adds an extra level of importance and customer service to the process. Every priority package the company sends out has a laboratory pack, return label, and UPS contact card inside. And, because UPS delivers priority overnight Monday through Saturday, Therapath has been able to grow its business with weekend delivery.

"We provide customers with a telephone number to call for the pickup," explains Honahan. "Therapath not only provides the laboratory service, but also the delivery. When a customer calls a dedicated UPS representative for pickup at 5 p.m., it happens. We don't have to walk the logistics beat at Therapath. We leave it up to the customer to work with UPS to make sure the pickup occurs when they request it."

Therapath also takes advantage of the fact that in New York, UPS picks up shipments until 5:30 p.m., which gives it a full day to fill orders. That doesn't happen in other parts of the country.

In New York City, UPS delivers between 7:30 a.m. and 8:30 p.m. Sometimes it provides off-hours service, but that's an exception. Still, UPS will go out of its way—in other ways—to meet customer demand.

"Parking and dock space are limited in the city, especially in Queens and Brooklyn," Napier explains. "A manufacturer might only operate one dock. We have to get shipments in and out within two-hour windows throughout the day."

UPS can't get into some places with a tractor-trailer. If a customer requires skid deliveries and pickups, UPS may have to visit a location six times a day, and pick up five skids on a 24-foot van. In other parts of the country, the expediter might drop and spot a trailer, then come back to pick it up at the end of the day.

UPS drivers carry handheld units that can communicate alerts if a premium shipment needs to arrive at a consignee's location within a specific timeframe. In Manhattan, where it often takes three drivers to service one city block, UPS has developed some practical solutions to meet those needs.

"We put two drivers in a van—one delivers to the right side of the street, the other delivers to the left," says Napier. "This saves us from dealing with parking congestion and enables quicker deliveries for time-sensitive shipments.

"We also use drivers who deliver morning shipments to hold parking spaces for drivers in critical areas where we know we have time-sensitive deliveries," he adds. "Parking logistics in New York City is challenging."

Parking often is a factor UPS drivers can't control. Maintaining good relationships with city officials, ticket agents, doormen, and even elevator operators is important—that's how drivers get in and out of locations.

"When a 50-story building only runs two freight elevators, and you don't have a good relationship with the operator, it's a problem," says Napier.

MOVING FORWARD

If TTI's 2011 *Urban Mobility Report* is any indication of the challenges that U.S. commerce faces in the coming years, the United States will require Olympic-like dedication, focus, coordination, and planning to repair the ills that currently plague transportation infrastructure. And urban logistics will continue to be an area that shippers and services providers focus on to create greater efficiencies, streamline costs, and reduce carbon footprints.

Even as the economy improves, history suggests the U.S. transportation and logistics sector cannot be complacent about dealing with current and looming congestion concerns in and around major demand centers.

"Previous recessions in the 1980s and 1990s saw congestion declines that were reversed as soon as the economy began to grow again," states the report. "And we think 2008 was the best year for mobility in the last several; congestion was worse in 2009 and 2010.

"Anyone who thinks the congestion problem has gone away should check the past." ■


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THINKING SMALL

The Business Case for LCL

Using less-than-containerload (LCL) services to ship smaller ocean freight volumes can reap large benefits.

by Lisa Terry

When it comes to ocean freight, many shippers strive for full containerloads (FCL), believing that's their best option for moving goods across the sea. Often, they're correct—less-than-containerload (LCL) shipments can cost considerably more. But as some shippers begin to take a broader view of their supply chains, they find that smaller shipments can be the most cost-effective choice for certain combinations of goods, order size, and market need.

Perhaps that's why LCL has grown over the past decade. Getting a precise read on the percentage of steamship cargo moving via LCL is tough because service providers often consolidate shipments, then present them to steamship carriers as full containers. But in an analysis of shipments presented directly to steamship companies for consolidation into containers—a minority of the LCL market—international trade data research firm Datamyne found that LCL shipments held steady from 2010 through 2011 at nearly 15 percent of containers.

Several LCL consolidators report increases during the first half of 2012. The proportion of FCL to LCL shipments shifts with the economy, says Allen Clifford, president of the Containerization + Intermodal Institute (CII), a non-profit organization that educates shippers about containerization.

The high cost of air cargo is a driving force behind the rise of LCL, which offers increasingly diverse options. Within the past few years a new service tier—expedited LCL service—has emerged to meet demand for time-definite ocean transport, particularly for goods that previously moved by air. New steamship lanes are making Asia-to-U.S. East Coast LCL a more viable option. And, as sourcing locations diversify, new LCL services are entering the market.

Who Uses LCL?

Small- and mid-size businesses use LCL frequently because they simply don't have the volume to fill a full load, and waiting until they do would mean missing delivery deadlines. LCL shipments are also typical for companies opening new markets or serving smaller ones. And sometimes manufacturing a product—say, a sparingly used but vital and perishable ingredient for hand cream—depends on a small but regular supply. Retailers, especially apparel, are frequent LCL users, as are the automotive, oil and gas, chemicals, and e-commerce industries.

Avoiding air freight may have been a strong initial driver for shifting to LCL, but today another supply chain factor draws customers: smaller orders.

"In a down and uncertain market, companies are cautious about how much freight and inventory they produce," says Ken Black, director of logistics and engineering for Crowley Maritime Corporation, a U.S. marine solutions, transportation, and logistics company. When a customer wants smaller orders more frequently, air freight and LCL are the only global transportation options.

"LCL cargo shipments have increased because companies are skittish about buying volume," says Clifford. Because today's sophisticated technology can deliver better demand visibility, supply chain managers can more accurately forecast their needs and schedule smaller orders to arrive at prescribed intervals just in time—a tactic some logistics professionals call "warehouse on the water."

LCL shipments from Europe to the East Coast can arrive in as few as eight days, says Greg Howard, global CEO at CaroTrans, a Clark, N.J.-based non-vessel-operating common carrier (NVOCC) and ocean freight consolidator. The combination of increasing freight costs, tighter air cargo regulation, and airport delays convinces some shippers to decide they can wait a little longer for their goods.

It turns out they do not always have to wait that much longer for ocean shipments compared to air freight. "Nothing moves overnight from Asia," notes Joe Albelo, director of sales at Con-way Freight, a less-than-truckload carrier headquartered in Ann Arbor, Mich. "Airfreight shipments typically take five to eight days, due to delays or capacity constraints."

The simple definition of LCL's sweet spot is when a shipment weighs less than 10,000 pounds, or measures less than 800

It's the shipper's responsibility to provide accurate documentation and information to their LCL service provider.


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cubic feet. But the true answer is more complicated, and the picture changes as rates fluctuate.

Total landed cost can be critical to help establish LCL shipping's true price tag. But so can the impact of choosing to move a smaller shipment sooner or a larger one later. Factors include manufacturing costs, the time it takes a manufacturer to fill a complete container, and the carrying cost of the excess inventory that moves in a full containerload. What is the cost of product obsolescence, and lost sales and profit if the goods are not available when they're needed? How does this compare to FCL's savings?

Expedited less-than-containerload service has grown to meet increased shipper demand for time-definite ocean transport.

The equation tips toward LCL for Beauty & Logistics, a Miami-based fulfillment provider for distributors selling health and beauty products into duty-free shops in the Caribbean and South and Central America. Customer orders are typically one to five pallets, which must arrive in time to meet promotional and product-launch windows.

"Sometimes the deciding factor is not cost savings or transit time, but customer satisfaction," says Jose Rodriguez, export agent for Beauty & Logistics, which shipped via air until about five years ago, and now uses Crowley Maritime Corporation as its consolidator.

Some providers may offer services to reduce costs, such as consolidation close to sourcing points, or "milk runs" in which goods are picked up from multiple suppliers along a corridor to create a consolidated container. This might cost less than transporting the goods inland all the way to the port area, then paying for consolidation services—and doing the reverse at the destination. "Inland costs dramatically decrease," says Black. "Shippers can run domestic truckload one way."

The ability to guarantee a certain cargo volume over time means it is possible to negotiate a competitive rate for LCL, says Robert Lieberman, owner/managing director of Glass Packaging Solutions, a Lincolnton, N.C., importer of high-end glass bottles from Europe. Many of his customers request LCL shipments as part of just-in-time inventory programs.

Even for small shipments, however, these rates may not equal a better deal. "Consider the cost of a 20-foot container," advises Sara Mayes, president of Gemini Shippers Group, a New York-based shippers' association. "If you are moving 14 or 15 cubic meters of cargo, it's probably cheaper to ship FCL."

Expanding Options

As sourcing locations diversify and demand increases, the scope of LCL services has grown. "The routes have always been there, but they're growing in size, with more vessels and more frequency," says CII's Clifford.

"CaroTrans has enhanced its LCL offerings, expanding trade lanes and adding more point-to-point services to avoid overseas hubs and handling centers," adds Howard. The new service lanes include China to Chile, Chile to Peru, and Australia to Europe.

Con-way Freight is expanding OceanGuaranteed, the expedited LCL service it offers in conjunction with international supply chain service provider APL Logistics. The service, which ships from 12 Asian ports to Los Angeles and Seattle, recently added ports in Xiamen, China, and Jakarta, Indonesia. OceanGuaranteed is a premium, guaranteed, day-definite and asset-based LCL service that is 30 percent faster than standard ocean/intermodal moves, and up to 75 percent less expensive than air freight. The service is intended for high-value products, time-critical materials, and items that have a short shelf life, with not enough margin to warrant air freight, but requiring more reliable transit times than traditional LCL.

A definitive arrival date is a particular distinction. "LCL used to be a shipper's least-favorite option because there is no certainty of delivery or transit time to mainland customers," says Con-way's Albelo. The guaranteed delivery dates have attracted business even from customers within 300 to 400 miles of West Coast ports, to ensure they avoid processing delays. OceanGuaranteed freight is typically offloaded within five hours of the vessel's arrival.

Other logistics professionals report increased use of alternative routing, if the shipper can afford the extra time it sometimes requires. "The biggest difference is Asia to the East Coast," says Stephen Dedola, chief operating officer of Dedola Global Logistics, an international freight forwarder headquartered in Los Alamitos, Calif. "It's an all-water route, but costs less than mini-landbridge," in which goods are delivered to a West Coast port and moved by train to their ultimate destination.

The Upside of LCL

LCL delivers a number of benefits. Shippers can buy specific service


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packages from full-service consolidators, and ensure extra shipment supervision. Beauty & Logistics chose its consolidator for the combination of technology-enabled visibility and the ability to work with a contact person at its destination ports.

"Some shippers don't use online tools, and don't plan to," says Rodriquez. "It's important to have both a contact person at the destination, and automated service in the United States for status updates."

Other advantages LCL provides include:

■ **Delineated costs.** LCL makes it easier to allocate freight costs because an LCL shipment's order amount or cubic foot size is clear.

■ **Flexibility.** The small order sizes enabled by LCL not only reduce inventory investment, they also give shippers flexibility. "Shippers can change their product mix on a dime without wasted inventory," notes Glass Packaging Solutions' Lieberman, who ships LCL with Troy Container Line, a Red Bank, N.J.-based NVOCC. "We don't mind paying 10 cents more if we have that flexibility, because it may pay off in the long term."

■ **Speedier vessels.** Chris Hellow, chief operating officer of the import department at Troy Container Line, which ships about 80 percent of its cargo via LCL, says transit time in consolidation will be fastest with LCL because consolidators can select vessels with direct routes or fewer stops as opposed to long routes with multiple stops.

■ **Preferential treatment.** "LCL consolidation containers move at higher freight rates than general commodity FCL, so carriers tend to give them preferential loading," says CaroTrans' Howard. Another reason: LCL container shipments are usually consistent in volume, and typically shipped port-to-port.

SELECTING A CONSOLIDATOR

In addition to the due diligence a company must undertake to ensure the financial viability and integrity of any service provider, choosing a consolidator, international freight forwarder, or NVOCC with particular capabilities and qualities can help make LCL shipping easier.

Primary requirements include a strong track record and a solid network. "A good consolidator is only as good as the destination agent or services," says Ken Black, director of logistics and engineering for Crowley Maritime Corporation.

Make sure the consolidator offers all the services required at the destination, such as strong local Customs and transportation knowledge, and several partners to provide flexible shipping options. Robert Lieberman, owner/managing director of Glass Packaging Solutions, develops personal relationships within his consolidator partners' companies, and sends them strategically timed e-mails to help manage shipments.

Ensure the consolidator offers the services you want – end-to-end, only inbound or outbound, and the right modes and markets – particularly if sourcing locations are growing more diverse. CaroTrans reports an increase in LCL containers in Vietnam, Brazil, Australia, Europe, India, and the United Kingdom. "Consider using a master consolidator that can offer critical mass and service reliability to ensure your shipment doesn't sit waiting for enough cargo to fill a container," suggests Greg Howard, global CEO, CaroTrans.

Other items for the selection checklist include solid technology systems that provide shipment visibility, established processes for handling goods, and use of bonded warehouses for consolidation/deconsolidation. Know how the provider handles damages.

Also investigate the warehouse where consolidation will take place. How experienced is the staff? How well do they pack? How far is it from the port, and how smooth is the route?

Finally, verify that security measures include well-organized processes, the right certifications, and established documentation and release instructions so the shipment is passed into the right hands. A domestic bonded warehouse secured to U.S. Customs and Border Protection standards, and use of video to record loading and unloading, are also valuable.

Tradeoffs and Risks

By its very nature, LCL introduces extra risk into shipping. Chief among them is loss of control over the cargo. The consolidator may have relationships with multiple ocean carriers, so the shipment could move on any one of several carriers' vessels—even if the shipper has an FCL contract with a different ocean carrier.

In addition to the typical vagaries of ocean transport, shipments risk damage from other goods sharing the container. Consolidation and deconsolidation mean extra handling, and shipments may go to one or more secondary sort centers before arrival at the destination port—exposing the cargo to damage and theft risks. This can be particularly true for economy LCL services that include several stops along the way.

Shipment documentation is another concern. An LCL container is only as customs-ready as the weakest paperwork. One shipper not in compliance can delay all the properly managed shipments. "For OceanGuaranteed service, we separate C-TPAT from non-C-TPAT-certified cargo," says Con-way's Albelo. The service also clears its LCL shipments through Customs before arrival.

High-quality consolidators take pains to select like shipments for consolidation.


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They avoid mixing commercial goods with shipments made by individuals, hazardous with non-hazardous materials, and non-compatible hazardous shipments.

A good consolidator knows what items Customs tends to check more thoroughly and keeps those separate from other goods, says Dedola. But hazardous goods can sometimes experience delays because of other hazardous shipments the consolidator is handling at that time, limiting service options.

Fees can also add up. Consider forklift and accessorial charges; documentation, demurrage, and clean truck fees; peak-season surcharges; and costs associated with PierPASS, a traffic mitigation program. Some fees are the same whether the shipment is FCL or LCL, so the shipping-cost-per-item increases for LCL shipments. Some consolidators and logistics providers seek to mitigate the likelihood of unexpected fees and keep costs more predictable by aggregating fees into a landed cost.

"If shippers are straightforward with the information they provide to freight forwarders, there should be no problems," advises CII's Clifford. "If they leave details out, they might get a few surprises."

For example, one bottlemaker forgot to mention the wire swing top on a shipment of glass bottles, and the shipment was delayed for four weeks while U.S. Customs and Border Protection determined if the wire was explosive.

Other tradeoffs include:

- Earlier cargo and dock cut-off times, and more time for delivery at the end of the route, adding as much as one week to transit time.
- Extra packaging required.
- Delays. Many steamships are opting for slow steaming on some routes to cut fuel costs—moving at 19 knots rather than 22 to 23 knots as in years past. Together with consolidation and deconsolidation time and interim stops, that can mean long and uncertain transit times.

Best Practices for LCL Shipments

While consolidators offer many services, the ultimate onus for successful LCL falls on the shipper.

Most importantly, shippers must ensure they have compiled the correct documentation. "Of the 17,000 individual shipments we will handle this year, at least 20 percent will have documentation issues that incur extra charges for importers," says Troy's Hellow.

It is also vital to plan sufficient time for Customs clearance. Don't promise to meet a customer's delivery date within five days of discharge, for example, when Customs delays could push delivery time to 14 to 21 days.

Effective packaging is the key to avoiding some LCL risks. Packaging requirements exceed even those of LTL, because the cargo will not only be packed with other shippers' goods, but will be subject to the rigors of sea transport.

"Square, neat freight is best for LCL, because stackability is a big issue," says Crowley's Black.

In the United States and Europe, LCL consolidators often emphasize pallets and shrinkwrap. In Asian ports, many goods are hand-packed directly into containers without forklifts to increase space utilization, so cartons suitable for manual handling are a must. Many NVOCCs, consolidators, and freight forwarders offer packing guidelines on their Web sites.

Uniformity also helps; it may pay to wait to ship oversize or odd-shaped goods until you can fill your own container, due to the extra handling and risk.

Another strategy is amassing shipments from multiple suppliers so yours becomes the head load or nose load—the shipment with the largest volume in the container—which can reduce costs. "Volume wins in this business, even at the LCL level," says Dedola.

Some shippers also look to buy LCL services opportunistically. "There are some good deals on LCL from service providers trying to fill containers," he adds.

Finally, know that "issues will always arise," says Hellow. "Choose a service provider that can fix problems quickly and efficiently."

Full containerloads continue to be the goal for shippers looking to keep a tight lid on shipping costs. But LCL services are evolving and diversifying to fit specific needs in a marketplace hungry for new and cost-effective transportation options. ■

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Materials handling automation and warehouse technology are transforming forklift fleets into competitive weapons—and distribution facilities into finely tuned, demand-responsive machines.

By Joseph O'Reilly

"The dynamics of distribution are changing," says Bruce Stubbs, director of industry marketing for Everett, Wash.-based inventory tracking solutions company Intermec. "Companies want immediate results."

This demand for speed and responsiveness spans the entire supply chain, from consumers to retailers and upstream manufacturers and suppliers.

The warehousing industry's appetite for new materials handling equipment and solutions has closely followed consumption patterns and speed-to-market expectations. For example, the e-commerce revolution has reduced the consumer shopping experience to point-and-click proficiency—and buyers expect as much from fulfillment and delivery.

Demand has triggered a rush of new distribution center (DC) solutions. Automated guided vehicles (AGVs), mobile computing tablets, vertical carousels and storage systems, and on-demand warehouse control systems are but a few tools that make today's warehouse a veritable lab for experimentation and innovation.

As new distribution strategies and warehouse technologies emerge, forklift manufacturers and integrators are adapting to demand. Their objective is to eliminate wasted time and space. And for some end users, lift truck fleets are becoming a competitive differentiator rather than a capital expense.

One Size Doesn't Fit All

While sophisticated sortation, conveyor, and carousel systems organize and speed flow, mobile communication devices capture and disseminate data, and intelligent warehouse management systems direct action, forklifts are the real DC movers and shakers.

This doesn't mean lift trucks aren't sophisticated, or fleet management decisions are low priorities. In fact, proper due diligence encompasses a number of different considerations. For one, a wide variety of lift truck models are available to choose from: counterbalanced sit-down riders, low-lift walkies, swing-reach turrets, and order pickers; with many different power options including electric, natural gas, diesel, and gasoline. Companies can acquire lift trucks new or

used, lease them, or outsource entirely. They can maintain and manage fleets in-house or through a third party.

Companies are challenged with identifying the right mix of assets, the appropriate deployment, and the ideal facility layout to optimize product flow—whether it's a vertically oriented, high-density very-narrow aisle (VNA) layout, or a wide-open crossdock.

"One size does not fit all," says Cesar Jimenez, national product planning manager, for forklift manufacturer Toyota Material Handling U.S.A. "Ten to 20 years ago, basic forklift specs applied to a broader base of end users. Today, 40 percent of our orders are special-design requests."

Irvine, Calif.-based Toyota maintains a team to vet special requests. Not all requests are approved, but sometimes the ideas presented hold mainstream appeal.

"Recently, a company requested we include an integrated sideshifting legal-for-trade scale on our I.C. lift truck," says Jimenez. "No forklift manufacturer offers that as a standard option. It's a specialized piece of equipment that is integral to the lift truck itself."

The client could have worked with a third party to develop an aftermarket lift truck attachment that would have met its need. Instead, it chose to work with Toyota to improve upon what was already in the field. The manufacturer developed a forklift with the integrated scale, delivered a prototype to the customer, received feedback, and made some modifications. Now the scale is a standard option available to all customers.

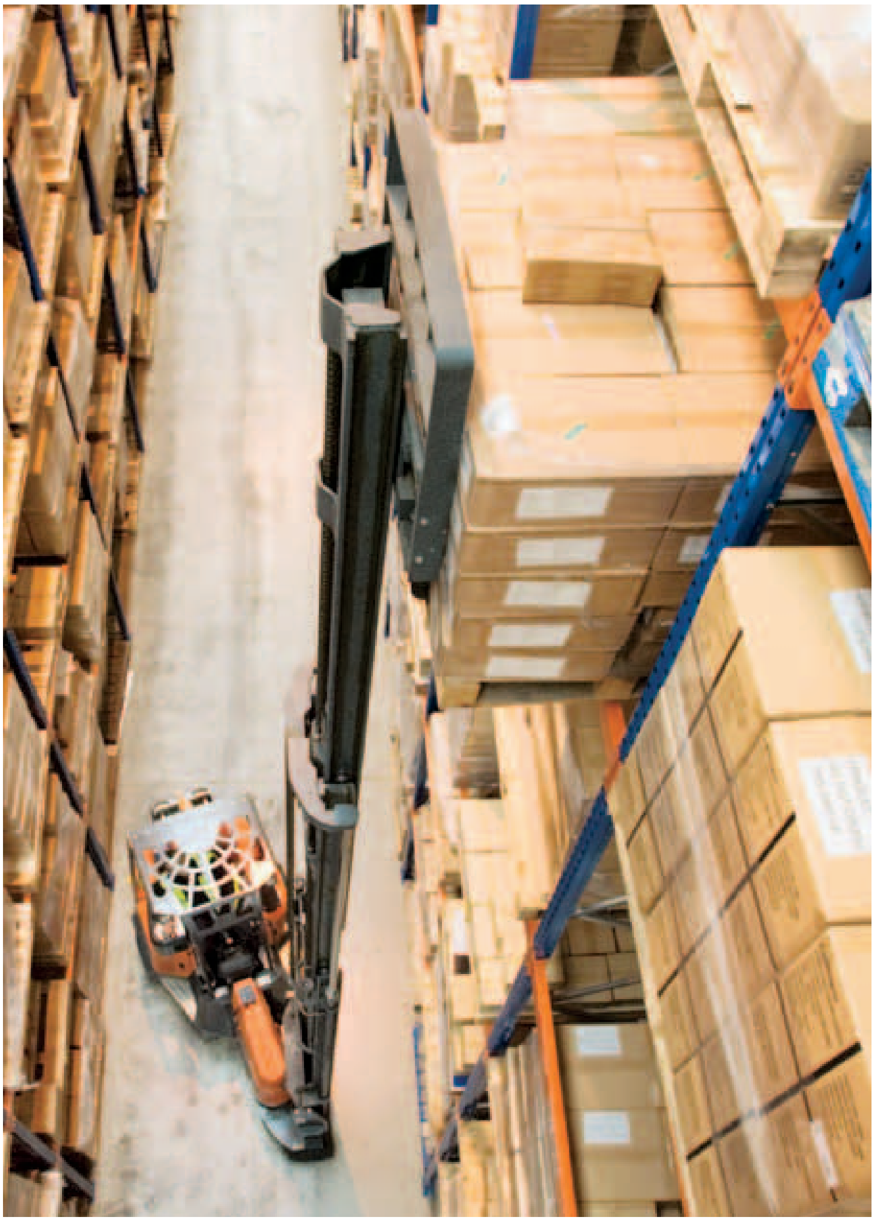
Accessorizing Forklifts

How forklift end-users are modifying and managing fleets to boost efficiency and effectiveness reflects the changing distribution landscape. For many facility managers today, the buzzword is flexibility. It may be a matter of working within a shoestring budget, or simply having the ability to adapt warehouse infrastructure and scale assets to peak season demand flows. Some companies invest in forklift equipment to optimize existing operations. Others let solutions dictate the way they design and flow inventory through facilities.

Although automation promises to be the next materials handling revolution, most companies are still committed to its building blocks.

Customizing the Space

"Ninety-nine percent of companies are working with forklifts, reach trucks, pallet jacks, stock pickers, and four-wheel sit-down machines," says Michael Gary,



High-reach lift trucks allow warehouse operators to make the most of vertical storage space, increasing cube without adding to a facility's footprint or tax base.

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vice president, sales and customer service, for LTM Services, a Manorville, N.Y., fleet cost management consulting firm. "The difference is in how they set up their shop. Very-narrow-aisle layouts are still popular. Companies are also considering vertical configurations, which don't increase their footprint or tax base, but do increase cubage."

LTM manages more than 30,000 pieces of equipment across the United States for companies such as M&M Mars, Pep Boys, and Pinnacle Foods. Multinational companies with huge fleet operations are always trying to figure out more efficient and effective ways to perform materials handling activities.

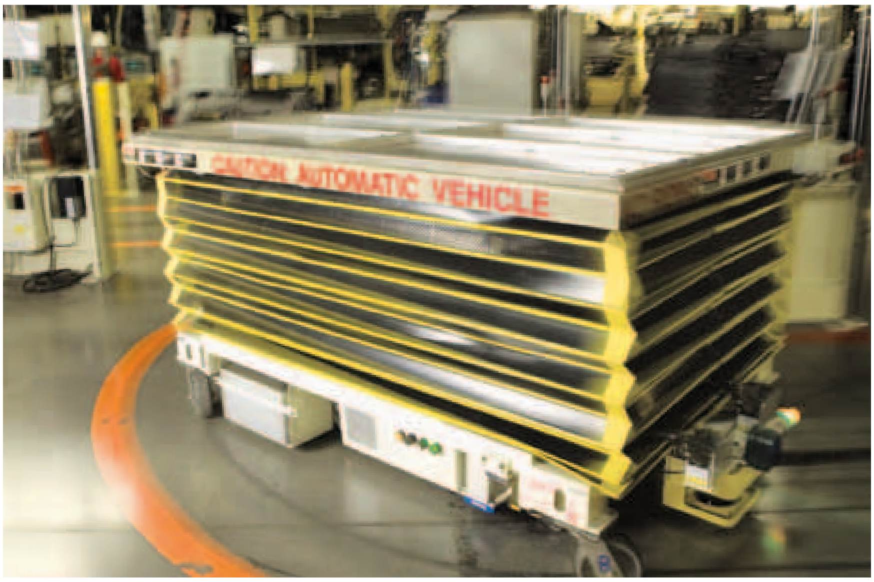
Some are exploring automated guided vehicle systems. Office Depot, for example, opened a state-of-the-art facility two years ago in Newville, Pa., that features robotic picking, high-density storage, and a high-speed conveyor and sortation system. Companies with a specific product demand, heavy volume, and steady inventory flows can design a new facility that makes automation technology work. But this level of innovation and capital investment is unattainable for most companies.

Instead, an overabundance of warehousing capacity and a lengthy recession have pinched discretionary spending. New facility expansion has largely been shelved in favor of warehouse contraction and optimization, and network realignment. This approach allows companies to leverage tried-and-true forklift management strategies and materials handling technology to manage growth without significant investment.

"Businesses are looking for more flexibility in their operations and workforce," says Stubbs. "Fork-mount units and forklift solutions that are voice-, RFID-, and data-capture-enabled allow the asset to operate as a multimodal tool. The forklift can capture critical data through a scan, allowing users to leverage voice-picking instructions to increase accuracy and productivity."

Overall, forklift equipment and technology exist in separate spheres. Some forklift manufacturers, such as Crown and Raymond, are adding internal sensors and analytics to their equipment. The collected data helps users judge when a machine needs preventive maintenance, or speeds operators through their daily checklists. Electronics, however, inevitably add complexity and repair costs.

But companies such as Intermec are developing solutions—hardware, software, and services—that provide a total package. Working closely with materials handling and third-party software companies allows the integrator to constantly evaluate industry trends, and push the envelope to enhance traditional lift truck solutions.



Magnetic tape placed on the warehouse floor directs automated guided vehicles to storage zones and workstations throughout the facility.

For example, Intermec is transforming materials handling vehicles into information technology tools by integrating vehicle-mounted mobile computers, bar-code scanners, and RFID. This enhances productivity and efficiency with even greater far-reaching benefits.

"Deploying these technologies allows growing companies to increase throughput and handle more volume while postponing the need for expansion," explains Stubbs. "Also, some businesses are moving away from conventional distribution where they bring product in, put it away, replenish, pick, and ship.

"Retailers, for example, are considering crossdocking and flow-through models, removing existing warehouse infrastructure and enlarging dock space inbound and outbound to move product through the facility faster and with fewer touches," he adds.

Counterbalancing Automation

The warehouse of the future may resemble an autonomous machine, but it will be a gradual evolution—and human direction will never be too far removed. Some companies are already exploring ways they can incorporate elements of automation within a conventional warehouse footprint without locking up significant capital in long-term return on investment.

Toyota has witnessed an uptick in queries about automation options. Despite the fact that it's part of a corporate hierarchy that manufactures non-automated forklifts, Toyota also offers a line of AGVs.

"Automation provides a different type of solution for moving product more efficiently in a facility," says Jimenez.

One example is converting a conventional class-3 electric-tow tractor into an automated vehicle using an aftermarket kit. Magnetic tape placed on the warehouse floor directs equipment where it needs to move. The user has the flexibility to use the asset as an AGV or a conventional tow tractor, depending on need. The added benefit of using an aftermarket kit is that users can resell the equipment as OEM, and if they lease their forklifts they can easily install the kit on new units.

In the Zone

Integrating automated forklifts and lanes into a DC can greatly impact productivity by reducing travel time and optimizing labor utilization—for example, enabling zone picking.

"Some companies set up a fleet of automated forklifts that brings product to a staging area," says Stubbs. "One picker works in a specified zone, and the machine brings pallets to the worker, who uses voice technology to pick the assignment. When complete, the truck moves to another zone for the next person and pick." Automating the product's movement to the picker eliminates human travel time and waste.

The extent to which companies can add automation is ultimately limited by disruptions to existing processes, cost, and ambition. When companies go all-in with automation, they generally prefer a blank canvas.

But, as with any major materials handling overhaul, risk is involved. When Gary creates proposals for clients, he wants them to understand the entirety of their commitment to a solution. As a cautionary reminder, he recalls a client that designed a new building around a swing-mast truck and its ability to run more narrow aisles. After three years, the equipment became too cost-prohibitive to maintain, but the company was stuck with the investment because of how it set up the facility.

Materials handling is now a significant consideration in facility design and site selection decision-making. That's a testament to increasing innovation, as well as the cost of investment.

Choosing the right lift truck involves considering options such as fuel type, specialized capabilities, and technology add-ons.

Conventional Wisdom

Automation holds the key to unlocking future distribution efficiency. In certain industries, that value proposition makes sense and has already been amortized through careful investment and facility design. But it's not a silver-bullet solution.

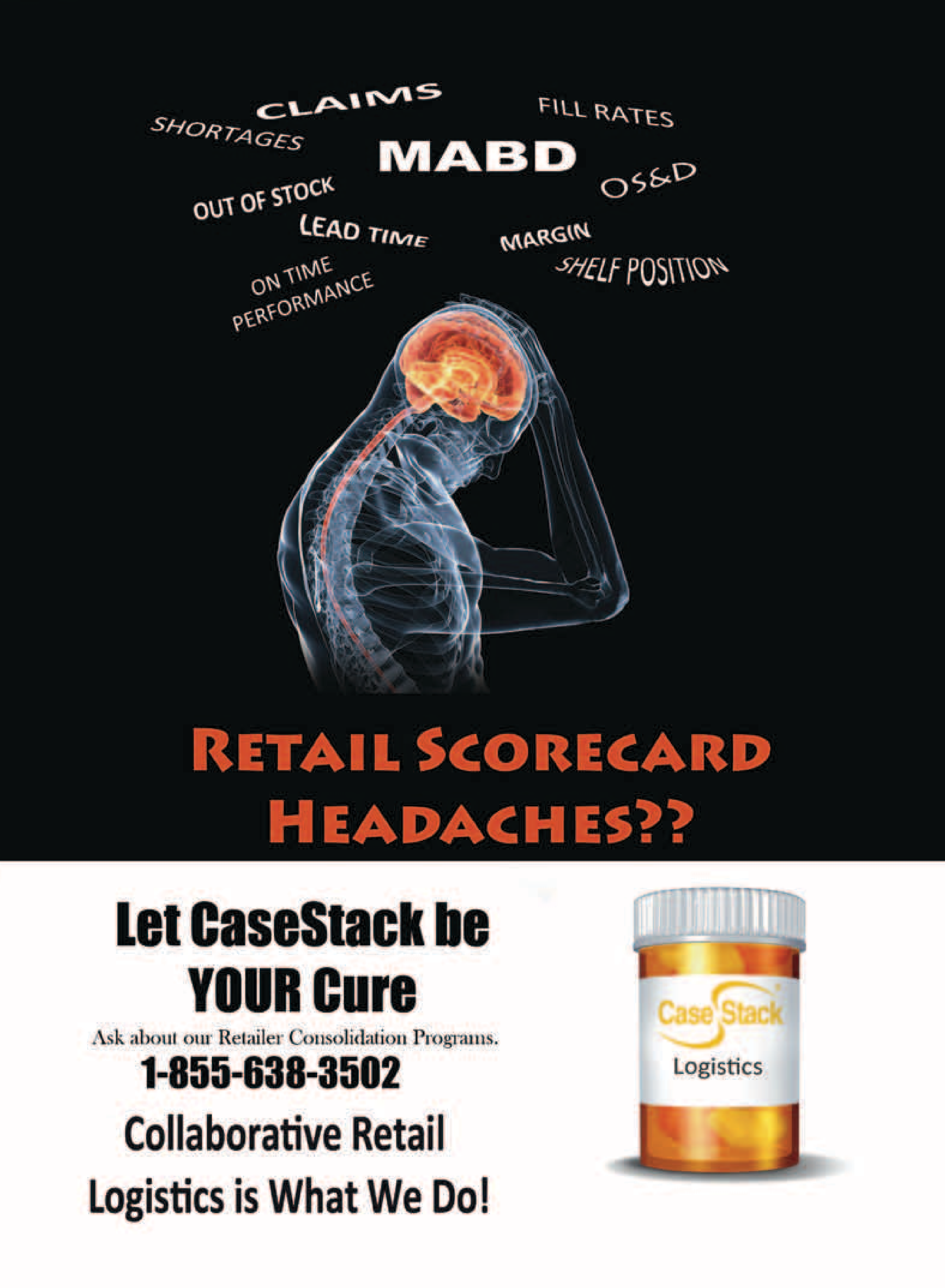
More telling is the reality that businesses are keen to amplify lift truck utility by integrating technology, and experimenting with automated vehicle guidance. But they also want the option to flip the switch between automation and convention. Warehouse management has always been an exercise in scalability, matching assets and resources to inventory flows as efficiently as possible. Mobilizing lift truck fleets that physically move product, gather data, and communicate visual or aural instructions to operators in real-time optimizes asset and labor movement while providing more flexibility to perform different functions.

Stubbs envisions a more collaborative distribution landscape that integrates infrastructure with mobile equipment—whether autonomous or human-operated.

"Materials handling equipment is both static and mobile," he says. "Companies want to use these lift truck fleets in different ways. Ultimately, it builds greater flexibility across the entire network."

Like piece-picking orders from a diverse inventory, companies will always have myriad options at their disposal to mix and match storage and conveyance infrastructure with materials handling equipment—all under the hierarchy of warehouse management technologies. Selectivity is what makes every warehouse system unique.

But the forklift isn't going anywhere fast—unless it needs to. ■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Inbound Transportation Management & Control:

Why It's Important and How to Grab It

Do inbound shipments just seem to appear on your dock? Here's how to seize control.

Adapted with permission from *Inbound Transportation Management and Control: Low Hanging Fruit and How to Grab It*, a whitepaper published by TransportGistics, a logistics and transportation management solutions provider based in Bohemia, N.Y.

In most organizations, transportation costs equal or exceed the combined costs of warehousing, order entry, and customer service. In addition to representing an enormous expense, freight transportation is the corporate bloodline to the marketplace, and has been a precursor to the shrinking or "flattening" of the world.

As the supply chain becomes more refined and integrated, logistics management has an even greater impact on the bottom line. Every dollar allocated to transportation and materials management must be ultra-efficient. When it comes to managing your transportation program, the overriding theme must be control. Yet many organizations have not applied the same efforts to inbound transportation management as they have to outbound management, making it a great opportunity for efficiency and cost savings.

Changing Business Attitudes

Yesterday's business relationships recognized the individual importance of the buyer and seller. Individual advantage was the objective, and this attitude was portrayed with customers and competitors alike. This business relationship was supported on many levels, but most supportive was the belief that this was a zero-sum game, and there could be only one winner.

At many organizations, inbound shipments just appear on the dock. Companies have little control over when and how the products are shipped, and see little opportunity to streamline. Many companies do not have their arms around their inbound spend; too many other areas have a higher priority because of the lack of inbound control and visibility.

Improving control brings a wealth of benefits that can help companies better decide where and how to route and consolidate inbound shipments for real savings.

After all, the ultimate goal of any inbound process is receiving materials as quickly as possible, without exception, so they can either be moved to production for manufacture or assembly, or into stock for sale — all at the lowest possible cost.

Begin Control

The first step is to develop a routing guide that defines the rules of engagement between vendors and customers. This document must be extremely detailed, providing a solution for every shipping situation. Yet, it also must be easy to read, simple to use, and flexible. Your trading partners will be more apt to comply with a guide if nothing is left to their imagination, and the carriers, cost savings, and route parameters are clearly spelled out.

The rules of engagement are essentially a compilation of business rules that address the operating conditions under which the trading partners perform. Developed from an understanding of the corporate philosophy and empowered by the terms of sale/purchase and freight terms, the rules of engagement establish the way in which trading partners conduct themselves. The rules of engagement also function as the platform through which compliance is defined and enforced, and should serve to speed up the flow of information and materials.

The following 10 tips will help you create an effective inbound routing guide:

1. Organize your current and future shipments by origin and destination.

Turn to your company's vendor and customer files to identify origin and destination points in your entire distribution network. You can create something as simple as a state-to-state matrix, or as complex as a nine-digit ZIP-to-ZIP matrix.

2. Identify and chart the price/service capabilities and limitations of each transportation vendor, consistent with your desired level of service and cost.

Know your carriers' strengths and weaknesses. Some carriers are good at transporting perishables; others may provide the best service, but only to certain locations. Other carriers may provide great inbound service, but less-than-optimal outbound service. A few may excel at overnight service; others may have strength in day service. There are as many capability variables as there are carriers. Communicate the possibilities, and specify where to access the best value for every transportation dollar you spend.

3. Identify shipment volume and weight, frequency, modal requirements, special needs, and time in transit.

Know the general make-up of your shipments and the variables for time in transit. Identify weight grouping and service/modal requirements that apply to each group.

Typical weight groups are:

- one to 70 or 150 pounds
- 151 pounds to 5,000 pounds
- 5,001 pounds to 12,000 pounds
- More than 12,000 pounds

Service/mode requirements may include overnight; two-day, three-day, or three- to five-day; air; less-than-truckload (LTL); truckload; rail; and ocean.

You may not want to provide a standard routing for overnight shipments weighing more than 5,000 pounds, nor would you provide a routing for ocean shipments weighing less than 70 pounds. Additionally, for shipments weighing less than 5,000 pounds, you may want an opportunity to consolidate the shipment with others before it is shipped.

Pay careful attention to your commodity mix and identify susceptibility to damage, contamination, and extreme temperatures. If some commodities cannot be shipped with others, or require unique handling due to their special nature, you need to make provisions for them.

4. Identify consolidation opportunities and weight breaks that support your price and performance needs.

All too often, shipments are arranged as they come in from sales or order processing. A basic rule in transportation is that volume enables volume discounts from carriers. If your shipments can be consolidated, you will receive better service and rates.

Review your carrier rates. You may find one carrier offers better pricing for shipments of varying weights; one provides lower pricing for smaller shipments; and another offers lower pricing for larger shipments.


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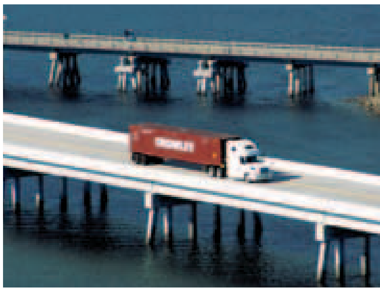


5. Create a simple cross-functional matrix that considers all variables discussed above.

This is a basic "what-if" matrix that leaves the decision-making responsibility with you, where it belongs. If vendors are given the flexibility to choose carriers for you, they will almost always choose a carrier they prefer — not necessarily the one with which you negotiated the best rate or service. Most freight rate exceptions, documentation errors, and causes for non-compliance can be associated with a lack of control. It is difficult to identify all possible combinations of circumstance and requirements. Keep your routing guide simple so your vendors or other users can easily obtain the information they need.

Creating a Web-based Routing Guide

Online routing guides let you quickly and easily make changes to your carrier assignments and rules of engagement. You can instantly and automatically inform all vendors, customers, and employees of the changes. A Web-based routing guide should:

- Provide constant contact with vendor and customer requirements and the ability to adapt these changing requirements by making and enacting instant changes while simultaneously notifying all users.
- Enable companies to maintain a manageable number of delivering carriers to maximize efficiencies of the freight receiving process.
- Allow users to simplify the distribution process and leverage all shipment volumes to improve compliance and drive down transportation costs.
- Empower users with real time information and the ability to make and execute decisions without delay.
- Provide greater flexibility in defining transportation instructions and take advantage of short-term opportunities offered by carriers.
- Facilitate compliance with routing instructions by eliminating paperwork.
- Improve communications by conveying logistics requirements to vendors, customers, and DCs.

6. Create a mechanism for exceptions handling that fits within your current business processes.

While you strive to provide as much necessary information to your vendors as possible, there are circumstances for which you cannot account. So you need a mechanism to provide routing assignments and rules for unique shipments.

Create a contact form or shipment authorization form your vendors can easily execute so they can provide you with all the information you need to obtain a carrier that will satisfy your requirements.

7. Create rules.

Identify the general and specific rules of engagement for conducting business with your company. These rules should identify anything that is necessary to maintain or improve the efficiency of your receiving, inventory, and accounts payable and receivable processes. Identify requirements for marking, labeling, tagging, bar-coding, bill of lading preparation, garment-on-hanger shipments, direct-to-floor merchandise, pallet specifications, contacts, purchase order guidelines, hazmat, and back-order processing.

8. Distribute your guide.

Print only the number of copies you require so that each recipient can have access to the appropriate information. Make sure each routing guide has a clearly stated security requirement clause, and ramification for violations that compromise your company's competitive privacy.

Copies of your routing guide falling into the wrong hands create a potential security problem, so you should know where every copy is at all times. When a vendor informs you that your routing guide has been misplaced, or even that parts or pages are missing, be very concerned.

The details in your routing guide can be highly competitive information that should be easily accessed by all relevant parties, but unavailable to competitors and others who do not have a need to know. All too often, a vendor misplaces a routing guide, or has it open or available when one of your competitors is in the office. Security is crucial, but can be a difficult concept to manage.

9. Create communications procedures for your guide.

Mail each guide with a signed delivery confirmation and a return receipt or fax acknowledgement form. Follow up with a phone call to review aspects of the routing guide that might be confusing.

Share comments about your routing guide with users, particularly where they pertain to exceptions that can impact your supply chain. Keep notes of these exceptions for addendums and future updates.

A signed confirmation is not just a security function. You need to confirm that every vendor is referring to the most recent edition of your routing guide when it is time to make a transportation delivery decision. You should not tolerate the excuse that your routing guide was not available.

10. Plan to repeat this process in four months, or consider simplifying the process by taking it online.

Circumstances change, and your routing guide is not a static set of rules. There are many reasons to continually revisit your routing guide: You negotiate a lower rate. You find a better transportation alternative. A carrier goes on strike. A usual route or highway is closed, or is prone to congestion or accidents.

If you are working with old-fashioned paper routing guides, you know that this is also an ongoing compilation and printing expense. If you have changed over to an electronic routing guide, you can make changes as they occur, so your guide is always current, secure, and ready for full compliance.

Improve Control By Improving Communications

Managing the costs of moving goods through the supply chain is a huge challenge for shippers and consignees. A single shipment involves inter-company and intra-company transactions and communications. In the lifecycle of every transaction, a variety of people — including vendors, customers, carriers, customer service, accounting, purchasing, product coordination, inventory management, warehouse management, and fulfillment — require data.

Companies procure transportation services with specific carrier partners that both meet their requirements for price and service, and understand the nuances of their business needs. Additionally, these companies establish business processes and rules of engagement to facilitate efficient information and material flow into and throughout their organizations. To convey information internally and externally, companies have historically implemented the use of paper routing guides.

Shippers prepare, print, and distribute the guides several times a year, and often require vendors to acknowledge receipt of the new guide, and immediately comply with the new directives. Once you mail the guides, there is no ready method to ensure vendors have the correct information – until you see vendors using carriers that were not approved.

Because the process of distributing a routing guide and monitoring compliance is so costly, companies are reluctant to update their routing guide too often. This precludes companies from taking advantage of better freight rates and immediately reacting to changing market conditions.

Many organizations have not applied the same efforts to inbound transportation management as they have to outbound management, making it a great opportunity for efficiency and cost savings.

The routing guide functions as a set of operating rules that speak to sales and purchase-driven freight transportation matters – such as carrier selection, routing, packaging and labeling, claims, and credit. Most shippers publish these weighty documents either semi-annually or annually.

A Collaborative Resource

Because of their unwieldy size, and lengthy preparation and printing time, many routing guides are already outdated by the time they are distributed. In an attempt to stay current, some shippers issue supplements and revised pages throughout the life of the guide.

As cumbersome and impractical as this process is for the issuers, it is at least as painful for the recipient. Neither buyer nor seller can deploy changes quickly, or even place the changes into a workable process. If getting the information out on time is impossible, it is equally impossible to take advantage of significant transportation opportunities that are available throughout the shipment's entire life.

A routing guide should be looked upon as a collaborative resource that improves trading partner relations and management decisions, and reduces costs for all parties, as non-compliance with routing guides costs both vendors and their customers millions of dollars annually.

To adjust to today's conditions, many manufacturers, distributors, and retailers have implemented Web-based routing guides (*see sidebar, page 176*). A Web-based routing guide ensures companies that trading partners use the carriers, rates, services, business rules, and communications that are required to effectively manage their supply chain.

Setting Goals

Routing guides should accomplish the following goals:

- Empower users with real-time information and utilities to immediately execute decisions based on current information.
- Make this information visible, thereby providing a solid basis for decision-making.
- Eliminate voids between the decision and the implementation of the decision.
- Improve communications and relations between trading partners.
- Share information in a real-time environment, given the ongoing challenge to drive down transportation and handling costs.

People in general, and management in particular, do not deliberately make mistakes. Non-compliance implies that a mistake has been made somewhere along the supply chain. The most common causes of errors are inadequate and inaccurate data.

A Web-based routing guide should be designed to address these issues. It should capitalize on what computers and people do best. Computers are excellent at handling data, but not so good at decision-making.

People are nowhere near as good at handling data, but excellent at making decisions if given the right information. A Web-based routing guide gives decision-makers the right data at the right time to allow them to make the right decisions. The right decisions made at the right time increases service, improves performance, and eliminates non-compliance.

The most valuable use of a routing guide is allowing you to gain control over inbound shipments by getting vendors to comply with routing instructions. Web-based routing guides promise timely information, easy distribution, and widespread access.

These documents can serve as a simple, cost-effective way to gain control, improve transportation management, and drive down direct and indirect costs associated with inbound transportation. ■

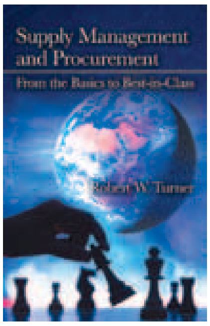
INBOUND LOGISTICS

2012 Summer Reading Guide

Whether you brush up on fundamental logistics concepts, or explore emerging warehousing, sustainability, and procurement trends, you'll be brighter than ever after dipping into these supply chain bestsellers.

Supply Management and Procurement: From the Basics to Best-in-Class

By Robert W. Turner



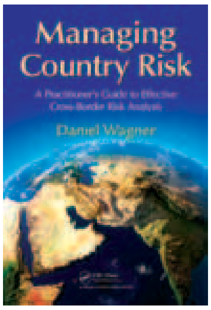
Written for C-level executive planners and procurement practitioners, *Supply Management and Procurement* contains proven tools, techniques, and information to help organizations attain best-in-class supply management performance and a competitive advantage. Through case studies and data analysis, Turner illustrates how value chain design and planning, benchmarking, and strategic sourcing methodology models can create more efficient supply management.

KEY TAKEAWAYS: Integrating new concepts and philosophies into current operations drives cost reduction, process improvement, and increased efficiency. Change is inevitable, but businesses that continually promote, implement, and manage changes can benefit from them.

FOR DETAILS: www.jrosspub.com

Managing Country Risk: A Practitioner's Guide to Effective Cross-Border Risk Analysis

By Daniel Wagner



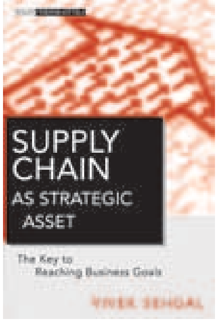
Wagner explains how to identify and manage risks associated with conducting business abroad, and anticipate the impact of change on business operations. Chapters include the foundation of country risk management and assessment; political risk insurance; company case studies; and an explanation of China's place in the world.

KEY TAKEAWAYS: *Managing Country Risk* discusses how risk management contributes to organizational development, increased profits, and job creation. Every business transaction possesses its own unique risk profile, and requires a distinct set of data and analysis to accurately assess the risks associated with it.

FOR DETAILS: www.crcpress.com

Supply Chain as Strategic Asset: The Key to Reaching Business Goals

By Vivek Sehgal



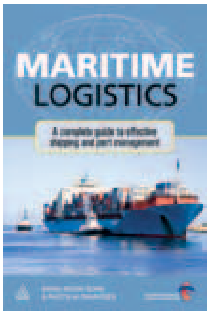
This book provides an accessible, coherent road map to creating and implementing effective supply chain strategies to help your business sustain competitive advantages. Sehgal offers a step-by-step guide to designing a customized supply chain and executing fully integrated business strategies.

KEY TAKEAWAYS: *Supply Chain as Strategic Asset* illustrates how misalignment between business, functional, and technology strategies creates friction and inefficiencies that prevent an organization from reaching its full potential. Chapters discuss business strategies and alignment, alternative strategies, and real-world case studies. This book provides tools, guidance, and examples to maximize business performance and create a competitive advantage.

FOR DETAILS: www.wiley.com/business

Maritime Logistics: A Complete Guide to Effective Shipping and Port Management

By Dong-Wook Song and Photis M. Panayides



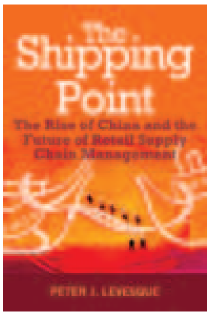
Maritime Logistics examines the latest developments, knowledge, and practices taking place in the shipping and port industry. A team of international academics and researchers presents insights on container shipping, international maritime trade, and port logistics.

KEY TAKEWAYS: Dramatic changes in world trade and cargo transportation, characterized by the prevalence of business-to-business and integrated supply chains, have spurred increased demand for value-added logistics service and mode integration.

FOR DETAILS: www.koganpage.com

The Shipping Point: The Rise of China and the Future of Retail Supply Chain Management

By Peter J. Levesque



A reference guide for anyone involved in retail supply chain management in China, *The Shipping Point* examines the country's historical transformation from global manufacturer to global consumer marketplace, and discusses the impact of this change on the future of retail supply chain management.

KEY TAKEAWAYS: This book provides insight into the ascendancy of China's economy; technology's impact on traditional retail models; building successful transportation networks; and a tactical perspective on the fundamentals of logistics network design and supply chain execution in China.

FOR DETAILS: www.wiley.com

Strategic Supply Chain Management

By Carlos Cordón, Kim Sundtoft Hald, and Ralf W. Seifert

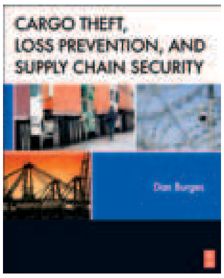
Through 20 real-world case studies involving corporations such as Nestlé, LEGO, and Hewlett-Packard, this book outlines strategic decision-making and execution processes that turn supply chain threats into strategic opportunities and value. From designing supply chain response strategies to fast-tracking project management with suppliers, the authors explain specific tactics that make a difference in logistics operations.

KEY TAKEAWAYS: The supply chain provides the infrastructure for a corporation's business model, determining its profitability and future. Increased logistics outsourcing has actually increased the supply chain's importance within companies, making it more crucial than ever that businesses address logistics operations as part of their vision and global strategy.

FOR DETAILS: www.routledge.com

Cargo Theft, Loss Prevention, and Supply Chain Security

By Dan Burges



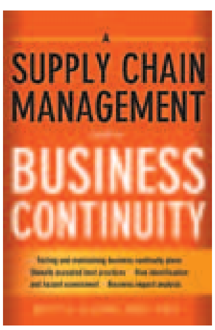
This book provides a comprehensive methodology for establishing supply chain security and cargo theft prevention programs. Burges, senior director of intelligence for FreightWatch International, explains the threat cargo theft poses to the national economy, along with the impact to individual supply chain stakeholders — from the manufacturer all the way back to the consumer.

KEY TAKEAWAYS: In addition to product loss, cargo theft's downstream costs include efficiency loss, customer dissatisfaction, and product recalls. Shippers can reduce cargo theft by taking steps to decrease risks both in facility and in-transit operations; adopting policies designed to secure cargo from origin to destination; and implementing technologies that prevent theft and increase cargo recovery.

FOR DETAILS: www.elsevier.com

A Supply Chain Management Guide to Business Continuity

By Betty A. Kildow, CBCP, FBCI



In the logistics sector, just one weak link can jeopardize the whole organization, so no company can afford to ignore its business continuity planning. Kildow covers each phase of business continuity program development and maintenance, focusing on the supply chain, to help logistics professionals create, test, document, refine, and manage workable business continuity plans.

KEY TAKEAWAYS: Through a combination of exercises, strategies, and tactics, this book offers insight and tools to identify and reduce risks; break down business continuity silos; evaluate and select the most-qualified and best-suited suppliers; and coordinate supply chain continuity requirements. Additional features include a macro-level self-assessment to measure the current level of supply chain business continuity preparedness; a checklist to review existing business continuity plans; and a list of specific management steps to prepare for future disruptions.

FOR DETAILS: www.amacombooks.org

The Procurement Game Plan: Winning Strategies and Techniques for Supply Management Professionals

By Charles Dominick and Soheila R. Lunney

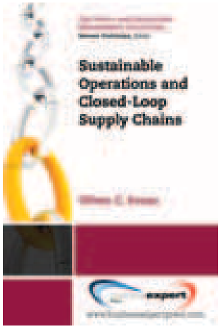
The Procurement Game Plan simplifies complex concepts through real-life examples so readers can apply winning strategies and techniques to become successful procurement professionals. Topics range from the fundamentals of procurement and supply chain management to emerging trends likely to revolutionize corporate procurement strategies.

KEY TAKEAWAYS: Procurement can have a dramatic impact on an organization's financial performance and internal operations efficiency. In companies of all sizes, procurement departments must take a total strategic approach to exceeding management's expectations, embracing a broader supply chain role, and serving internal customers.

FOR DETAILS: www.jrosspub.com

Sustainable Operations and Closed-Loop Supply Chains

By Gilvan C. Souza



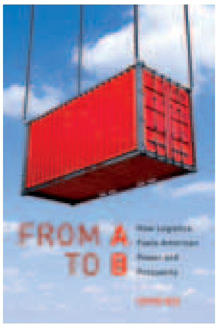
When making decisions, companies that want to be sustainable must consider the triple bottom line: economic (profit), environmental (planet), and social (people). Souza explains how closed-loop supply chains design products for multiple lifecycles, plan reverse logistics networks to handle used products, and develop remarketing strategies to ensure customers buy remanufactured products.

KEY TAKEAWAYS: The first step toward sustainability is reducing operational waste through tools such as Lean and Six Sigma programs. Next, companies must conduct a lifecycle assessment that measures the environmental impact of its main products and processes. Finally, the organization must close the loop through efforts such as designing efficient, toxin-free, recyclable packaging and products that last for multiple lifecycles.

FOR DETAILS: www.businessexpertpress.com

From A to B: How Logistics Fuels American Power and Prosperity

By David Axe



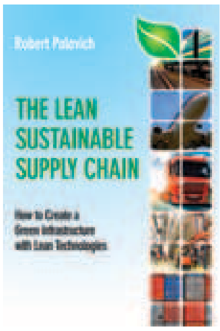
Societies depend on transportation and logistics for survival. Logistics solidified the United States' global power and influence in the world wars and Cold War, and gave the current U.S. military the ability to fight two wars at once. *From A to B* tells the story of modern American logistics, which will continue to shape the nation's role in this century.

KEY TAKEAWAYS: Axe describes the intricacy of logistics during war; the complex and colorful transportation culture; and the risk of falling behind as competition stiffens and national transportation infrastructure crumbles. *From A to B* presents the challenge of finding new ways to move resources and products more efficiently in order to prosper as a nation.

FOR DETAILS: www.potomacbooksinc.com

The Lean Sustainable Supply Chain: How to Create a Green Infrastructure with Lean Technologies

By Robert Palevich



Palevich introduces ideas, strategies, and technologies drawn from more than 30 years of supply chain experience. His best-practice implementation techniques and detailed guidance for scorecarding improvements in productivity, cost, and environmental impact help build more responsible and profitable supply chains.

KEY TAKEAWAYS: *The Lean Sustainable Supply Chain* breaks down the processes used by world-class companies, so any manager can implement the technological advances now available. The book explains lean technologies, such as warehouse management systems and enterprise resource planning solutions, and illustrates how to implement each improvement and measure success through increased company performance and improved sustainability.

FOR DETAILS: www.ftpress.com

Highly Competitive Warehouse Management: An Action Plan for Best-in-Class Performance

By Jeroen P. Van Den Berg

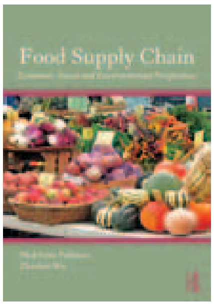
This book shares the warehousing secrets of best-in-class operations, and explains how they create a competitive advantage. Van Den Berg provides a systematic, yet flexible, action plan for improvement, which involves human behavior, process redesign, warehouse management systems, and supply chain alignment.

KEY TAKEAWAYS: *Highly Competitive Warehouse Management* explains the Warehouse Maturity Scan, a useful tool that analyzes the current state of supply chain operations. Other topics include warehouse management systems; process efficiency; resource utilization; synchronized planning; and service alignment.

FOR DETAILS: www.distributiongroup.com

Food Supply Chain: Economic, Social, and Environmental Perspectives

By Madeleine Pullman and Zhaohui Wu



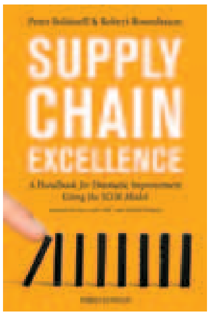
Compiled for supply chain partners, policymakers, and researchers, this book provides a deep understanding of how food is created and distributed to American consumers. Topics addressed include unique traits of specific food type supply chains; food-focused regulations, manufacturing, logistics, and retailing; food packaging and transportation safety; and the future of food supply chain management.

KEY TAKEAWAYS: Growing populations, increasing demand, the need for new farming and food distribution methods, and corporate consolidation are challenging food supply chain managers to adapt their practices.

FOR DETAILS: www.routledge.com

Supply Chain Excellence: A Handbook for Dramatic Improvement Using the SCOR Model

By Peter Bolstorff and Robert Rosenbaum



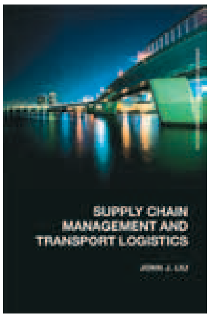
This book provides a hands-on guide to executing supply chain improvement and achieving operational superiority. *Supply Chain Excellence* instructs supply chain professionals in avoiding misalignment, high inventory, unexpected costs, constrained growth and profits, and market share loss.

KEY TAKEAWAYS: Bolstorff and Rosenbaum offer a highly compressed timeline for using the Supply Chain Operations Reference (SCOR) framework to plan and execute supply chain improvement in an SAP environment, in global enterprises, and in a small business. Featuring examples and experience from roughly 100 projects, *Supply Chain Excellence* refines the use of the scorecard for better process analysis; extends the approach to encompass implementation and strategy; and quantifies the financial value of supply chain improvement to demonstrate its importance in achieving lasting competitive advantage.

FOR DETAILS: www.amacombooks.org

Supply Chain Management and Transport Logistics

By John J. Liu



Liu explains recent developments in supply chain management (SCM), such as the Walmart model and sustainability trends in the industry, and offers insights on the interrelationship between SCM and logistics.

KEY TAKEAWAYS: Chapters focus on topics such as logistics theories and methodologies; inventory and reserve systems; sourcing and outsourcing; supply chain maintenance; ocean and air transport logistics; environmental logistics; and the future of supply chain and transport logistics.

FOR DETAILS: www.routledge.com

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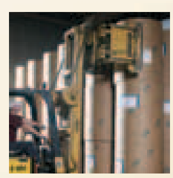
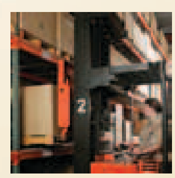

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DRIVING GROWTH NORTHWARD

Increasing demand for U.S. goods in Canada represents a positive sign for the economies of both countries. But keeping cross-border shipments moving requires building smart and savvy logistics partnerships.

Economic recovery in the United States may not yet be complete, but signs of improvement are present along the U.S./Canada border. The steady stream of goods passing north and south across the nearly 4,000 miles of border that separate Canada and the contiguous United States is evidence that the economies of the two countries are moving in the right direction.

While the U.S. economy remains stagnant, the Canadian economy is expected to grow 2.25 percent in 2012, and 2.5 percent in 2013, according to the Organization for Economic Cooperation and Development.

"The Canadian economy is booming," says Bob Poulos, vice president of sales at Chattanooga, Tenn.-based transportation solutions provider U.S. Xpress Enterprises. "Demand for southbound and, especially, northbound freight is increasing. Opportunities are developing coast to coast."

"The unemployment numbers don't show it yet, but the transportation industry in Canada is definitely up," agrees Mike Said, president of operations for Clarksville, Tenn.-based transportation provider Continental Expedited Services.

Canada's push toward economic recovery spells good news for the United States, too. The strength of the Canadian economy has led to an upswing in the number of U.S. companies attracted to Canada as a budding market. Canada is the United States' biggest trading partner—in 2011, U.S.-Canadian trade totaled $597 billion, accounting for 16.2 percent of all U.S. international trade—so good news on one side of the border is good news for the other side, too.

The value of the Canadian dollar is one factor contributing to the flow of goods north. The value of goods in U.S. surface trade with Canada increased 13.7 percent year-over-year in February 2012, according to the Bureau of Transportation Statistics.

"Goods shipped north are cheaper for Canadian consumers," says Derek Leathers, president and chief operating officer of Omaha-based global transportation provider Werner Enterprises. "Changes in the exchange rate have affected the import/export dynamic substantially, and are promoting the flow of imports into Canada."

Businesses in Canada are reaping the benefits. "We opened a new warehouse in January 2012, and it's almost full," says Andrew Kirkpatrick, director of sales and marketing at Sherway Group, an asset-based, full-service, customized logistics and supply chain solutions provider based in Mississauga, Ontario. "Companies are looking to seize opportunities and improve efficiencies, which translates to an upswing in business demand on both the U.S. and Canadian sides of the border."

Ten to 15 years ago, the bulk of U.S.-Canada trade flowed north to south. But as the dollar depreciated

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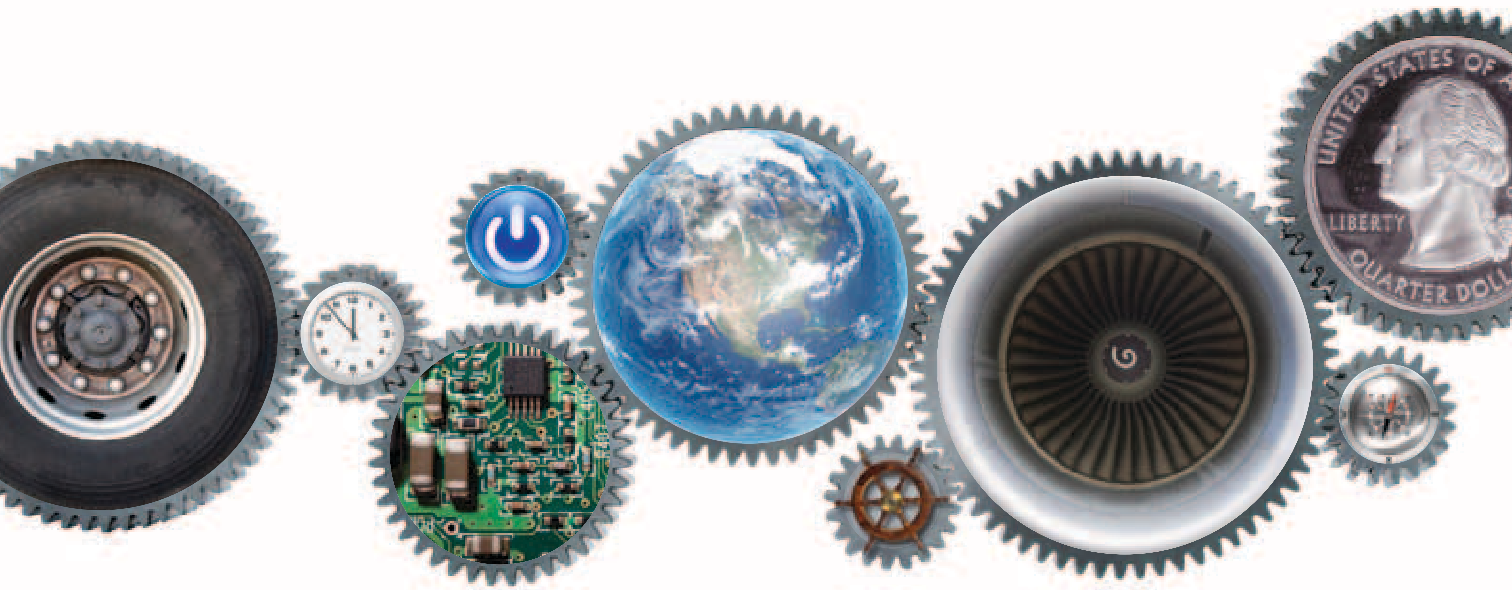

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over the past several years, manufacturing in Canada and exporting goods into the United States decreased as well. Today, the trend has reversed, and south-to-north shipments have increased substantially.

Simultaneously, a jump in Canadian consumer goods prices has translated to yet another spike in cross-border sales. The price gap—which accounts for some products costing as much as 40 percent more in Canada than in the United States, according to the Canadian Senate Finance Committee—has occurred despite the strength of the Canadian dollar.

While U.S.-based businesses are benefiting from the current price spike, Canadian citizens are not as pleased. Pressure from Canadian consumers recently pushed the Canadian Senate Finance Committee to launch an investigation in an attempt to understand the reasons behind the price increases.

Supply management is one reason cited. "If the committee is going to look at factors that contribute to the differences in pricing between Canada and the United States, it would be remiss in not addressing supply management in some way," says Diane Brisebois, president of the Retail Council of Canada.

RISING DEMAND

The volume of northbound shipments places greater demand on cross-border carriers. "U.S.-based shippers are more frequently asking for solutions in Canada," says Poulos. "While that's good news, it also means we are pushing hard."

An auto industry rebound is another catalyst in the improving economic landscape. The Canadian auto industry is closely linked to the United States, due to the Automotive Products Trade Agreement and the North American Free Trade Agreement. Roughly 540 U.S. companies make automotive parts for original equipment manufacturers (OEMs) and their suppliers in Canada. As U.S. demand for automobiles has increased faster than expected, OEMs in Canada have seen a corresponding uptick.

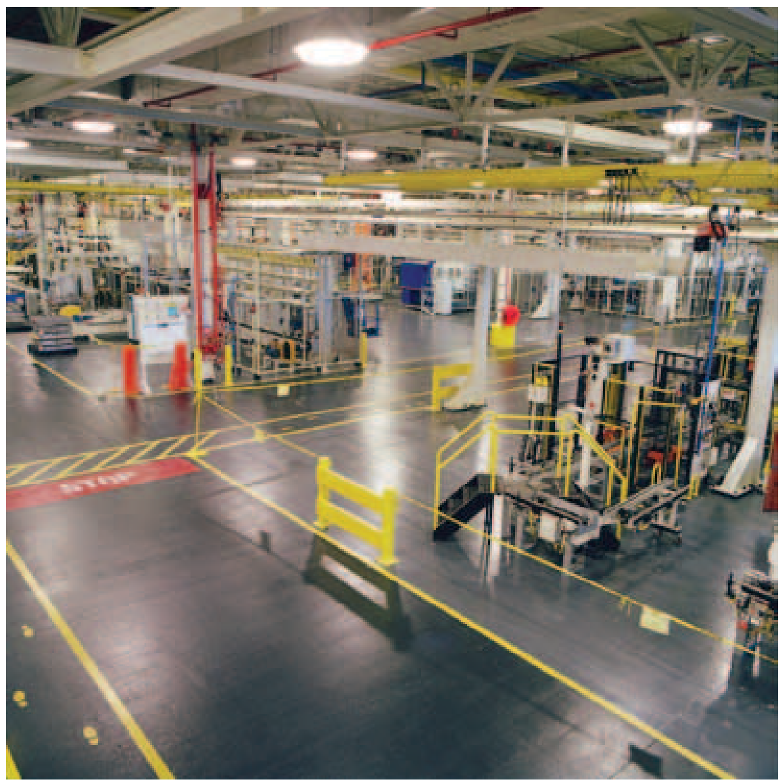
"The auto industry has always been a leading economic indicator, and, in 2012 to date, it represents a positive trend," says Poulos.

But the uneven pace of economic recovery in the United States and Canada has led to challenges as well. The number of trucks hauling freight into Canada and returning to the United States partially or totally empty is on the rise. Part of the reason can be attributed to the imbalance in hauling capacity between the countries, but most of it can be traced back to exchange rate issues.

"The increased trade imbalance presents a big challenge," says Leathers. "The Canadian dollar's strength created more demand for products going into Canada than in the other direction. U.S. exporters are faced with a higher rate structure, and often have to return empty trucks from Canada, which makes the trip more expensive for them. It's all because of lower demand for goods coming from Canada."

Other factors complicate the Canadian shipping market. "Two big issues are government restrictions on importing certain goods, and the cost and availability of quality carriers to haul into Canada," says Richard Patenude, director of client integration and development for The Wheels Group, the shared-services division of The Wheels Group of Companies, which also includes Wheels Clipper, a 3PL based in Toronto and Chicago, and international freight forwarding division Wheels Synergex.

"The inefficiencies of shipping large volumes to and from Canada through carriers that lack a significant Canadian presence can add considerable expense," adds Jon Routledge, vice president of sales and marketing at New York-based integrated parcel and freight delivery services company Purolator. "Fuel price fluctuation in the United States and Canada is another



Ford's Windsor, Ontario, manufacturing plant represents one of many original equipment manufacturers working to meet automotive industry demand.

factor affecting cross-border transportation. Rising fuel costs over the past several years have affected day-to-day dynamics, and dramatically influenced business—and not in a positive way."

While Canada is often viewed less as a foreign country and more as the United States' friendly neighbor to the north, shipping and logistics between the two countries has never been simple. While the current economic outlook in Canada tempts U.S. exporters, companies that don't understand the system and how to navigate it properly can end up paying exorbitant fees for engaging in cross-border business.

BIG BOX, BIG PROBLEMS

Logistics service providers can help U.S. companies understand the Canadian market and its dynamics before diving in. "A few big-box store retailers that have penetrated the U.S. market see Canada as a place to grow their business," Poulos says. "They are looking to expand their presence there significantly, but don't understand the market. They don't fully grasp the difficulties of cross-border issues, such as clearing Customs."

"It's critical for manufacturers and retailers to engage trusted partners to help with all the challenges cross-border shipping presents."

—**Bob Poulos,** vice president, sales, U.S. Xpress Enterprises

Managing customs clearance is a critical component of cross-border shipping – and one shippers find increasingly complex. "Enhanced border security since the terrorist attacks of Sept. 11, 2001, is definitely a concern," says Amy Magnus, director of customs affairs and compliance for A.N. Deringer Inc., a St. Albans, Vt.-based 3PL. "Keeping the flow of legitimate trade moving supports both the U.S. and Canadian economies."

Over the past decade, several requirements have been put in place for advance delivery of shipment information. Often, when cargo arrives at the border, a decision has already been made as to whether or not it will be inspected. "The U.S. government has visibility into what shipments are coming in at least one hour before they arrive, which has created efficiencies," says Magnus.

But if data is inaccurate or incomplete, shipments can be delayed, held by U.S. Customs and Border Protection (CBP) or other government agencies, or refused entry. "It pays for shippers to have all their data organized so shipments can be processed correctly the first time," Magnus says.

While border delays are common today, the U.S. and Canadian governments are dedicated to improving them in the future. On Dec. 7, 2011, President Barack Obama and Prime Minister Stephen Harper unveiled the Beyond the Border Action Plan and the Regulatory Cooperation Council Action Plan. The two initiatives were designed to "ensure that the vital economic partnership that joins our two countries continues to be the cornerstone of economic competitiveness and security," according to Canadian Defense Minister Peter MacKay.

The Beyond the Border Plan states that the United States and Canada "intend to pursue a perimeter approach to security, working together within, at, and away from the borders of our two countries to enhance our security and accelerate the legitimate flow of people, goods, and services between our two countries," according to a declaration by Obama and Harper. "We intend to do so in partnership, and in ways that support economic competitiveness, job creation, and prosperity."

Beyond the Border may relieve some existing trade barriers and improve access to information for shippers and service providers. "The plan could give both sides more reliable data; make the rules about the timing and amount of data required more consistent; and involve government agencies in harmonizing the data they need so the entire process will eventually be less burdensome for all trade partners," Magnus says.

Electronic information exchange is one way to ease bottlenecks at the border. For example, the Free and Secure Trade (FAST) program is a joint initiative between CBP and the Canada Border Services Agency that enhances border and trade security while simplifying cross-border commercial shipments and minimizing delays. FAST allows properly credentialed trucks to move through an express lane, where pre-approved, low-risk travelers have the ability to bypass the traditional CBP inspection process and use automated kiosks to expedite entry into the United States. The program enables CBP to focus its resources and security efforts on travelers of high or unknown risk.

AN ACE UP THEIR SLEEVE

Meanwhile, the Automated Commercial Environment (ACE) electronic manifest system is mandatory for cross-border shippers, creating a secure and streamlined environment for processing and releasing cargo at the land borders. These electronic truck manifests have helped improve efficiency and eliminate redundancies.

Using RFID technology, ACE can identify trucks and drivers from a distance, then retrieve manifest and entry data for CBP officers. In September 2012, vessel and rail ACE manifests will also become mandatory.


GEODIS
wilson

Third-party logistics provider Geodis Wilson enhanced its presence near the U.S./Canada border by acquiring Minneapolis-based domestic transportation specialist One Source Logistics.

"The e-manifests, which are electronically submitted by carriers, enable both CBP and the Canada Border Services Agency to pre-screen the crew, conveyance, equipment, and shipment information before a truck arrives at the border," says Magnus. "It is an enormous project that has experienced bumps along the way, but it reflects the way we'll be doing business in the future."

ACE makes discrepancies easy to spot, but shippers who don't organize their data could face delays. This could be especially challenging for less-than-truckload (LTL) carriers. One manifest covers an entire trailer, but the customs declarations come from multiple LTL shippers.

"New technology is making the customs process easier," notes Said. "As long as data is organized, clearance shouldn't be a problem."

CONSTANT CHANGES

New regulations and requirements affecting cross-border trade arise regularly, keeping all parties on their toes. For example, the U.S. Lacy Act, which was passed in 2008, prohibits importing illegally logged timber into the United States. "Every new law requires new information gathering and data requirements," says Magnus. "As more data is required, it becomes burdensome on trade."

A.N. Deringer boosted internal staff training to help shippers comply with new requirements and avoid delays. "Legitimate goods need to flow freely. If they don't, serious economic consequences can result," Magnus says. "Assembly lines can slow down or shut down, and workers can be sent home. Delays are costly for all parties."

The vast and varied requirements for crossing the border can be a particular disadvantage for smaller carriers that may not have the proper technology systems in place. "For large companies, the technology investment is reasonable, but for small carriers those hurdles may be too difficult or expensive to overcome," says Leathers. "That can result in fewer carriers interested in crossing the border. Anything that limits the system's capacity has a net effect on the cost of shipments crossing the border, and will ultimately affect the rate structure."

"Legitimate goods need to flow freely. If they don't, serious economic consequences can result. Delays are costly for all parties."

—**Amy Magnus,** director, customs affairs and compliance, A.N. Deringer

Maintaining compliance with changing rules can be an especially daunting challenge when dealing with perishable shipments.

"Increased legislation and controls for consumables is an issue," Patenude says. "The fines and penalties for failing to meet those requirements are increasing. The government is tightening the processes and making it harder to get around them. Significant

Tennessee-based transportation provider U.S. Xpress Enterprises partnered with a Canadian trucking company to facilitate its cross-border shipments.

room for error exists, and the government is not making it easier."

To help comply with new and existing regulations, and tight security measures, shippers often look to align themselves with experienced logistics and supply chain providers.

"Shippers should work with carriers that can overcome these challenges so their freight moves with fewer issues and delays," says Leathers. "A qualified logistics provider can handle electronic filing, has experience operating in Canada, and maintains resources there. Most importantly, companies should work with flexible providers that can design solutions to fit their needs, and work with them collaboratively."

DRIVERS IN DEMAND

As the United States struggles to keep up with Canadian demand, a shortage of available truck drivers in North America presents another challenge. Despite a high national unemployment rate, drivers have become increasingly difficult to find. Major trucking firms recorded a 90-percent driver turnover rate during the first quarter of 2012, compared to 75 percent in 2011, according to *USA Today*.

A lack of drivers is forcing carriers to raise shipping rates, which are expected to increase up to five percent in 2012. The driver shortage could worsen as the federal government enforces strict limits on the hours drivers can spend behind the wheel.

In addition, requirements enacted in 2009 mean drivers who want to cross the U.S./Canada border must shell out roughly $100 for a passport. Though not a huge hurdle, logistics companies say it's just one more impediment they encounter.

"It is challenging to find drivers who want to go into Canada," says Poulos. "Passport requirements are a deterrent. And a perception exists among drivers that if you go to Canada, you get stuck there."

U.S. Xpress is addressing this issue by partnering with a Canadian company that can help get its trucks back to the United States more quickly. Meanwhile, some Canadian transportation providers have made efforts to facilitate cross-border shipments by establishing a U.S. presence.

Geodis Wilson Americas, based in Iselin, N.J., expanded its North American network through acquisition. Part of the Geodis Group, a global logistics provider with some 30,000 employees in a network spanning 120 countries, Geodis Wilson enhanced its position in the U.S. market by acquiring Minneapolis-based domestic transportation specialist One Source Logistics.

"The acquisition is a strategic fit for Geodis Wilson," says John Gallahan, regional vice president, Geodis Wilson Americas. "One Source Logistics significantly strengthens our capabilities. It accelerates the growth of our domestic product offerings and cross-border trucking services throughout North America."

One Source Logistics offers specialized domestic transportation services with a focus on truckload and LTL shipments. The company currently supports transportation, logistics, and distribution services networks throughout the United States. The new access One Source Logistics provides to a broader local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distribution network improves Geodis Wilson's inland and final-mile delivery services.

"One Source excels at solving complex domestic issues with Mexico and Canada," says Gallahan. "It has the ability to bring clarity, structure, and form to supply chain management."

A VAST TERRITORY

Another challenge unique to Canada is the country's geography. The majority of the Canadian population lives within 100 miles of the U.S. border. Yet in terms of territory, Canada is the second-largest country in the world after Russia. While the immense population base near the border is easy to reach in terms of distance, the vast area beyond also needs to be served. That's another reason working with smaller Canadian carriers can be beneficial—and often necessary.

"The fact that the United States and Canada are joined by a huge land mass, with a heavy population base near the border, means many commercial businesses can successfully serve Canada from the United States without building a physical location there," says Routledge. "They generally need help from carriers, however. A good logistics partner can make cross-border transportation seamless."

One potential avenue to growth in U.S./Canada cross-border trade is e-commerce. "The Canadian market is about five years behind the United States in terms of the e-commerce adoption cycle," Routledge notes. "Major U.S. e-tailers can look to Canada for more opportunity, as long as they are prepared to meet the challenges."

Some major U.S.-based e-commerce retailers have given Canada a try, only to become frustrated and eventually back out.

Bottleneck Bridge

The Ambassador Bridge is the busiest international border crossing in North America in terms of trade volume; more than 25 percent of all merchandise trade between the United States and Canada crosses the bridge.

More than 150,000 jobs in the region and $13 billion in annual production depend on the Windsor-Detroit international border crossing, according to a 2004 Border Transportation Partnership study. In April 2010, the Canadian government offered to lend Michigan $550 million to help pay the state's share of a proposed project to build a second bridge between Windsor and Detroit. The offer demonstrated how dependent Canada is on the United States for exports.

The Ambassador Bridge is owned by Grosse Pointe billionaire Manuel Moroun through the Detroit International Bridge Company in the United States and the Canadian Transit Company in Canada. The bridge holds a monopoly on commercial truck traffic, which has been part of the issue. Moroun would like to build a second bridge of his own, and he's putting up a serious fight to maintain his monopoly. The day after Canada made its offer, Moroun's lawyers announced that they would sue to block the loan. The proposal has been stymied ever since.

As one example, U.S.-based shoe retailer Zappos recently pulled out of Canada as a result of problems with customs and other issues.

"Product selection on canada.zappos.com is limited due to distribution agreements with the brands we sell in the United States," the company's Web site states. "In addition, we have struggled with general uncertainty and unpredictability of delivering orders to our Canadian customers, given customs and other logistics constraints."

"The challenge was the way Zappos was navigating the border," explains Routledge. "Part of achieving success in Canada is understanding the consumer experience you are trying to deliver. Retailers have to account for how they will physically move products. It's not for everyone. But if a company chooses the right partner, its chances of success improve."

"It's critical for manufacturers and retailers to engage trusted partners to help with all the challenges cross-border shipping presents," says Poulos.

FLEX WITH DEMAND

Flexibility is crucial as well, because of constantly changing regulations and requirements. "We always keep in mind that shippers are in a changing marketplace, so it's important that we be adaptable and flexible to meet their needs," says Kirkpatrick, who notes that Sherway Group's expertise with retailers such as Walmart and grocery store chains adds significant value.

Others see information technology investments as key to the future of smooth and successful U.S./Canada cross-border trade. "We've invested heavily in systems and technology to make it easier for our employees to manage information," says Kirkpatrick. "Accurate data is critical. We have invested in warehouse and

"More infrastructure capacity between the two countries is essential. Trucks must be able to get through border crossings faster so carriers can keep up with demand and ensure goods are flowing."

—**Derek Leathers,** president and COO, Werner Enterprises

transportation management systems, and we are now making sure they are all integrated. Shippers can use Web-based tools to easily track shipments, and gain visibility into the entire transportation stream."

LOOKING AHEAD

Canadian demand for U.S. products doesn't appear to be slowing. Yet given the challenges of cross-border trade, frustrations are likely to grow, if not worsen. Looking ahead, new infrastructure projects may help alleviate some headaches.

Currently, 70 percent of trade between the United States and Canada crosses the border by truck, according to the U.S. Commercial Service. Improving bottlenecks may help trucks move more quickly. Plans are currently in place to upgrade facilities at some of the busiest land crossings between the two countries.

"Choosing different mode options can help ease some of the pressure, especially as prices rise due to higher fuel costs and driver shortages," says Patenude. "Shifting some freight to rail, and using intermodal resources, helps avoid problems, slowdowns, and costs."

A long-rumored second bridge connecting Detroit and Windsor, Ontario, could help alleviate costly delays at the border (*see sidebar, page 204*). The Ambassador Bridge has long been a source of significant bottlenecks.

"A second bridge would definitely help reduce congestion," says Leathers. "But it's also a great redundancy in case of an unforeseen problem with the current infrastructure."

The proposed new span would be a cable stay bridge that could accommodate the bulk of cross-border traffic, with the original span used for overflow traffic.

"More infrastructure capacity between the two countries is essential," says Leathers. "Trucks must be able to get through the border crossings faster so carriers can keep up with demand and ensure goods are flowing."

Meanwhile, one project recently completed on the U.S. side of the border is helping improve some congestion. A new highway connector leading to the Ambassador Bridge means vehicles no longer have to negotiate Detroit's surface streets. A federal law that prohibited Michigan from directly linking the privately owned bridge to the interstate system was changed a few years ago. Today, the bridge links directly to Interstate 75, vastly improving traffic flows.

While U.S. and Canadian cross-border trade presents challenges, transportation and logistics providers continue to innovate with new products and services that meet demand. By managing border-clearance issues, maintaining a network that services all areas of Canada, understanding the differences between the two countries, and providing seamless service without compromising the consumer or business experience, smart and savvy transportation and logistics service providers will continue to thrive. ■


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THOUGHT LEADERS

Co-locating Reverse and Forward Logistics Unlocks Value of Returns

Q: Why is reverse logistics an important function in today's consumer electronics supply chain?

A: Companies are trying to extend product lifecycles, as well as maximize asset recovery value. If they spend money to make a product, they want to recapture as much of the original cost as possible.

Consider that 65 to 70 percent of consumer electronics returns have no problems—a consequence of buyer's remorse or lack of understanding about the product. Manufacturers and retailers that turn viable assets, and make them available quickly for resale, can defer investment in new inventory, which carries both cost and sustainability considerations.

Q: How is strategy evolving to streamline reverse logistics processes?

A: Co-locating reverse and forward logistics functions together instead of using a centralized returns model is one way to reduce transportation miles, touches, and facility overhead while increasing turn times.

Typically, a customer with a defective item ships product back to the distribution center, then the third-party logistics (3PL) provider delivers it back to the contract manufacturer. Or returns may go to a centralized center where units are processed to finished goods, liquidation, or sorting facilities. This approach brings multiple hand-offs and associated costs.

Co-locating reverse and forward logistics in one facility allows shippers and 3PLs to determine whether a unit is good or bad, make minor repairs, sub-contract for more technical board work, return the item to the manufacturer, or repackage working units with accessories, then put them directly back into the proper resale channel—all in one stop. Immediate receipt verification also allocates credit back to the customer more quickly.

As part of the refurbishing process, companies can also record and report components that are routinely defective. Manufacturers can then ask their engineers to troubleshoot whether problems are a result of supplier or consumer error; or perhaps even identify new ways to design certain devices to extend their lifecycle.

Q: How does technology play a part in expediting returns?

A: Up to 12 percent of consumer electronics sales are returned. Processing high-velocity items quickly is the key to realizing and recouping whatever value remains in an asset.

From a technology perspective, having a tier-one reverse logistics system allows companies to receive advance shipping notices, then compare that information against products to validate and verify reporting and analytics. This also helps identify disposition strategies associated with certain assets.

For example, if an inexpensive part is defective or cosmetically blemished, it's likely not worth repairing. The system builds in business rules at the item level, so it knows whether the value of a unit justifies refurbishment. If not, the process stops, and the product goes to the scrap heap to capture any leftover commodity value.

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CHAD BURKE
Director Supply Chain Excellence,
Reverse Logistics
Ryder Supply Chain Solutions

Developing a Comprehensive Transportation Strategy

Q: What advice do you have for companies attempting to optimize their inbound freight?

A: It's worth the effort. Traditionally, companies have focused on low-hanging fruit, such as improving efficiencies and reducing outbound transportation costs. Overlooked is the more difficult task of managing inbound transportation, which can often be multimodal, multi-leg, and international.

Companies need to think outside the box to find ways of overcoming traditional roadblocks: poor data quality, lack of trading partner collaboration, limited visibility, and not enough communication between purchasing and logistics departments.

Fortunately, the playing field has changed for inbound logistics with the emergence of the functionality-rich, on-demand enterprise transportation management system (TMS). Now it is possible—and affordable—for companies to take control of their entire end-to-end transportation network, allowing them to maximize leverage, own carrier relationships, improve efficiencies, reduce inventories, and maximize cost savings.

Q: What does the future hold for inbound transportation planners?

A: Advancements in transportation technology are occurring more rapidly than ever. It's all about control—you need to arm transportation planners with the best transportation management technology to give them the control they need to provide a competitive edge for your company. Companies are replacing their outdated freight management tools with new systems that give planners visibility to the company's entire transportation supply chain—inbound and outbound—and allows them to plan across the entire network to drive improved service and lower cost.

Planners are increasingly responsible for working with purchasing departments to reduce the total cost of sales, and for evolving the transportation department from a traditional cost center to a profit center. The ability to route, plan and optimize, select carriers, tender, track and trace, manage exceptions, and automate and manage freight audits will be common practice for inbound planners of the future.

Q: What is the most common mistake that companies make when trying to improve their inbound logistics?

A: Not having a plan. Many companies don't have a comprehensive transportation strategy because of top-down initiatives developed at the corporate level. The cost-cutting culture that often prevails in today's boardrooms can negatively affect logistics departments. Taking action for short-term gain can distract companies from doing things the best way. An overall transportation strategy includes short-term and long-term goals, and initiatives across more than just the logistics department. A sound strategy takes into account inventory planning, vendor compliance, partner collaboration, leveraging the entire transportation network, customer demand, and fully landed product cost, among others. A rich and robust TMS plays an important role in a company's inbound transportation strategy.

DAN VERTACHNIK
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SaaS-Based TMS Empowers Global Freight Management

Q: What are the biggest challenges facing shippers in today's economic environment?

A: In today's volatile market, managing transportation domestically and globally is a key factor for a more efficient and cohesive supply chain. Many businesses still use manual methods to manage freight, with no way to measure service or performance. Other companies are bound to installed/hosted legacy transportation management systems (TMS), which limit the flexibility and visibility necessary for end-to-end supply chain management. With limited metrics and no best practices, companies struggle to improve services and reduce transportation costs.

Additionally, as more companies expand overseas and offshore, multi-country compliance is quickly becoming a challenging factor of transportation management.

Q: How can today's shippers effectively manage domestic and global freight?

A: To support global initiatives, shippers should consider leveraging a Software-as-a-Service (SaaS) TMS with domestic and global functionality. True global logistics technology enables companies to successfully manage all modes of transportation—domestic and global—under a common umbrella while providing complete visibility and direct collaboration between shippers and carriers.

By leveraging a global TMS, shippers are empowered with a comprehensive solution for managing domestic and cross-border freight that directly impacts the bottom line. Automated communications, processes, and workflow between supply chain partners allow companies to improve efficiencies while gaining visibility into freight payment and discrepancies before they impact the company's finances.

Global transportation technology bridges the gap for multi-divisional enterprises, enabling domestic and global logistics management in a centralized system that delivers significant value for shippers and carriers.

Q: How can companies looking to expand internationally leverage a TMS?

A: A TMS with both domestic and global functionality provides scalability for those companies that are currently handling domestic freight while looking to expand into international territories, or even those companies that are currently managing international freight outside of their domestic processes but need one flexible platform for domestic and global transportation.

Furthermore, with a true SaaS TMS solution, companies have visibility to true total landed costs and lead-times to make better sourcing decisions while monitoring and managing supplier performance all over the globe.

A true SaaS solution for stransportation management enables companies to reduce overall transportation spend; gain visibility into domestic and global transportation processes; improve collaboration between all global partners of the supply chain; and scale and quickly adapt technology based on domestic and global needs.

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3PLs Control Loads to Provide Shippers Superior Service

Q: Third-party logistics (3PL) companies face many challenges with each shipment they manage. Why is it critical for 3PLs to take control of their shipments?

A: In today's difficult economy, shippers look for efficiencies such as maintaining smaller inventories and scheduling employees to unload freight at key consumption and/or distribution times. This demand only increases the importance of on-time deliveries.

All 3PLs know that when you put a person, a truck, and Mother Nature together, many things can go wrong. Today's 3PLs must think and operate differently than yesterday's brokers did. They need to influence all aspects of the shipping process.

Q: What can a 3PL company do to gain more control through today's technology?

A: Web-based load boards such as Internet Truckstop and TransCore allow 3PLs to access real-time carrier information through their Federal Motor Carrier Safety Administration-issued Motor Carrier Number. 3PLs can check the driver's insurance, authority, driving records, and CSA 2010 scores to grade drivers quickly, and better manage safe and on-time deliveries.

They can also communicate with drivers through smartphone apps such as MacroPoint, which is similar to a GPS system, and can easily track drivers to provide the same level of oversight as a company that owns its trucks.

Q: How does a 3PL's insurance coverage factor in?

A: All 3PLs must decide whether to use contingent cargo insurance or primary cargo insurance. Contingent costs less than primary, which is a factor for some companies. Primary cargo insurance, however, demonstrates willingness to take direct responsibility over shipments, which instills customer confidence. Depending on the shipper the 3PL is working with, it can be the deciding factor in getting a load or not. In the long run, the additional expense of primary insurance is worth it because it demonstrates greater commitment to customers.

Q: How will investing in greater shipment oversight benefit your 3PL company over time?

A: 3PLs can set themselves apart from other providers by taking as many steps as possible to show shippers a higher level of responsibility over their freight. You can't just be a broker today. You must be able to accurately track shipments, know contract carriers and their drivers well enough to completely trust them, and take responsibility for every job.

Not every company can implement all of these processes at one time, but 3PLs can take small steps along the way to inspire shipper confidence.

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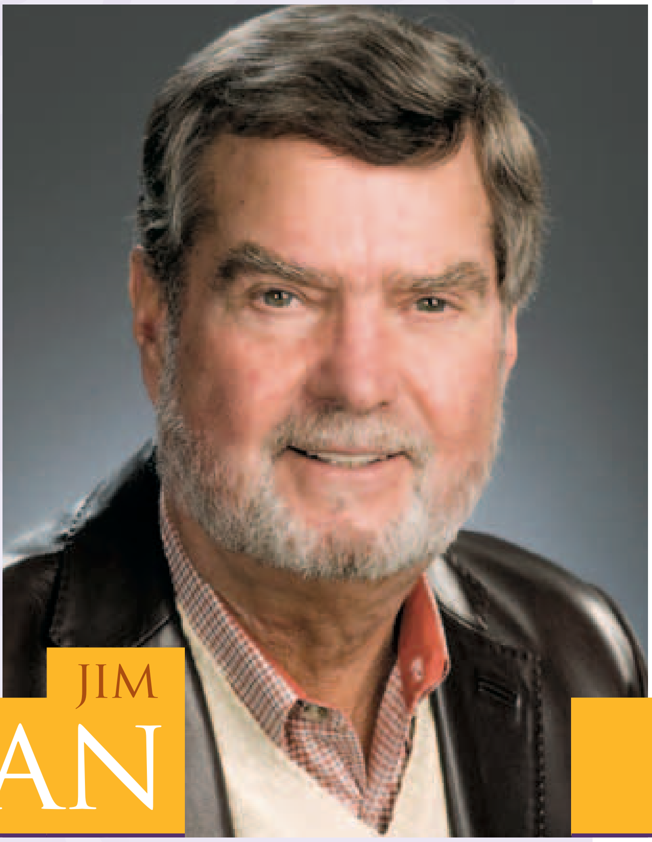
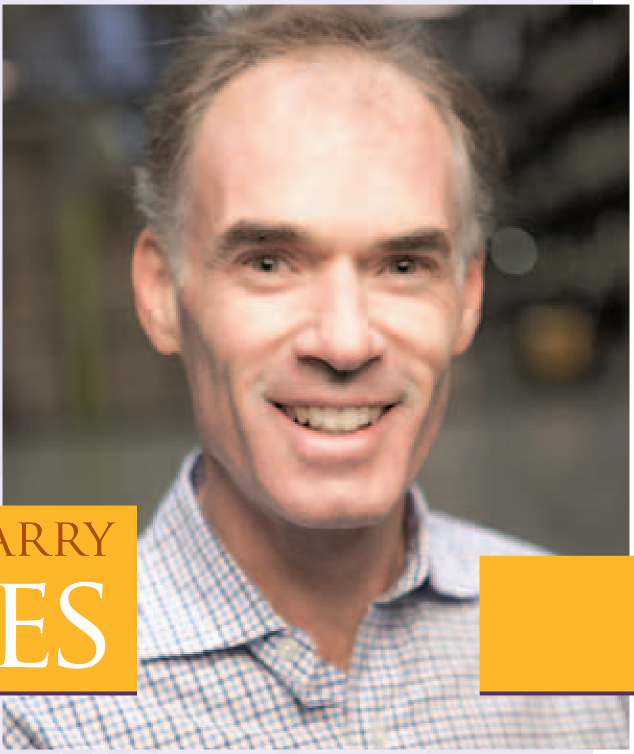


JIM SYFAN
Chief Executive Officer
Syfan Logistics

Harnessing the Power of Information Technology



Q: How do you squeeze the most reliability, accuracy, and cost efficiency out of today's supply chain?

A: Smart information technology (IT) is fundamental to success. Leading manufacturers know the importance of effective logistics management. Getting your product to the right place, just in time, and exactly as the retailer demands is crucial to the bottom line.

Q: How does IT transform logistics management?

A: Technology tools provide actionable data for supply chain improvements, cost efficiencies, on-time performance, and customer satisfaction. With every shipment, IT supports better methods and cost-effective processes to streamline your business, and manage today's supercharged supply chain with better results. It's mandatory for supplying mass retailers.

GARRY NEEVES

Vice President,
Regal Logistics

Q: What types of systems are most critical for improving supply chain performance?

A: A combination of tools clearly and instantaneously captures real-time data about a manufacturer's orders, received and distributed shipments, and inventory status, for reliable, accurate operations and efficiently tracking and preventing exceptions. These systems include:

- **Real-time visibility and online shipment tracking.** Access complete visibility of distribution status, harness useful data to ensure just-in-time deliveries and vendor compliance, and ensure immediate visibility of shipment status via the Web. It should be powerful and easy to use, feature advanced dashboards with one-click access to real-time data, and provide enhanced electronic data interchange (EDI) visibility so users can see exactly when electronic files are sent and received and view, print, or download documents.
- **Complete EDI services.** Required by major retailers, EDI saves time and money by ensuring the seamless movement of goods, resulting in lower administrative costs, automatically reconciled accounts, quick turnaround management reports, immediate compliance with retailers' mandates, and improved customer service.
- **Warehouse management systems.** Provides complete end-to-end supply chain support for real-time tracking and visibility of incoming product, shipping and delivery.
- **Transportation management systems.** Locates the best carrier service and rate package, ships freight, and provides detailed, real-time shipment tracking information.
- **Electronic bill of lading technology.** Reduces inaccuracies, time, and costs, and provides instantaneous online shipment details.

Smart use of IT enables more efficient, cost-effective movement of product through the supply chain, and provides actionable data necessary to increase productivity, reduce costs, and give your company a competitive edge. Often the best way to achieve this is by outsourcing logistics services for part or all of your supply chain management functions. In fact, 74 percent of the largest American manufacturers use third-party logistics (3PL) services. An effective 3PL will deliver measurable results by helping you operate more efficiently and keep costs low by using sophisticated, standardized IT as part of its warehousing and distribution services.

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Tech Tools Serve Retailers' Diverse Needs

Q: What do retailers need to know about working with 3PLs today?

A: Retailers are challenging third-party logistics (3PL) providers to supplement their offerings with a broader range of services. To obtain and retain business, 3PLs must meet retailers' diverse reporting, visibility, and delivery needs—yet not increase their cost structure.

Achieving this goal is particularly problematic without adaptive software. There is no one-size-fits-all solution for carton tracking. 3PLs using multiple platforms must integrate that data, not only between carton-tracking systems, but also with accounting and other enterprise systems. The more manual integration is required, the more it affects both 3PLs' efficiency and retailers' shipping rates. Logistics providers who choose agile solutions will be better positioned to meet retailers' varied needs.

Additionally, 3PLs with data visibility at both the micro and macro levels can offer better performance. It's critical to be able to see what's in any carton, at any time, anywhere in the delivery process. But it's also important to have big-picture visibility, such as on-time delivery and on-time performance across the enterprise.

CHANDRA
ALLRED
Chief Operating Officer
PCSTrac

Q: What technology trends have the most impact on retail distribution?

A: One trend with a lot of potential is the ability to repurpose data across functions. Automating a single process increases efficiency, but when the data from the automation of one process can be shared to automate another process elsewhere in the enterprise or supply chain, it can create an exponential advantage.

For example, many retailers use data provided in carton tracking to populate enterprise systems. It's a seemingly obvious, but very innovative, idea that does away with the previous model of re-scanning cartons at the store. If only one hour per week of time were saved at $10 per hour at 1,000 stores, the annual savings would be $520,000 – simply by eliminating the need for store personnel to re-scan cartons.

Innovations like this save not only pure labor costs, but also the opportunity cost associated with pulling associates off the sales floor. It's a classic example of using technology to enable employees to focus on the activities of their core business.

Q: What should retailers consider when choosing a technology provider?

A: Every retailer faces a unique set of business challenges. Technology providers should offer innovative ways to modify applications to meet these needs. Whether it's a variation of distribution center bypass, moving wholesale freight with a carton-tracking system designed for store delivery, or a custom store operations Web site for expected deliveries, customization is key.

Building custom applications from scratch is both time- and cost-prohibitive. For both 3PLs and retailers, investing in a technology partner that supports customization and flexibility at a moderate cost is a strategy for long-term adaptability and growth.

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Supply Chain Control Towers Offer a Bird's-Eye View

Q: How can companies better manage their supply chains to gain competitive advantage?

A: Over the past year, the concept of a supply chain control tower has been gaining momentum. A control tower is a single command center for visibility, decision-making, and action, based on real-time data.

NATHAN PIERI

Senior Vice President
Marketing & Product Management
Amber Road

"A supply chain control tower is a central hub with the required technology, organization, and processes to capture and use supply chain data to provide enhanced visibility for short- and long-term decision-making that is aligned with strategic objectives," according to Capgemini Consulting.

It's also a new name for a concept that has been around for a while: fourth-party logistics (4PL). Companies are increasingly realizing that supply chain must become a core competency, and taking on the 4PL role offers them the ability to accelerate collaboration and achieve higher performance levels.

The control tower represents the common processes enabled by cloud-based technologies, such as configuring a set of services to business units and trading partners across a supply network. These services start with a basic function: collecting and aggregating all orders, shipments, inventory, and status. This information is linked to other enterprise systems to provide global visibility, then transformed to become the input for supply chain execution solutions.

The control tower is a hub that must go beyond visibility to provide integrated global logistics and trade compliance services. Based on a company's supply chain segmentation strategies, these services must be configured to support the needs of business units and the key fulfillment attributes of a product line. Control tower managers can decide how to distribute the services by determining the correct mix of centralized and decentralized execution for their supply chain design.

Q: What are the advantages of a supply chain control tower?

A: Having one global supply chain system and standardized processes gives companies the flexibility to plug in new logistics providers as needs change, or quickly assimilate new businesses. The control tower reduces the risk of getting locked into using an external provider's system, and changes the balance of power in a relationship. Control tower managers have the visibility and data-driven analysis of service levels to objectively manage each provider. Similarly, new businesses can be plugged in with standard interfaces and highly configurable processes.

By collecting the mountain of data from the daily orchestration of supply chain processes, control towers also offer unique insight into performance. With business intelligence tools, managers can perform "what-if" analyses to optimize sourcing or distribution decisions, pinpoint a process breakdown that results in inventory builds, and right-size inventory based on actual cycle times and variability.

Whether applied by a control tower or 4PL, today's technology enables global supply chain teams to tame complexity and control their own destiny.

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Improving Reverse Logistics Moves Shippers Forward

Q: How can shippers improve their reverse supply chain?

A: Amid today's higher fuel and transportation costs, technology becomes critical as companies search for efficiencies within the supply chain. The reverse supply chain has historically been viewed as a cost center and is often overlooked as a place where profit can be found.

In the reverse supply chain, product is often returned as an "each" rather than a full case, creating the need for systems to capture data at a more granular level. Even though goods are returned, they often still have value in the market. This creates the need to extract the value from returned and unsold product using technology to ensure the greatest yield.

In addition, efficiencies can be found within the supply chain by using a nationwide network of reverse logistics facilities and a highly skilled team of supply chain field analysts. This network reduces transportation and handling costs, as well as carbon footprint, which is important for cost savings and sustainability efforts.

Shipping returns to facilities closer to customer locations and retailer or manufacturer distribution centers helps achieve these efficiencies. Supply chain analysts in the field can monitor inbound shipments to provide valuable data for improving the supply chain and implementing changes to reduce damage.

Even more critical is how technology helps manage returns for highly controlled industries such as pharmaceuticals. A solid system with visibility and proper reporting can help mitigate risk for clients. Also, having strong technology in reverse logistics centers can provide limited touchpoints, automated sorting, and flexibility that allow monitoring and compliance with ever-changing government regulations.

In 2012, information is king. Web tools that provide retailers and manufacturers visibility into their supply chain are critical to continuous improvement. Developing tools such as watch lists and benchmarking helps trading partners make better business decisions by increasing the collaborative discussion between them. In today's environment, technology enables those collaborative discussions that are critical to improving the reverse supply chain.

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Helping Shippers Do More With Less

Q: What challenges or issues are shippers facing in an era of globalization?

A: Our world has certainly become a much smaller place, but our challenges have only increased. Coupled with a tough economic climate, the need for greater supply chain visibility is paramount. Transportation costs over the past several years have come under greater scrutiny, and as shippers are challenged to do more with less, a company's operational business intelligence is crucial to streamlining and optimizing its global supply chain.

Over the past 40 years, freight audit and payment providers have been a key source of data for North American companies to gain insight into their supply chains. As the freight audit and payment industry continues to evolve, shippers are now looking for a solution that can provide a single, global data warehouse, as well as state-of-the-art analytical tools that will allow them to realize greater visibility and efficiencies, while reducing costs on a global scale.

KEITH SNAVELY
Senior Vice President, Global Sales & Marketing
nVision Global

Today, a number of global freight audit and payment providers can help shippers gain valuable insight into their global supply chains while overcoming numerous challenges, including harmonizing multiple currencies, capturing information in foreign languages, cleansing data, and meeting archival requirements.

Q: What should shippers look for when selecting a global freight audit and payment provider?

A: Shippers looking for a truly global solution should ensure potential providers have a firm understanding of regional as well as global requirements, such as VAT compliance and documentation archival requirements. The provider must also possess experience in implementing complex processing requirements.

Shippers should also ensure potential providers have strategically placed, global, full-service processing centers with a multi-lingual staff that can provide regional support.

Extensive line-item data capture is critical to providing customers the visibility they require. Other considerations shippers should look for are Web-based, state-of-the-art analytical tools, including dashboards; collaborative exception management applications; imaging technology; the ability to provide complex general ledger account coding; and the ability to remit payment in numerous currencies.

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Partnership: The Key to Supply Chain Efficiency

Q: How can value chain partners cooperate to create and share efficiencies?

A: Sharing supply chain best practices has become critical to achieve the continuous improvement required for success in driving value for clients. The managers, executives, and companies that partner best will win.

In a global environment, no supplier can claim expertise with every function in every country, so achieving effective partnerships is key. Whether you are a niche player or a global giant, you can take steps to draw more value from your partnerships:

- Executive leadership should create an environment that encourages partnerships. Managers must be trained in developing and managing strategic relationships, then have the authority to act on behalf of the company with their partners.
- Value chain partners must be willing to enter into long-term agreements. Improvements often require capital investments, and one- or two-year agreements with 30-day cancellation options do not allow for the meaningful investment that could create breakthrough results. Value chains have become extremely complex, which means there is a learning curve for all parties. It takes time to achieve peak performance.
- Tie compensation and incentives to results achieved, not just tasks performed. This approach takes more work than you find in typical agreements, but allows the partners to develop shared goals and key performance indicators.

Q: How can today's manufacturers deal with increasing regulations, demand volatility, and shifting global trade currents?

A: Working with a third- or fourth-party logistics provider that can integrate customized vendor, purchase order, inventory, transportation, and warehouse management systems with a manufacturer's current system can facilitate forecasting, planning and execution, and risk mitigation. Whether its demand planning or compliance, offshore risks are infinitely greater because exceptions extend further and reach deeper. Today's supply chains need to be responsive to second-tier manufacturers in a third-world country, resulting in variables that can be mind-boggling. Partnerships are what stand between success and failure.

Manufacturers know that supply chain volatility is one of their greatest operating risks, especially in emerging markets. In 2011, natural disasters in Japan, Thailand, and New Zealand; political upheaval in Asia; debt crisis in Europe; and rising global oil prices all disrupted supply chains.

To manage risks and reduce landed costs, manufacturers are increasingly outsourcing global logistics operations to 3PLs to gain expertise in local regulations and customs rules, and regionalize supply chains through nearshoring.

The glue to the process is global connectivity. Manufacturers must have partners that are an extension of them in the marketplace with their people and systems. Having partners that provide real-time visibility, and deliver the information to managers at the decision point, is a crucial differentiating factor, and much more effective than relying on historical methods when managing for unforeseen events.

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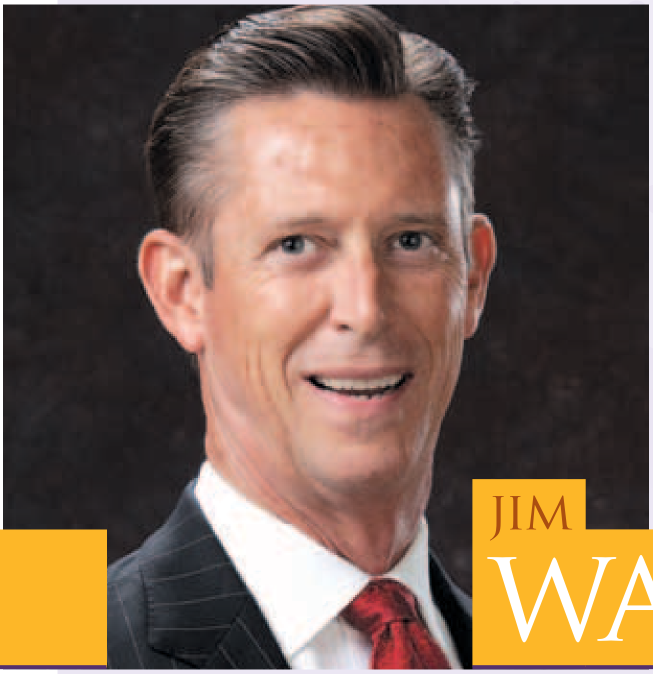

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I.T. Toolkit

by Beth Stackpole

Opening the Door To Real-Time Visibility

The WHITING Group replaced siloed systems with integrated ERP, ushering in transparency and real-time decision-making across its multiple divisions.

Steve Kopelchak of The WHITING Group of Canada says he feels like an octopus at times because he has his hands in every facet of the business. Kopelchak splits his time overseeing customer service and fulfillment, purchasing, warehouse operations, shipping and receiving, and information technology for WHITING Door Manufacturing, which produces transportation-grade rollup doors.

Kopelchak also has his hands in the parent company's two other subsidiaries, AMDOR Inc., a maker of shutter-style doors and lighting for emergency vehicles; and DRW Suppliers, a distributor of transportation and industrial after-market products.

His ability to serve as a central cog across all of The WHITING Group's divisions gives him unprecedented visibility into all aspects of the organization's multi-faceted operations.

Unfortunately, there hasn't been the same kind of hub for the company's core business applications, which Kopelchak says have historically been disjointed, disconnected, and overly reliant on manual processes. Because The WHITING Group's initial roll-up door business was limited to sales only in Canada, the company stretched its portfolio in new product areas via acquisition as a catalyst for growth and as a means for competitive differentiation.

Yet with each acquisition and expansion area, The WHITING Group was faced with a new set of systems and processes to handle core functions such as accounting, inventory, logistics, and transportation. None of the inherited business applications were built on the same database, so they couldn't share data, and few were readily accessible across all three divisions, despite synergies in products with a possible shared customer base.

"We were running a hodgepodge of systems built over the course of six or seven years when we grew from a small business to a multi-division company," says Kopelchak. "We started with the Sage *Accpac* accounting system, and kept bolting on components, making the system increasingly larger and more unwieldy."

Silos and Inefficient Manual Processes

What started out as one division's basic accounting solution for purchase orders, order entry, general ledger, accounts payable, and accounts receivable gradually morphed into a system with a life of its own. The need to track manufacturing bills of materials (BOMs) for what are primarily custom orders led to a bolt-on configurator and costing system add-on.

The company added a separate warehouse management system (WMS) to the mix to work out kinks on the distribution side of operations. While many of these extra capabilities came in the form of add-ons to the core accounting platform, other functions such as customer relationship management (CRM) and ISO tracking were either developed internally as proprietary systems or purchased from third-party vendors.

"Between the SQL-based *Accpac* accounting system, the WMS system, and the costing system, we had three databases that kind of talked to each other, were performing similar functions, and were supposed to sync up—but they never really did, in practice," Kopelchak recalls. "Therefore, we spent a lot of time rationalizing inventory and reconciling data manually—not live, but with a batch and queue process. Five separate pieces of software were controlling functions that could be managed with one."

That was the situation three years ago, but in 2009 a new controller familiar with the benefits of integrated systems mandated phasing out the siloed approach in favor of an enterprise resource planning (ERP) platform that would encompass a complete set of functionalities. The idea was to trade the myriad systems and resulting islands of information for a single core system that would deliver a consistent and cohesive view across the multi-division organization, and facilitate more strategic decision-making.

One of the biggest problems with the siloed approach was operational inefficiency. Because the various systems weren't integrated and didn't share live data, any change made to one system—inventory, for example—wouldn't show up in the main accounting system until the next morning, when transactions were physically uploaded to the system in a batch process.

Lack of integration between manufacturing and warehouse data kept The WHITING Group's employees in the dark about inventory levels and order status.

Manual processes were also the norm with the old system, so, for example, an employee would have to log the transfer of finished goods from the manufacturing system into the warehouse system in order to create customer shipments. To top it off, a dedicated employee was required to orchestrate and confirm that all manual input went off without a hitch.

Not surprisingly, the result was often miscommunication and misinformation. Take the example of the inventory system not being automatically synced with the accounting and CRM system. As a result of this disconnect, customers could place an order for a specific part from the DRW Suppliers distribution business, then later discover none of the desired parts were left in inventory.

The lack of integration between the manufacturing and WMS system meant that if an employee forgot to manually transfer finished goods from one system to another, the product might not be available for shipment on time, putting the order at risk or disrupting an optimized transportation schedule.

"We were relying on people instead of using an automated system to be more efficient," Kopelchak says. "We needed a completely integrated system with live transactions so items consumed in manufacturing would be immediately evident to anyone else in the system. We also needed all three companies to share the same database."

In Search of an Integrated Solution

The WHITING Group started its search for an integrated ERP solution, initially selecting 15 potential platforms, which it quickly narrowed to five, then three, after extensive research related to its feature and budgetary requirements.

In addition to wanting a single integrated software system that could run the three businesses from front office to back, The WHITING Group also put a high

priority on information management and visualization capabilities, so dashboards could be easily created and disseminated to showcase data in a way that fostered real-time decision-making. "What's the point of gathering data, then not using it to run the business?" Kopelchak asks.

Picking a Platform

The evaluation quickly led to a decision to go with Epicor's integrated ERP platform, which Kopelchak says exceeded the custom reporting requirements while also delivering all the capabilities he anticipated The WHITING Group might need over the next few years. Kopelchak's one big fear was that the Epicor platform would be out of his price range, but Epicor and its solution partner, Six S Partners, actually came in with the lowest-priced bid.

The WHITING Group's requirement for integrated ERP is typical of a small to mid-sized company that starts out with a finance-centric platform and needs to add more integrated materials planning and logistics capabilities over time.

"The challenge with islands of information is that companies become a slave to data processing, requiring employees to spend an inordinate amount of time re-keying data into the system," says Six S Partners President and CEO John Preidtsch. With multiple versions of the same customer in separate databases—say WHITING Door Manufacturing's accounting system and DRW Suppliers' customer system—any time a simple data point such as a phone number was modified, an employee had to make the change in multiple systems, and maintain three separate copies.

Together, The WHITING Group and Six S Partners followed Epicor's implementation methodology, and leveraged the integrator's best practices. One challenge of the deployment was process mapping, or refining existing business processes to take advantage of an integrated system.

A typical implementation team looks at what a new system has to offer, examines existing processes—materials planning or carrier scheduling, for example—and performs a gap analysis of what needs to change.

The WHITING Group's warehouse workers can prepare shipments based on real-time inventory data provided by Epicor's enterprise resource planning system.

The WHITING Group was no exception. The team got through the process using conference room pilots to hash out workflow changes, and brought in representatives from materials planning, inventory, logistics, and order entry to perform mock scenarios and vet the new processes. In total, that piece of the deployment took several weeks.

The team also adhered to a number of its own key principles, which members claim readily contributed to the implementation's success. One key differentiator was The WHITING Group's decision to take ownership of the system so it wouldn't have to rely on vendors for every aspect of development and support. That meant the company needed to invest time upfront to learn the system inside and out—a goal Kopelchak and crew took on via extensive training and a protracted roll-out cycle. They spent more than one year implementing the system, and addressed each module individually.

A core team from The WHITING Group trained on the modules, then followed up every week with training sessions for a larger group, which was encouraged to provide feedback on the system set-up, as well as the new business processes. Kopelchak's team ensured the larger audience had representation from all aspects of the business—from warehouse personnel, to plant production workers, to logistics and transportation employees.

"They came in every week for one year," he explains. "Being involved made them feel they were shaping the system, instead of us trying to force it on them."

Continual Training

Training didn't stop when the system went live. For one full year after deployment, the same group continued to show up for weekly training sessions to identify problem areas and refine business processes to squeeze more productivity out of the application.

Although The WHITING Group licensed the full gamut of Epicor functionality, it didn't go live with all the features at once—another best practice Kopelchak believes contributed to the team's relatively smooth deployment.

Initially, the team focused on all the functions shared by the older system. New functionality such as dashboards, credit card processing, and warehouse and plant labor tracking would come at a later date, after employees achieved competency with the core processes.

The WHITING Group's ability to resist scope creep was another factor in its ability to go live with the implementation on time. "It's tempting to try to pack in more functions," Preidtsch says. "But they stayed focused on owning the system."

Reaping the Benefits

Now live with the integrated system for more than 18 months, The WHITING Group has enjoyed a wide range of benefits—the most significant being the ability to tap into real-time data and offer live feedback on what's happening across the company.

Such real-time visibility has ushered in improvements across a range of functions. For example, armed with real-time manufacturing BOM data, the logistics team can plan shipments days in advance, saving customers money on transportation.

The ability to track inbound and outbound materials with a bar-code scanner means customer service reps know where a part is at any time, so they can keep their customers informed.

"The customer care team has immediate visibility as soon as items ship, because the data is all in one system," Kopelchak says. "They can see instantly when a shipment is prepared—knowledge they never possessed before."

Using Epicor's dashboard capabilities, The WHITING Group has pushed visibility further, allowing its sales manager to track sales on key accounts across divisions in real-time. The system also lets procurement specialists examine minimum and maximum availability levels for consumable parts, based on history and using color coding to identify items on order, items available, and items that need to be ordered based on material requirements planning.

"This visibility enables us to track the supply chain so we're not left without inventory to meet increased demand during peak periods," Kopelchak says.

All these benefits made the transition to an integrated system well worth the hard work, Kopelchak says. Reduced software license and maintenance costs is one area of savings – the firm doesn't have to keep licenses on siloed systems for three companies, nor is it paying expensive maintenance fees on multiple systems.

The other big savings is labor, because a dedicated person is no longer required to monitor the manual input of data across systems.

"It's not that we have fewer workers—we're just directing them to more value-added activities," Kopelchak says. "We've seen payback in 18 months—and that was unexpected." ■

DC Solutions | by Thomas G. Dolan

Stacker Cranes Cure Pallet Pain

For companies with busy and complex warehousing operations, running short of inventory storage space can be a bitter pill to swallow. Through an imaginative approach to stacker crane use in a uniquely designed facility, pharmaceutical manufacturer Catalent Pharma Solutions maximized materials handling flexibility and efficiency to increase capacity at its Philadelphia packaging center.

Pharmaceutical manufacturer Catalent prescribed an automated storage and retrieval system to treat inefficient pallet storage in its high-bay warehouse.

Catalent develops and manufactures softgel capsules, modified release oral solids, and prefilled syringes in an extensive manufacturing facility network that includes more than 20 sites across five continents. Many of these facilities also provide commercial packaging services – filling bottles, pouches, and blister strips with tablets, powders, and liquid solutions – to the healthcare industry.

Catalent's Philadelphia facility is representative of the company's global distribution center (DC) operations. The site provides healthcare industry partners with a full solution, from primary package design and engineering to filling, assembling, and labeling packages, and managing secondary packaging. The Philadelphia site specializes in cold chain biotech packaging, as well as bottling, blistering, and pouching.

To gain operations efficiency and storage space, Catalent dramatically renovated the facility. The first step in the project was partnering with materials handling equipment provider LTW Intralogistics, an Austrian company with U.S. headquarters in Emigsville, Pa. LTW manufactures automatic and manually operated stacker cranes, and delivers components including racking, conveyors, and warehouse management software for high-bay warehouse systems. The company also provides engineering and project management for turnkey warehouse solutions, and specializes in handling loads from 20 to 20,000 pounds.

The Philadelphia facility presented an interesting design challenge. "Three existing buildings stood surrounding an empty space," says LTW's North American president, Daryl Hull. "We added a fourth building in the middle, and tore down walls to connect the existing buildings to it, creating a single facility that provided a more efficient workflow, increased warehouse density, and netted considerable electricity and refrigeration savings."

Ready to Move

To support the facility's cold chain activities, the renovated site features refrigerated storage for 880 pallets. It also houses a Class II vault for storing controlled drugs. The majority of the plant's packaged product, however, is stored in the high-bay warehouse system at an ambient temperature.

Workers box, label, palletize, and shrink-wrap products coming from the plant's 63 packaging suites, then move the pallets by lift truck to an automated storage and retrieval system (AS/RS) induction conveyor for storage in the high bay. This 54-foot-high, five-aisle bay holds 19,000 pallets, stacked nine pallets high.

A curved track allows stacker cranes in Catalent's facility to change aisles easily.

"Software tracks pallet throughput around the clock," says Justin Smith, Catalent's logistics director of supply chain. "We can handle more than 630 pallet moves in a 24-hour period."

LTW assisted Catalent in designing the optimized AS/RS to meet the facility's needs, while keeping costs in check. For example, the DC's five aisles would typically necessitate five automated cranes—one per aisle. On an average day, however, Catalent would use only 30 to 40 percent of the system's capacity to move its palletized product.

LTW designed a new version of the system that used only three cranes, instead of five, saving $800,000 in equipment investment. "Matching the number of stacker cranes to the warehouse's throughput needs, instead of to the number of aisles, reduces capital investment and operating costs," Smith notes.

With up to 2,000-pound pallet payload capacity, the cranes manage not only all the facility's pallet handling, but also most of the materials receiving, and shipping for both finished products and waste materials.

An Easy Fix

Unlike conventional aisle-changing cranes, which are limited in flexibility, the cranes at the Catalent facility continue when they reach the end of an aisle, traveling on a curved 12-foot track that directs the crane into the next aisle to continue storing and retrieving pallets.

This flexibility also pays off when equipment fails. Repairing conventional stacker cranes can be difficult because they are often stuck in place when they malfunction. Repairs can be time-consuming, and the maintenance crew often must bore holes in the facility's roof to access the broken machine. The cranes in the Catalent facility, however, can be pushed off-track to a separate area for repair.

"These cranes virtually eliminate the supervision, equipment, and maintenance problems that plagued earlier aisle-changing cranes," Smith notes.

For Catalent, the new system was just what the doctor ordered. "Our Philadelphia facility now leverages fully automated warehousing, distribution, and packaging functions, thanks to the AS/RS and aisle-changing stacker cranes," Smith says. "We can move products from packaging into storage, then ship them to our clients or distribution centers with efficiency and flexibility." ■

WEB_CITE CITY

Did you ever search online for a logistics solution without having a specific company name?

Search engines spit back thousands of unusable responses. *Inbound Logistics* is here to help, by compiling the most comprehensive directory of leading logistics and transportation Web sites, organized by category.

THERE ARE TWO WAYS TO USE WEB_CITE CITY:

1. Keep it near your keyboard when seeking specific transportation/ logistics sources or just to become familiar with new industry players.
2. Go to the online version of Web_Cite City – fast and searchable by keyword – at inboundlogistics.com/web_cite

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3PD Inc. • www.3pd.com

Each year, 3PD makes nearly five million deliveries (and counting) for some of the biggest names in business. That's a lot of deliveries, a lot of doorbell ringing, and a lot of focused last-mile logistics experience that we can turn into a competitive advantage for you.

A.N. Deringer • www.anderinger.com

Customer care, service excellence, and a firm commitment to customs compliance illustrate the differences that have led to Deringer's success as a leading logistics provider for more than 90 years. Deringer's turnkey logistics services include customs brokerage, international freight forwarding, warehousing and distribution, cargo insurance, and consulting. With more than 30 offices and a strong network of international agents, Deringer helps companies optimize efficiencies in their supply chain.

A&R Logistics • www.artransport.com

A&R Logistics specializes in bulk transportation, packaging, distribution, and logistics. A&R provides dependable, quality services to meet your distribution and logistics needs. Through analytical reviews, A&R customizes timely, cost-effective solutions for your company. Put A&R's experienced staff and extensive affiliate network to work for you, and realize global solutions in a changing worldwide market.

Access America Transport • www.accessamericatransport.com

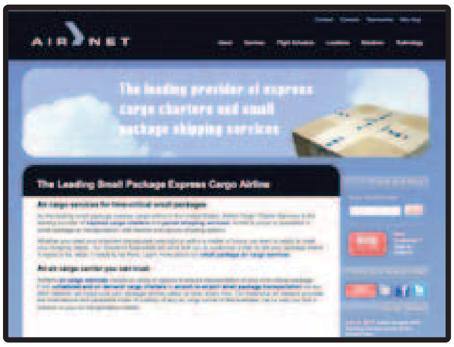
Access America Transport (AAT) is the premier transportation provider in North America. Our commitment to our customers sets us apart from the competition. Our services include: truckload, LTL, heavy haul, and specialized shipping. We offer 24/7 customer support, and AAT is an expert in expedited as well as JIT freight. Our LTL tool enables shippers to instantly compare rates, book freight, and manage all their carrier relationships with one click. Access America is PowerTrack enabled, DoD and GSA approved, Six-Sigma certified, and a Smartway-approved carrier. Please visit our Web site today to get started.

ADS Logistic Services • www.adslp.com

ADS is an award-winning, full-service 3PL provider offering public and contract warehousing, distribution, and fulfillment services designed to move your product with maximum speed, accuracy, and cost efficiency. ADS proudly received *Inbound Logistics'* prestigious Top 100 3PL Providers award for many years. With more than 15 years of experience, ADS has the cutting-edge technology, extreme cost containment strategies, and high level of expertise required to solve any logistics challenge. Visit www.adslp.com or contact Bruce Mantz at sales@adslp.com.

AFN-Advantage Freight Network • www.loadafn.com

Serving carriers, manufacturers, and retailers since 2003, AFN is a recognized leader in freight brokerage, third-party logistics, and transportation management services. We're known for our commitment to client service, our proactive approach to fighting cargo theft, and our expertise in retail compliance. AFN's team works with you to provide a solution that blends seamlessly into your daily business processes.



AirNet • www.airnet.com

As the third-largest air cargo airline in the United States, AirNet is the leading provider of expedited and specialized transportation solutions. AirNet is proud to specialize in small-package delivery, with flexible and secure handling and delivery options. Whether you need your shipment delivered overnight or within a matter of hours, our team is ready to meet your shipping needs. Our Solutions Specialists will work with you to customize a plan to get your package where it needs to be, when it needs to be there. Learn more about our small package air cargo services.

APL Logistics • www.apllogistics.com

APL Logistics designs and operates global supply chains that deliver products to everywhere you need them. Its innovative end-to-end solutions use data connectivity for greater visibility and control. APL Logistics provides the resources necessary to support your supply chain. Services include shipment consolidation and deconsolidation, global freight forwarding and customs management, regional warehousing and distribution networks, and IT solutions that increase supply chain performance and reduce costs.

Aspen Logistics • www.aspenlogistics.com

The Aspen Alliance Group provides global brand name partners with a competitive advantage through high-quality customized, integrated, cost-effective logistics services. We offer customer-focused solutions in contract and public warehousing, transportation, and value-added services with a special emphasis on temperature-controlled environments. Our superior service is driven by leading-edge technologies, which provide timely flow of information to manage complex supply chain environments.

Averitt • www.averittexpress.com

A balanced equation of technology, facilities, equipment, and personnel is how Averitt determines the best options for you to gain time and cost efficiencies in your supply chain. Learn more about our capabilities in warehousing services, portside distribution, dedicated fleet management, transportation network design capabilities, and outsourced transportation management. If you do not see a solution you had in mind, give Averitt a call and we will work with you to create an innovative approach to fulfill your need.

Bender Group • www.bendergroup.com

Bender Group is a full-service third-party logistics provider focused on providing flexible logistics solutions, delivering excellent customer service, and building partnerships with companies of all sizes to improve their supply chain networks, from raw materials to consumer delivery. Bender Group operates dedicated and multi-client distribution centers, a complete transportation network, and international logistics services. To learn more about how Bender Group can meet your supply chain needs, visit the Web site.

Big Dog Logistics • www.bigdoglogistics.com

Big Dog specializes in designing customized solutions for customers who want more than a cookie-cutter approach. Big Dog provides and manages shipments, warehousing, sorting, staging, and delivery with precise timing that reduces costs and keeps critical parts, spares, and finished goods moving at the pace of your business. The company has established a track record of exceptional customer service by focusing on creative logistics solutions and consistent service quality across every customer's network. Find out more on Big Dog Logistics' Web site.

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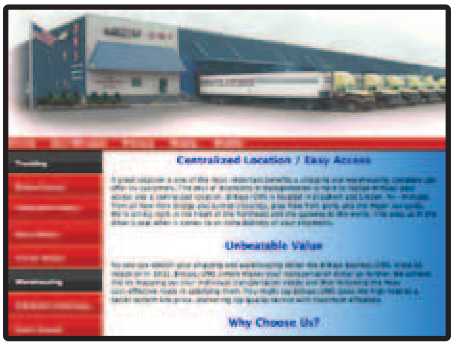


Bilkays Express • www.bilkays.com

From dedicated contract service to distribution, logistics, and EDI, Bilkays Express sets the standards in shipping by which all others are judged. Businesses throughout the Northeast depend on Bilkays' accurate, on-time delivery for all their shipping needs. Why? Because Bilkays gets the job done better for less by maintaining a modern state-of-the-art fleet so you can be sure your shipments are on the road to an on-time delivery.

BNSF Logistics • www.bnsflogistics.com

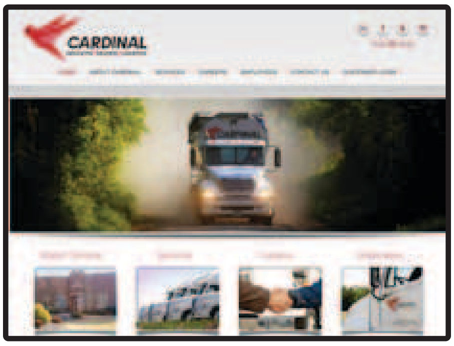
BNSF Logistics creates, implements, and executes high-value logistics solutions for customers by utilizing experienced logistics professionals; leading logistics technology; multi-modal execution including LTL, truckload, intermodal, and rail; and a deep understanding of its clients' business. Ultimately, blending these factors together enables BNSF Logistics to become your most valued partner—the most critical link in your supply chain. Visit www.bnsflogistics.com for more details.

Bulk Connection Inc. • www.bulkconnection.com

Bulk Connection Inc. (BCI) specializes in providing transportation services for liquid/dry bulk, truckload, and LTL shippers nationwide. Recognizing the transportation needs of its customers, BCI has also established strategic alliances with airfreight, intermodal, and international freight organizations. Through its network of carrier partners, BCI has used its ability to mobilize and coordinate large volumes of equipment in emergency situations to help customers get the job done on time and in budget.

C.H. Robinson Worldwide, Inc. • www.chrobinson.com

Founded in 1905, C.H. Robinson Worldwide, Inc. is one of the largest third-party logistics companies in the world, providing multimodal transportation, fresh produce sourcing, and information services to more than 32,000 customers globally, ranging from Fortune 500 companies to small businesses in a variety of industries. For more information about our company, visit our Web site at www.chrobinson.com.



Cardinal Logistics Management • www.cardlog.com

Cardinal Logistics Management is a fully integrated logistics and transportation solutions provider with industry-leading experience and hands-on involvement from our senior leadership team. Cardinal's logistics experts work directly with clients to optimize their supply chains by developing and implementing customized transportation solutions including specialized equipment and handling, and proven technology. Cardinal's services include dedicated contract carriage, home jobsite delivery, transportation management, supply chain consulting, SaaS solutions, warehousing, and distribution. Visit us at www.cardlog.com.

CaseStack • www.casestack.com

Founded in 1999, CaseStack is the industry's leading outsourced logistics provider, offering complete supply chain solutions to companies selling products to retailers, distributors, and other manufacturers. Thousands of suppliers turn to CaseStack for innovative consolidation programs, efficient warehousing systems, and streamlined transportation management, all of which are centered on proprietary real-time inventory and order technology. Our customers reap the cost savings and achieve the performance levels of their larger competitors without the investment costs.

Coastal Logistics Group, Inc. • www.clg-inc.com

Coastal Logistics Group, Inc. (CLG) is a premier third-party logistics (3PL) provider that uses its lean logistics expertise, robust technologies, and kaizen culture to engineer customized solutions for its customers. CLG, headquartered in Savannah, Ga., is privately owned and operated. It has been one of the fastest-growing privately held companies in the U.S. in 2009 and 2010, according to *Inc.*'s 500/5000 list. CLG utilizes its manufacturing support services, distribution support services, specialized port services, and packing and crating services to engineer the solution.

Columbian Logistics Network • www.columbian.us

For more than one century, Columbian Logistics Network has been providing legendary customer service as a third-party logistics provider. Heavily invested in software and technology, Columbian maintains more than one million square feet of ambient and temperature-controlled warehousing space, coupled with a skilled, dedicated transportation management team that can successfully handle your warehousing and logistics needs. For more information on Columbian's products and services, visit www.columbian.us.

IN THIS SECTION:
3PLs

CT Logistics • www.ctlogistics.com

CT Logistics can help you save money – no matter your company's size. For small and medium-sized shippers, CT Logistics offers its TranSaver shipper cooperative buying program. Larger shippers can simplify their freight spending with CT Logistics' exclusive FreitRater freight bill rating and processing system. And businesses of all sizes can benefit from AuditPay freight payment services. Add to these offerings a wealth of online collaboration and reporting tools, and it's easy to see why shippers have trusted CT Logistics with their freight payment needs for more than 86 years.

CTSI-Global • www.ctsi-global.com

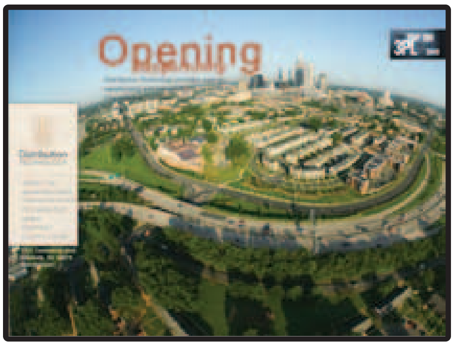
For more than 50 years, CTSI-Global has been a valuable resource to companies by providing the technology and industry expertise to help them manage all aspects of their supply chain – physical, informational, and financial – through freight audit and payment, transportation management systems (TMS), information management tools, and global consulting. The end results are improved shipping efficiencies, greater control, and significant ongoing savings. CTSI-Global is your link to supply chain solutions.

The Dependable Companies • www.godependable.com

The Dependable family of transportation services is comprised of six main business groups, serving nearly all areas of the logistics industry. Each of the six divisions – DHE, DDC, DLS, DHX, DGX, and DAX – have achieved double-digit growth over the past five years, while earning a reputation for leadership in their respective fields.

DF Young • www.dfyoung.com

DF Young has more than 100 years of experience providing international businesses with the full range of transportation and logistics solutions. DF Young's customized, person-to-person services are proven to meet today's challenging logistics requirements. DF Young paves the way for international shipments clear across continents, using the most sophisticated air, sea, and land transportation services available. Each move is backed by state-of-the-art technology and Internet access that spans the globe.



Distribution Technology • www.distributiontechnology.com

For more than 30 years, Distribution Technology has built a tradition of logistics service excellence and reliability that meets and exceeds the needs of our customers. Through a combination of contract and public warehousing services, flexible freight management, sophisticated software technology, reverse logistics expertise, value-added packaging, and a dedicated organization, we provide you with a winning logistics supply chain partner. Consider us for your local, East Coast, or national coverage.

DSC Logistics • www.dsclogistics.com

With experience, knowledge, and IT – as well as supply chain capabilities that are adaptable, versatile, and focused on changing customer needs – DSC Logistics helps companies reach their business goals. Services provided by DSC include supply chain analysis and design, strategic solutions-based consulting, systems integration, process improvement, and management of logistics operations such as warehousing, transportation, packaging, and fulfillment. In today's business environment, filled with rapid and unpredictable change, DSC manages change and information in the supply chain by using a strategy called sense-and-respond and by being ready for anything!

Dunavant • www.dunavant.com

With more than 50 years of experience in logistics and supply chain innovation, Dunavant Enterprises has the knowledge to ensure your company's logistics practices are efficient and effective while providing a customized approach for your business. Driven by superior customer service and a dedication to the proper use of the most advanced technology, Dunavant is leading the way into the future of logistics.

Dupré Logistics • www.duprelogistics.com

With specific emphasis in the chemical, consumer products, and beverage industries, Dupré's unique solutions provide expertise in dedicated fleets, transportation management/brokerage, materials handling, and reverse logistics. Dupré works to understand your business and measure how our system meets your expectations.

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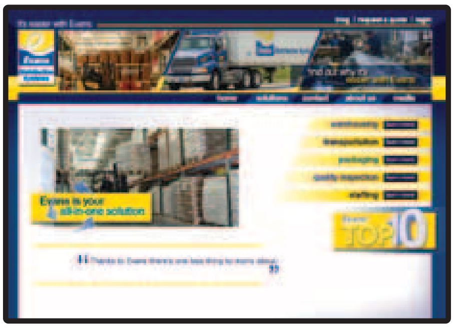
3PLs



Evans Distribution Systems • www.evansdist.com

Evans Distribution Systems has been enabling customer success for more than 75 years. Evans provides warehousing, transportation, packaging, quality inspection, and complete 3PL management services for a variety of industries. Through its experience, flexibility, and innovation, the 3PL proves to its customers that "it's easier with Evans." Let Evans provide you with all the information you need to meet your logistics challenges.

FAC Logistics • www.faclogistics.com

FAC Logistics focuses on the food service industry and covers all 48 contiguous United States, specializing in the safe and efficient transportation of time-sensitive freight. With more than 100 years of combined experience in LTL, truckload, small package, and refrigerated transportation, FAC holds the competitive advantage. Together with its employees, customers, and suppliers, FAC continues to revolutionize the food service industry. To become part of the team, log on to the Web site today.

GENCO ATC • www.genco.com

GENCO ATC provides third-party logistics for manufacturers, retailers, and U.S. government agencies. The company's supply chain solutions deliver initial and ongoing value by combining supply chain technology, industry-best experience, and lean Six Sigma philosophy into solutions that generate savings for clients.

Geodis Wilson • www.geodiswilson.com

With 5,500 people and a global network, Geodis Wilson is one of the world's largest freight management companies, serving customers with integrated supply chain solutions that deliver cargo by sea and air. The company's expertise, value-added services, and e-services enable you to streamline the flow of goods. We also make your supply chain more transparent and easier to manage. A self-reliant network of offices, and air and ocean hubs in more than 50 countries, ensures that your cargo flows efficiently and consistently across the world.

Hermann Services, Inc. • www.hermanntds.com

Launched in 1927 when Fred J. Hermann purchased his first truck, the Hermann name has since stood for integrity, value, service, and logistics expertise. Today, Hermann Services, Inc. offers state-of-the-art warehouse, packaging, and transportation logistics throughout the United States, from the Northeast to the Gulf Coast to the Southwest. Our offices and facilities are located in New Jersey, Texas, Massachusetts, Delaware, Connecticut, Maryland, and Pennsylvania.

J.B. Hunt • www.jbhunt.com

J.B. Hunt Transport Services, Inc., one of the largest transportation logistics companies in North America, provides safe and reliable transportation services to a diverse group of customers throughout the continental United States, Canada, and Mexico. Utilizing an integrated, multimodal approach, J.B. Hunt provides capacity-oriented solutions centered on delivering customer value and industry-leading service.

Jacobson Companies • www.jacobsonco.com

Jacobson Companies is a leading third-party logistics company providing end-to-end supply chain solutions that include warehousing and distribution, contract packaging and manufacturing, freight management, customs brokerage, and international ocean and airfreight forwarding. Jacobson can offer expertise in a wide range of industry verticals including food and beverage, consumer packaged goods, chemicals, healthcare/life sciences, durable goods, consumer electronics, retail, and industrial/automotive. What can we do for you? Contact us at 800-636-6171 or visit our Web site at www.jacobsonco.com.

Johanson Transportation Service (JTS) • www.johansontrans.com

Johanson Transportation Service (JTS) is a third-party logistics provider, NVOCC, and licensed ocean freight forwarder helping companies manage their supply chain with Justified Timely Solutions® that exceed their unique business challenges. Providing unmatched service at a fair price, JTS offers customized freight solutions including: dry and temperature-controlled TL, LTL, ocean and air; rail/intermodal; and comprehensive importing/exporting solutions with one point of contact. JTS adds value with logistics management, consulting, and state-of-the-art technology systems with real-time online tools to facilitate seamless supply chain communications for its customers.

IN THIS SECTION:
3PLs

Kane Is Able • www.kaneisable.com

Kane Is Able is a third-party logistics provider that helps consumer packaged goods (CPG) companies warehouse and distribute goods throughout the United States. Our CPG logistics solution includes integrated warehousing, packaging, and transportation services specially designed to meet the needs of CPG manufacturers. Kane's complete platform of logistics solutions makes us the right choice for your supply chain. At Kane, we are able. We are the CPG logistics specialists.

Kenco Logistic Services • www.kencogroup.com

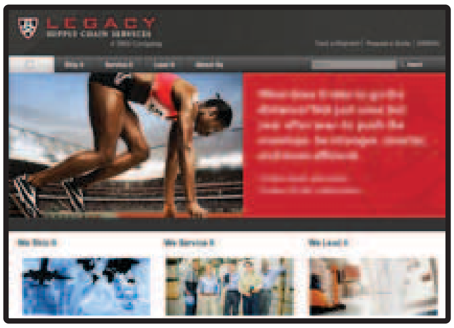
Adding value to your bottom line? That's the mission of Kenco Logistic Services. For more than 50 years, Kenco Logistic Services has guided some of the most demanding supply chains in the world. Kenco's convergence approach can help you streamline your supply chain and bring a greater return on assets and investments. Kenco invites you to visit this Web site so that you might get to know its services. Then, contact Kenco so that you might truly understand its unique strategic advantages.

Landstar • www.landstar.com

Landstar, a safety-first transportation services company, provides complete logistics services throughout the United States, Canada, and Mexico. Landstar's extensive brokerage network increases customer options as it brings a wider array of equipment options to handle the toughest transportation challenges. With innovative use of Internet technology, Landstar communicates in every medium, from the most sophisticated satellite tracking systems to the simplest pagers. That means customers know where their shipment is every step of the way, with every carrier selected. You'll find complete details on the Web site.

LEGACY Supply Chain Services • www.legacyscs.com

LEGACY Supply Chain Services, formerly TMSi Logistics, is a fully integrated supply chain and logistics provider that reduces costs, improves service, and creates a performance-driven culture that empowers employees to continuously find ways to improve. LEGACY has enhanced its service offering, achieved a greater network of resources, and expanded its warehousing and transportation capabilities on a national and global level to better serve customers.



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3PLs

LeSaint Logistics • www.lesaint.com

LeSaint Logistics' overall objective is to provide customers with the opportunity to focus on their core business by offering the full range of third-party logistics services: contract warehousing, public warehousing, hazardous materials management, common carriage, dedicated transportation, transportation management, information management, customer call centers, inventory management, and fulfillment. We provide value-added fulfillment services such as pick/pack and ship, repack, labeling, subassembly, kitting, and returns management, to name a few. We're flexible to our customers' requirements, providing them with the option of selecting from our menu of services, and choosing the capabilities that meet their specific needs.

LINC Logistics Company • www.4linc.com

LINC Logistics Company is a leading provider of custom-developed third-party logistics solutions that allow customers and clients to reduce costs and manage their global supply chains more efficiently. We offer a comprehensive suite of supply chain logistics services including value-added, transportation, and specialized services. Our services include crossdocks, consolidations, sequencing, subassembly, kitting, repacking, returnable container management, and much more.

Livingston International • www.livingstonintl.com

North America's number-one company focused on customs brokerage and trade compliance, Livingston International also offers consulting and global trade management services, as well as international freight forwarding across North America and around the globe. Contact us at tradeup@livingstonintl.com.

Logistics Management Solutions (LMS) • www.lmslogistics.com

Logistics Management Solutions (LMS) offers TOTAL, a Web-enabled TMS that significantly reduces overall transportation costs, can be implemented – and producing results – within 90 days, offers a low-cost point of entry, and easily integrates into existing ERP systems. Many of our clients, including BASF and Monsanto, are using TOTAL to significantly cut their transportation costs. Contact us: 1-800-355-2153.

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3PLs

Lynden • www.lynden.com

Over land, on the water, in the air—or in any combination—Lynden has been helping customers solve transportation problems for almost a century. Operating in such challenging areas as Alaska, Western Canada and Russia, as well as other areas around the globe, Lynden has built a reputation of superior service to diverse industries.

LynnCo Supply Chain Solutions • www.lynnco-scs.com

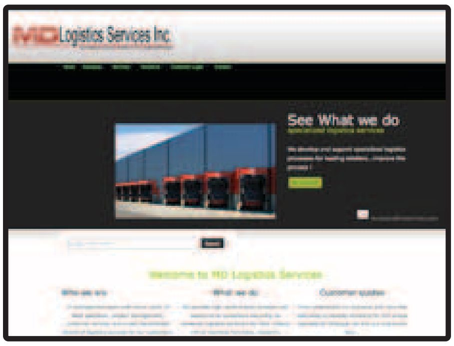
LynnCo specializes in value-added supply chain solutions. We create tailored solutions by taking redundant links out of our clients' logistics networks. Whether it's upfront due diligence studying current distribution patterns, rationalizing facilities with state-of-the-art optimization tools, or analyzing entire supply chain networks, our mission is to provide our clients world-class solutions – creating bottom-line value.

Mallory Alexander International Logistics • www.mallorygroup.com

Mallory Alexander International Logistics is a leading third-party logistics (3PL) provider. As a specialist in global logistics and supply chain services, Mallory Alexander acts as a single source for all logistics and supply chain needs. Specifically, Mallory Alexander provides public and contract warehousing, freight forwarding (international, domestic, air, and ocean), customs brokerage, import/export services, intermodal trucking and transportation, logistics services, and consulting.

Matson Logistics • www.matson.com/logistics/about_us/index.html

Matson Logistics is a leading provider of multimodal transportation, warehousing, and distribution services throughout North America. Intermodal services include reliable standard transits and premium services designed to compete with highway transit. Take advantage of the economy and lower carbon footprint of rail transportation while maintaining the highest possible levels of service. Contact Matson Logistics today for more information.



MD Logistics Services, Inc. • www.mservice.com

MD Logistics Services, Inc. is a full-service provider of specialized logistics services focusing on fixtures, furniture, and equipment projects and the special disciplines associated with those projects. We manage the logistics component of all types of store projects, including new stores, remodels, and program rollouts. Specific transportation modes and services include conventional trailerload, air-ride blanketwrap trailerload, hybrid LTL, merge-in-transit service, and most importantly, time-definite service.

Menlo Worldwide • www.menloworldwide.com

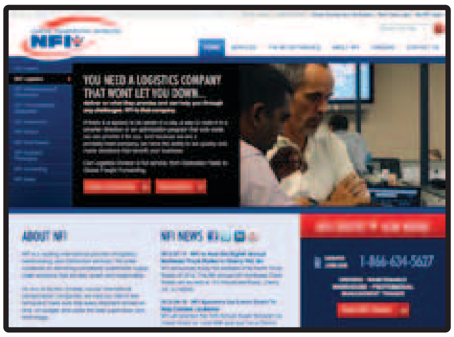
Some of the toughest, most complex logistics challenges in the world are met with customer-specific IT solutions engineered, installed, and managed by Menlo Worldwide. When it's time to cut waste and cost from your supply chain, think Menlo Worldwide. To learn more, visit us at www.menloworldwide.com.

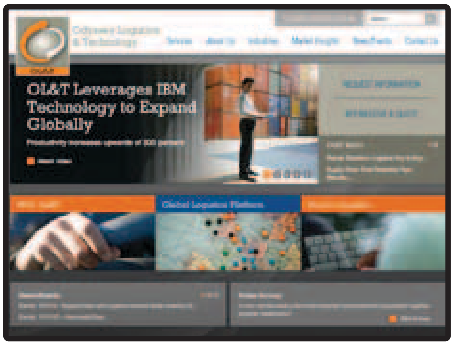
MIQ Logistics • www2.miq.com

Built on the strength and success of YRC Logistics, MIQ Logistics helps optimize supply chains and improve overall business performance. The company's solutions help manage distribution and warehousing more efficiently, and simplify domestic and global transportation. Started in 2002, MIQ Logistics has locations in Asia, Europe, North America, and South America. Along with its global network partners, MIQ Logistics provides services in and between more than 80 countries supported by more than 5,000 in-country logistics professionals.

NFI • www.nfiindustries.com

NFI is a fully integrated supply chain management provider offering logistics, distribution, warehousing, intermodal, global, commercial real estate, consulting, transportation brokerage, and solar services across the U.S. and Canada. NFI owns facilities nationwide and globally, more than 2,000 tractors, and more than 7,000 trailers. Privately held by one family since its inception in 1932, NFI operates more than 21 million square feet of contract and public warehouse and distribution space, and generates $1 billion in revenue annually. NFI is an EPA Smartway Transport and WasteWise Partner and is dedicated to increasing energy efficiency and reducing the impact of the freight industry upon the environment.





Odyssey Logistics & Technology • www.odysseylogistics.com

Odyssey Logistics & Technology combines deeply skilled industry professionals with a leading technology solution to provide multimodal logistics management services to the chemical industry and other process manufacturers. Odyssey Logistics & Technology enables these companies to outsource any part of the management and transportation of their raw materials and finished goods. They achieve cost savings through reduced transportation and infrastructure costs, measurable customer service and process improvements, and improved data quality and management.

Old Dominion Freight Line • www.odfl.com

Old Dominion Freight Line is a less-than-truckload carrier providing complete nationwide service within the continental United States. Through its four product groups, OD-Domestic, OD-Expedited, OD-Global, and OD-Technology, the company offers an array of innovative products and services to, from, and between North America, Central America, South America, and the Far East. The company also offers a broad range of expedited and logistical services in both domestic and global markets.

Penske Logistics • www.penskelogistics.com

Penske Logistics is an award-winning logistics services provider with operations in North America, South America, Europe and Asia. Our products and services range from dedicated contract carriage and distribution center management to transportation management and fully customized solutions. No matter what your needs or industry, Penske Logistics engineers supply chain solutions that deliver business results like boosting productivity, improving service, and shrinking carbon footprints. Call us today at 1-800-529-6531 to learn more.

Performance Team • www.ptgt.net

Performance Team is the only thing that should come between your products and your customers. For nearly 25 years, Performance Team has been offering its expertise to the retail and manufacturing industries with a broad range of supply chain services including: trucking, distribution, logistics, and fulfillment. Through 11 domestic hubs, over 5.1 million square feet of warehouse space, and a fleet of more than 400 trucks, Performance Team's skilled team of employees processes approximately $100 billion in wholesale goods. See why Performance Team continuously earns a reputation as the premiere trucking, consolidation, and distribution company in the United States; log on to www.ptgt.net.

Pilot Freight Services • www.pilotdelivers.com

Pilot Freight Services is a full-service transportation and logistics company with more than 75 locations throughout North America and a worldwide network of overseas agents, offering global coverage in more than 190 countries. As your transportation and logistics experts, we equip you with everything you need to move your cargo, delivering your shipments by air, land, and sea, anywhere in the world. To learn more, contact our 24/7 Customer Service Center at 1-800-HI-PILOT.

Port Jersey Logistics • www.portjersey.com

For more than 56 years, Port Jersey Logistics has been the number-one choice for transportation, warehousing, and distribution on the East Coast. Port Jersey operates modern, state-of-the-art warehousing space, as well as in-house trucking and logistics services. Along with our wide array of value-added services and first-class customer service team, Port Jersey Logistics is your one-stop shop for all of your supply chain needs.

Port Logistics Group • www.portlogisticsgroup.com

Port Logistics Group is the nation's leading provider of gateway logistics services, including value-added warehousing and distribution, transloading and cross-docking, vendor consolidation, and national transportation. With more than 4 million square feet of warehouse space strategically located in and around major North American ports, Port Logistics Group provides the critical link between international transportation and the "last-mile" supply chain.

ProTrans International • www.protrans.com

ProTrans' customers are given complete visibility of their materials while having the flexibility of customized services that meet their unique needs. Enjoy the simplicity of having one contact manage your entire supply chain. ProTrans' diverse offerings include: land, air and ocean transportation; consolidation; inventory management; customs brokerage; logistics optimization; carrier management; transportation procurement; route execution; and supply chain network management.

IN THIS SECTION:
3PLs

Purolator International • www.purolatorinternational.com

Purolator International is the U.S.-based freight forwarding subsidiary of Purolator Inc., Canada's leading overnight courier company. Purolator International specializes in air and surface forwarding of express, parcel, and freight shipments, with enhanced supply chain solutions to offer delivery to, from, and within Canada. Purolator International offers preferred access to an extensive distribution network in Canada, which includes 11,000 dedicated employees, the leading air fleet, and ground network with the most guaranteed delivery points in Canada.

RR Donnelley Logistics • www.rrd.com

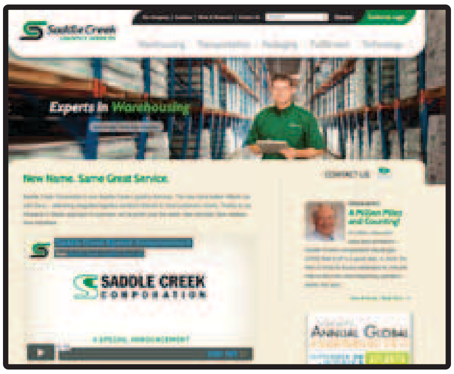
Experience the benefits that only come from working with a major, global shipper that is also a top-ranked 3PL. We offer multiple transportation modes, an established multi-carrier network, volume-leveraged rates and service levels, along with technology-enabled systems and processes. Visit our web site and contact us today to see why customers have relied on us for nearly 150 years.

Ruan • www.ruan.com

Ruan is a single-source provider of dedicated contract carriage, logistics, and other integrated transportation services. We specialize in private fleet conversion. We have nearly 5,000 employees, 3,200 tractors, and 7,000 trailers at more than 230 operations nationwide. With Ruan, you get more than just drivers and equipment—we become an extension of your team, advocating for your bottom line. To find out how we can drive costs out of your supply chain, call 866-782-6669 or visit www.ruan.com.

Ryder • www.ryderscs.com

Ryder Supply Chain Solutions is an end-to-end supply chain partner with nearly 80 years of experience helping customers in North America, the UK, and Asia transform their supply chains by delivering the best in operational execution. Ryder provides a full range of services, from optimizing day-to-day logistics operations to synchronizing the supply of parts and finished goods with customer demand. At Ryder, we understand that when it comes to logistics, Execution is Everything.



Saddle Creek Logistics Services • www.sclogistics.com

Saddle Creek Logistics Services is a third-party logistics company. We leverage our broad array of capabilities—including warehousing, transportation, packaging and fulfillment—to provide integrated solutions that support our customers' business objectives. For more information, visit sclogistics.com.

SDV International Logistics • www.sdv.com

SDV International Logistics has been active in the United States for nearly 40 years, and has amassed the local knowledge and resources to expertly serve our clients. Our 14 offices, situated along the main transportation axes of the country—from Miami to Seattle and from Los Angeles to Boston—cover the entire nation and offer you 360-degree solutions. Not only is SDV a forwarding agent, it's also a global service provider, offering complete global storage and distribution services, inbound or outbound.

Shippers Warehouse • www.shipperswarehouse.com

Shippers Warehouse is a well-established regional provider with strong knowledge and insight into the economic and political infrastructure of the Dallas/Fort Worth region. All the facilities operated in the Dallas/Fort Worth metroplex are food grade, and consistently rated excellent and superior by AIB. Let Shippers Warehouse help you match your requirements to the appropriate location, whether it be a new facility, an existing facility, or additional space that can be leased in the area. Details are available on the Web site.

Syfan Logistics • www.syfanlogistics.com

Since 1984, Syfan has provided customers with a competitive advantage through superior transportation and logistics services. Syfan consistently strives to meet and exceed customer expectations of service through timely communication and quality information. Leveraging its rich experience and dedicated team, Syfan's commitment is to provide you with on-time pickup and delivery – every time.

TransGroup Worldwide Logistics • www.transgroup.com

www.transgroup.com provides comprehensive information about TransGroup Worldwide Logistics, including locations, services, and global transportation and logistics capabilities. Detailed information about TransGroup's Web-based logistics management tools is also provided, as well as customer log-in access and links to resources useful to shippers. To learn about TransGroup Worldwide Logistics, visit www.transgroup.com, or contact TransGroup at 800-444-0294, or by e-mail at info@transgroup.com.

Transplace • www.transplace.com

Transplace delivers supply chain excellence through an optimal and flexible combination of industry-leading global and domestic logistics services and technology. Tap into our dense network of shippers and transportation providers through On-Demand transportation management and a suite of professional services tailored to your organization's needs.

TTS • www.tts-us.com

Ready for a supplier that is in perfect alignment with your organization's business goals and equips you for success? TTS lives and breathes logistics and supply chain management. Its reputation is more than a legacy; it's the product of cutting-edge technology, paired with unique solutions for individual client challenges. It's the reason TTS agents experience such robust growth in their enterprises. The company has developed an agent-centric network that eats deadlines for breakfast and makes no excuses. Accountability for your business isn't a new idea, but with TTS you will experience it at a whole new level.

Tucker Company Worldwide • www.tuckerco.com

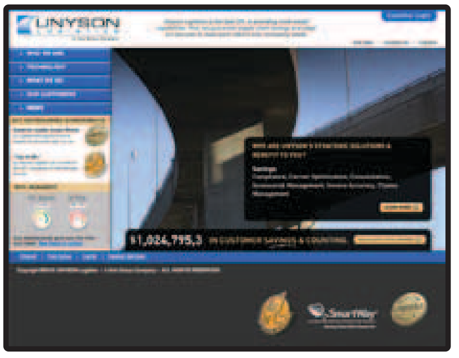
Experiencing truckload capacity problems? Receive steady waves of truckload equipment—from dry vans to flatbeds, refrigerated to specialized equipment—with Tucker Company Worldwide. Experiencing problems implementing an inbound freight management program? We get the job done, under-budget and fully controlled. Tucker Company Worldwide operates one of America's oldest freight brokerages. We co-founded the TIA, and are active members of TCA, NITL, SC&RA, NASSTRAC, and CSCMP. We are always interested in sales agents, reps, or those selling brokerages/3PLs.

UniGroup Logistics • www.unigrouplogistics.com

Managing a supply chain is complex. And your business is unique. Let UniGroup Logistics design a solution tailored to your needs. We'll show you the way to a more efficient logistics solution. UniGroup Logistics is a new name, but the foundation of the company is well-established. It is built on the heritage of United Van Lines and Mayflower Transit, trusted providers of reliable specialized transportation and logistics services for more than 50 years. Based on a network of 1,300 service centers in 146 countries, we are a single source for customized supply chain solutions. Whether your supply chain is domestic or international, UniGroup Logistics manages a global network of resources to show you the way to seamless, dependable, and efficient solutions.

Unyson Logistics • www.unysonlogistics.com

Unyson Logistics provides the technology and resources to help businesses drive costs out of their supply chains. We do this by creating logistics solutions where our customers own and drive the process jointly, with us, in unison. Combining the stability and resources of our $1-billion-plus parent company, Hub Group Inc., with this uniquely collaborative approach, Unyson surrounds customers with 360 degrees of measurable, strategic value—what we call The Y Factors: unity, opportunity, visibility, velocity, technology, delivery, capability, flexibility, stability, and integrity.



Verst Group Logistics • www.verstgroup.com

Verst Group Logistics is a 3PL company, strategically based in Northern Kentucky/Cincinnati in America's manufacturing heartland, operating numerous ultra-efficient facilities with streamlined processes known for getting products to market faster, cost-effectively, and more efficiently than most national or regional 3PL providers, enabling us to help make our clients first with their customers.

Wagner Logistics • wagnerlogistics.com

Wagner Logistics is not just a trucking company, warehousing company, or any other narrowly defined organization. We're a third-party logistical services company with multiple competencies to provide diverse services for our many customers across the United States. We provide contract trucking and transportation management, distribution centers, warehousing centers, packaging and assembly operations, and fulfillment. Plus, all services are provided with the highest standards of quality and the most technologically advanced information management systems. With our many areas of expertise, we can tailor a supply chain solution for your company to provide you with superb service while lowering your net cost.

IN THIS SECTION:

3PLs

Weber Logistics • www.weberdistribution.com

As a full-service, complete logistics provider, we are experts at non-asset freight management; asset-based LTL and TL services, including temperature-controlled; dedicated and shared warehousing; distribution; cross-docking/pool distribution; transloading; network optimization modeling and analysis; retail compliance; order fulfillment; material handling; supply chain management; real estate development; and personnel staffing. We have been in business for 85 years and specialize in working with importers; retailers; food, beverage, and CPG companies; and chemical and paper manufacturers.

Werner Enterprises, Inc. • www.werner.com

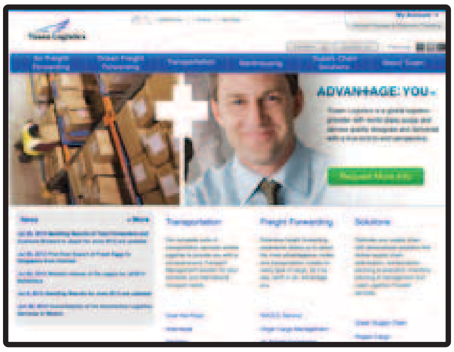
Werner Enterprises, Inc. is a premier transportation and logistics company, with coverage throughout the United States, Canada, Mexico, and China. Werner maintains its global headquarters in Omaha, Neb., offering 24/7 service 365 days a year. Werner is among the five largest truckload carriers in the United States, with a portfolio of services that includes long-haul, regional and local van capacity; temperature-controlled; flatbed; dedicated; and expedited. Werner's value-added services portfolio includes import and export freight management; PO and vendor management; truck brokerage; intermodal; load/mode and network optimization; and global visibility. Internationally, Werner provides freight forwarding and customs brokerage services, and is a licensed NVOCC.

Wheels Group • www.wheelsgroup.com

In this era of vendor consolidation, Wheels Group concentrates on providing a full spectrum of integrated products and services from a single source. Innovative and non-traditional approaches to supply chain management include: domestic and international transportation services; third-party logistics; supply chain consulting, optimization, and reporting; contract warehousing and distribution; technology systems and process development, and much more. For details, visit the Web site.

WSI-Warehouse Specialists Inc. • www.wsinc.com

Reliability is everything. At WSI, that has been our approach to integrated logistics and supply chain solutions for more than 40 years. Our promise of Condition, Count & Time ensures accurate, timely, and sound performance – every time. Recognized as one of the top 3PL companies in North America, WSI delivers custom solutions for warehousing/distribution, fulfillment, transportation, import/export, information technology, and customer support services. Depend on WSI for increased efficiency, reduced costs, and absolute reliability.



Yusen Logistics • www.us.yusen-logistics.com

Yusen Logistics offers a complete transport and logistics portfolio of services to some of the world's largest companies. We offer full end-to-end service coverage including origin cargo management, ocean freight forwarding, airfreight forwarding, warehousing, reverse logistics, surface transportation, and integrated supply chain solutions. We are committed to contributing to the sustainable development of our society through safe, environmentally friendly options.

CONSULTANTS

Open Sky Group • www.openskygroup.com

Open Sky Group is dedicated to being the best consulting partner on the planet for implementing supply chain software solutions, including engineering consulting, implementation and integration, and services for RedPrairie software. From warehouse and transportation management, to labor management and visibility, Open Sky can help you reach new heights of supply chain efficiency.

FREIGHT FORWARDERS/BROKERS

Panalpina • www.panalpina.com

The Panalpina Group is one of the world's leading providers of supply chain solutions, combining intercontinental air and ocean freight with comprehensive value-added logistics and supply chain services. This includes a unique, global own controlled airfreight network, in-house customs services, and advanced portfolio of global end-to-end supply chain solutions. The Panalpina Group operates a global network with 500 branches in more than 80 countries, employing 15,000 people worldwide.

GLOBAL LOGISTICS

Panalpina • www.panalpina.com

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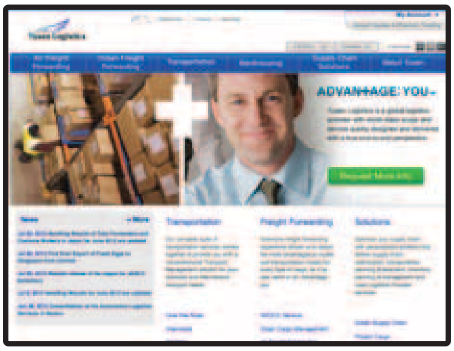
IN THIS SECTION:

Global Logistics – Security IT



Yusen Logistics • www.us.yusen-logistics.com

Yusen Logistics offers a complete transport and logistics portfolio of services to some of the world's largest companies. We offer full end-to-end service coverage including origin cargo management, ocean freight forwarding, airfreight forwarding, warehousing, reverse logistics, surface transportation, and integrated supply chain solutions We are committed to contributing to the sustainable development of our society through safe, environmentally friendly options.

GLOBAL TRADE

SEKO Logistics • www.sekologistics.com

SEKO prides itself on a commitment to customer service, whether it's a 2 a.m. pickup for a critical industrial part for a plant that is 4,000 miles away, or the cost savings achieved from proactive communication with your vendors overseas. SEKO offices have the knowledge and expertise to expedite or to consolidate, depending on your need. From Hong Kong to Amsterdam, SEKO knows how to serve its clients. As a non-asset-based third-party logistics provider, SEKO has the flexibility to meet your supply chain needs using a variety of modes and carriers.

LOGISTICS IT

Dutycalc Data Systems • www.dutycalc.com

Drawback software and services from a drawback company makes good sense. Dutycalc's Drawback.NET software package is recognized as the number-one Drawback Management System nationally. More than 300 system users benefit from our 30-plus years of drawback expertise. Additional services offered include application prep, rulings, claims prep, ABI drawback claim filing, audit assistance, compliance assessment, and more. Whether your needs are software or services, Dutycalc is the logical choice. For a free online system demo, email info@dutycalc.com, or call 530-637-1006 (PST).

SECURITY IT

Razient • www.razient.com

Razient allows companies to gain insight into the risks that could adversely impact their local and global locations. By tracking all data about global disasters and incidents daily, Razient can automatically geo-locate company suppliers, customers, and partners to incidents, provide assessment of risk, and provide crisis management mitigation steps.

TRUCKING

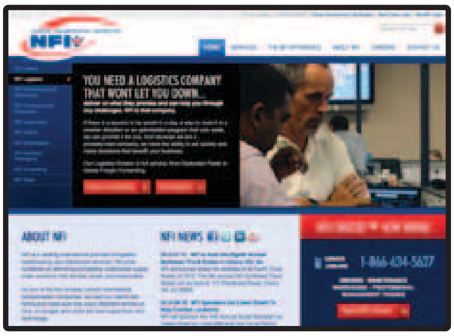
RWI Transportation • www.rwitrans.com

RWI Transportation, an asset-based logistics company with over 30 years service, handles temperature-controlled and dry freight with specialized expertise in perishable food commodities. Services include regional and national truckload, LTL, expedited, and both refrigerated and dry warehousing. RWI moves a high volume of perishable commodities with a low claim rate and can safely handle your most sensitive freight.

WAREHOUSING

D&D Distribution Services • www.dd-dist.com

Full-service public warehousing and distribution services provider D&D Distribution Services is centrally located in York, Pa., near the mid-Atlantic region's major metropolitan areas and seaports. Our prime location and Foreign Trade Zone enhance our ability to provide local and global warehouse service. We serve customers around the globe, developing customized logistics and customer service solutions. Handling raw materials at the front end of the supply chain, and finished goods at the back, D&D Distribution Services develops flexible programs to accomplish customers' goals.



NFI • www.nfiindustries.com

NFI is a fully integrated supply chain management provider offering logistics, distribution, warehousing, intermodal, global, commercial real estate, consulting, transportation brokerage, and solar services across the U.S. and Canada. NFI owns facilities nationwide and globally, more than 2,000 tractors, and more than 7,000 trailers. Privately held by one family since its inception in 1932, NFI operates more than 21 million square feet of contract and public warehouse and distribution space, and generates $1 billion in revenue annually. NFI is an EPA Smartway Transport and WasteWise Partner and is dedicated to increasing energy efficiency and reducing the impact of the freight industry upon the environment.

WMS

3PL Central • www.3plcentral.com

Built exclusively for third-party logistics companies, 3PL Warehouse Manager™ is an easy-to-use, on-demand warehouse management system (WMS) that helps 3PLs run more efficiently, grow their business, and satisfy customers, all for less than $500 per month per warehouse. 3PL Warehouse Manager™ is 100-percent Web-based and requires no investment in hardware, software, or IT resources and includes features such as: EDI, global inventory visibility, order management, real-time reporting, billing management, barcode scanning, and more. Sign up for a no-hassle, free trial today.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APM Terminals Virginia . Newport News Marine Terminal . Norfolk International Terminals . Portsmouth Marine Terminal . Port of Richmond . Virginia Inland Port
Major shippers are getting in and out America's heartland faster, all through one strategic location – The Port of Virginia. Our central east coast location provides second-day access to nearly two thirds of the U.S. population. A new generation of container cranes handles 9,000+ TEU vessels without channel depth or air-draft restrictions. Plus, next day double-stack rail doubles efficiency to and from Midwest markets. Directly speaking, with all of our innovative and natural assets, no other port comes close.
To learn how to get closer to your market, call 800.446.8098 or visit portofvirginia.com.
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WhitePaperDigest

Industry experts amass supply chain management best practices and skill sets, and invest in new research and evaluation tools. Now you can benefit. *Inbound Logistics* has selected this collection of whitepapers that will give you a jump on important supply chain issues. For more information on any of these whitepapers, visit the Web sites listed below.

Amber Road

TITLE: ***A Model for Value Chain Transformation***
LENGTH: *16 pages*
DOWNLOAD: *http://bit.ly/ValueChainTransform*
SUMMARY: Featuring Gartner Research, this complimentary newsletter, *A Model for Value Chain Transformation*, can help you assess where your company falls within Gartner's Global Trade Management Maturity Model. Learn what steps you can take to drive value at each stage of maturity, and bridge from one stage to the next.

3PL Central

TITLE: ***SaaS WMS – The Perfect Fit For Today's 3PL***
LENGTH: *8 pages*
DOWNLOAD: *http://www.3plcentral.com/SaaS_Perfect_Fit_Email*
SUMMARY: Reliable, flexible, and capable of providing the return on investment today's competitive marketplace demands, Software-as-a-Service (SaaS) Warehouse Management Systems (WMS) are the perfect solution for 3PLs looking to grow. To learn more about how SaaS WMS can help your business, download this free whitepaper today.

Share your whitepaper with *IL* readers!

WhitePaper Digest **is designed to bring readers up-to-date information on all aspects of supply chain management. We're building a database of SCM whitepapers, and you can help. E-mail us with whitepaper recommendations: editorial@inboundlogistics.com**

Ryder

TITLE: ***Small Parcel Shipments: Rethinking Inbound Supply Chains to Boost Visibility, Increase Control, and Cut Costs***

LENGTH: *17 pages*

DOWNLOAD: *http://bit.ly/KbgVW4*

SUMMARY: Many companies suffer the high cost of premium air service when unable to pre-authorize such shipments. This is especially true of businesses that ship many light parts or work with suppliers who fail to comply with routing instructions. Depending on the number of packages expedited, and the volume of shipments, inbound parcel shipping represents a rich opportunity to reduce costs. Learn how to save money by integrating a solution that delivers network visibility, parcel shipment optimization, an expedited workflow, and Web-based integration of parcel networks and carriers.

DRS Technologies

TITLE: ***Advanced Communications Technology in a Rugged Tablet***

LENGTH: *5 pages*

DOWNLOAD: *http://drsarmor.com/pdf/ARMOR_X10gx_White_Paper.pdf*

SUMMARY: Mobile computing has evolved from a specialty to a requirement for productive, task-oriented, and customer-focused employees. Rugged tablets like the ARMOR™ X10gx from DRS Technologies have changed how and where employees work, increasing their ability to connect and share information with colleagues and customers, and delivering the communications mobility needed to put the right person in the right place with the right information.

TMW Systems

TITLE: ***Integrating Routing Software With Your Business Process Workflow***

LENGTH: *12 pages*

DOWNLOAD: *http://www.hardmangrp.com/tmw/whitepapers/web/*

SUMMARY: Why are you really looking at routing software? Are you trying to reduce costs, cut the time it takes to create routes, or give better service to your customers? Are you growing and need help to handle the increased volume? Before you begin to look for a solution, make sure you have your business goals defined and agreement on them within your organization. Download this whitepaper to find out how TMW Systems' solution can help you integrate routing software into your workflow.

RWI Transportation

TITLE: ***2012 Temperature-Controlled Transportation Report***

LENGTH: *16 pages*

DOWNLOAD: *http://rwitrans.com/resources/whitepapers.asp*

SUMMARY: This study, based on a survey of North American shippers, examines the top challenges faced in temperature-controlled transportation. It provides interesting insights and information about best practices, common challenges, and emerging trends in today's temperature-controlled market. The report is provided by RWI Transportation, an asset-based logistics company offering temperature-controlled transportation. RWI manages in excess of 100,000 shipments annually, including both temperature-controlled and dry freight.

TRUCKING

Dayton Freight

A new service center in Gallipolis, Ohio, serves Ohio lanes previously handled by the Columbus service center. The center, located along the Ohio River, provides less-than-truckload transportation, including one- and two-day delivery.

www.daytonfreight.com 800-860-5102

Old Dominion Freight Line (ODFL)

A 24-door terminal in Pensacola, Fla., serves Gulf Coast cities in Alabama and Florida, providing regional, inter-regional, and national less-than-truckload service and value-added logistics. ODFL also opened a 64-door facility in Orange, Calif., strategically located near southern California's railroad hubs, ports, and highways.

www.odfl.com 800-432-6335

▲ 3PLs: Panalpina

Four new Logistics Competence Centers, located in Prague, Singapore, Buenos Aires, and New Jersey; and a Supply Chain Solutions Center in Frankfurt, Germany, support shippers through tender and bid management, logistics solutions design, operations modeling and optimization, and lean logistics services.

www.panalpina.com 973-683-9000

PRINTERS

Datamax-O'Neil

The new Pro+ industrial-grade printer offers a fast print speed, expanded communications, audible alerts, and large display.

www.datamax-oneil.com 800-816-9649

3PLs

Evans Distribution Systems

A new warehouse in Itasca, Ill., supports automotive suppliers with warehousing, transportation, packaging, and staffing solutions.

www.evansdist.com	313-388-3200

SP Express

SP Express enhanced its fulfillment and warehouse operations to better serve textile shippers. The 3PL now provides Measuregraph 564 60-inch double and roll machines, allowing textile clients to double and roll and distribute products in one facility; a catch weight processing warehouse management system to track inventory in both yards and bolts; and a vendor compliance management program that allows for complex labeling and shipping to retailers.

www.spexpress.com	866-773-7363

Performance Team

Performance Team's new Wando Welch Terminal container freight station at the Port of Charleston transloads cargo from ocean containers to trucks for distribution throughout the U.S. Southeast. The on-port terminal eliminates 50 miles in round-trip drayage; simplifies ocean-to-truck distribution; reduces transportation costs; and increases speed-to-market for Southeastern shippers.

www.ptgt.net	866-775-5120

Pilot Freight Services

A new station in Herndon, Va., handles government, logistics, and international shipping in and out of the Washington, D.C., area. The facility offers transportation and logistics services, including air, ocean, and ground.

www.pilotdelivers.com	800-HI-PILOT

Zenith Global Logistics

To meet growing demand for final-mile services in the Northeast, specialized furniture carrier and international logistics provider Zenith Global Logistics opened a new white-glove home delivery hub in Louisville, Ky. This addition to the company's U.S. home delivery hub network supports brick-and-mortar and e-retailers looking for final-mile order fulfillment.

www.zenithcompanies.com	800-937-3876

▲ **MATERIALS HANDLING: Herkules Equipment Corporation**

Herkules Equipment Corporation's new EnKon Systems brand A-Series A1300 Air Lift provides 3,000-pound capacity utilizing Herkules' Air Bag technology, which uses heavy-duty air bags rather than hydraulics, minimizing wear and maintenance. The scissor lift raises pallets and containers from nine to 42 inches, and can be customized with rotating, tilting, and caster components.

www.herkules.us	800-444-4351

▲ 3PLs: Choice Logistics

A new transportation management solution, Choice Transportation Management Services (CTMS), helps shippers actively manage critical overnight shipments – even those delivering a single service part or replacement product. The CTMS dashboard displays real-time order activity, and alerts Choice Logistics' Global Logistics Center of potential delays in time for an intervention.

www.choicelogistics.com 800-861-6900

Freight Management Inc.

A new Freight Management Inc. division, Simplified One Source, offers centralized transportation and warehouse management solutions, including risk management and network optimization for all transport modes.

www.gofmi.com 630-627-6560

CTL Global

A new 134,000-square-foot warehouse in Bensenville, Ill., features 20 exterior docks to facilitate receiving, crossdocking, and final delivery preparations.

www.ctlglobalsolutions.com 708-223-1153

C.H. Robinson Europe

The European subsidiary of C.H. Robinson Worldwide opened a new facility in Rotterdam to provide temperature-controlled logistics services and global freight forwarding.

www.chrobinson.com 855-229-6128

FREIGHT FORWARDING

Unigroup Logistics

A new facility in Denver, Colo., offers freight forwarding; international air and ocean freight service; domestic airfreight service; and import Customs clearance.

www.unigrouplogistics.com 855-605-8080

TEMPERATURE CONTROL

PakSense

The BIOmed XpressPDF temperature-monitoring label features an integrated USB connection point that generates a PDF file containing complete time and temperature shipment history.

www.paksense.com 208-489-9010

Preferred Freezer Services (PFS)

PFS upgraded its Avon, Mass., temperature-controlled warehouse's refrigeration system, racking equipment, roofing, and loading dock. The modernized 150,000-square-foot, 24-door facility now offers more secure, environmentally friendly storage.

www.preferredfreezer.com 413-562-0885

EXPEDITED

DHL Express

The new DHL Express North Asia Hub at Shanghai Pudong International Airport can process up to 20,000 documents and 20,000 parcels hourly. DHL plans to increase capacity on routes between the new hub and other cities in China and Taiwan.

www.dhl.com 800-CALL-DHL

MOBILE DEVICES & APPS

Gumro and Associates

The new Accurate Scanning Technology smartphone app gathers data for reporting, proof of deliveries, and signature and credit card information for payments, eliminating the need for specialized handheld scanners.

www.accuscanmobile.com 248-652-6200

Motorola Solutions

The MOTOTRBO XPR 7000 series digital radios offer features such as voice announcement, which allows for audible confirmation of channel and zone changes; and one-touch access buttons that provide quick access to favorite features. Integrated GPS enables organizations to easily locate mobile workers for increased safety and workforce management. The XPR 3000 series provides similar features in a more compact and lightweight design.

www.motorolasolutions.com	888-325-9336

MATERIALS HANDLING

Cabka

The new CPP 100 plastic pallet weighs 12.5 pounds and can handle dynamic load capacities of up to 2,200 pounds. The pallet's 1.2-inch nesting height allows 2,340 pallets to fit in a 53-foot trailer, increasing storage capacity and saving transportation costs. Cabka also offers a 100-percent recycled plastic version of the pallet.

www.cabka.com	877-GO-CABKA

Next Level Storage Solutions

Next Level introduced a range of steel storage systems, including pallet rack and wire decking in heights up to 32 feet. The systems are engineered for high performance in demanding warehouse and industrial environments.

http://nextlevelstorage.com	800-230-8846

AIR

Southwest Airlines Cargo

The Cargo Companion asset-tracking service gives shippers 24/7 location and environmental status visibility for high-value and time/temperature-sensitive shipments. The system monitors cargo location, shock, light, temperature, pressure, and humidity during transit. E-mail alerts inform shippers when their freight crosses predefined checkpoints; arrives at its destination; or if potential issues arise during transit.

www.swacargo.com	800-533-1222

OCEAN

CaroTrans

Carotrans introduced two new direct less-than-containerload (LCL) export services from New York and Houston to Cartagena, Colombia. Freight from Ohio, the Northeast, and Middle Atlantic regions is consolidated in New York, then shipped direct to Cartagena in eight days. Houston features a five-day transit for cargo from the Gulf and West Coasts. In addition to LCL services, CaroTrans also provides comprehensive full-containerload export services from

U.S. East, West, and Gulf Coast ports to Colombia destination ports in Cartagena, Barranquilla, and Buenaventura.

www.carotrans.com | 253-277-1898

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www.intermarineusa.com | 800-229-8701

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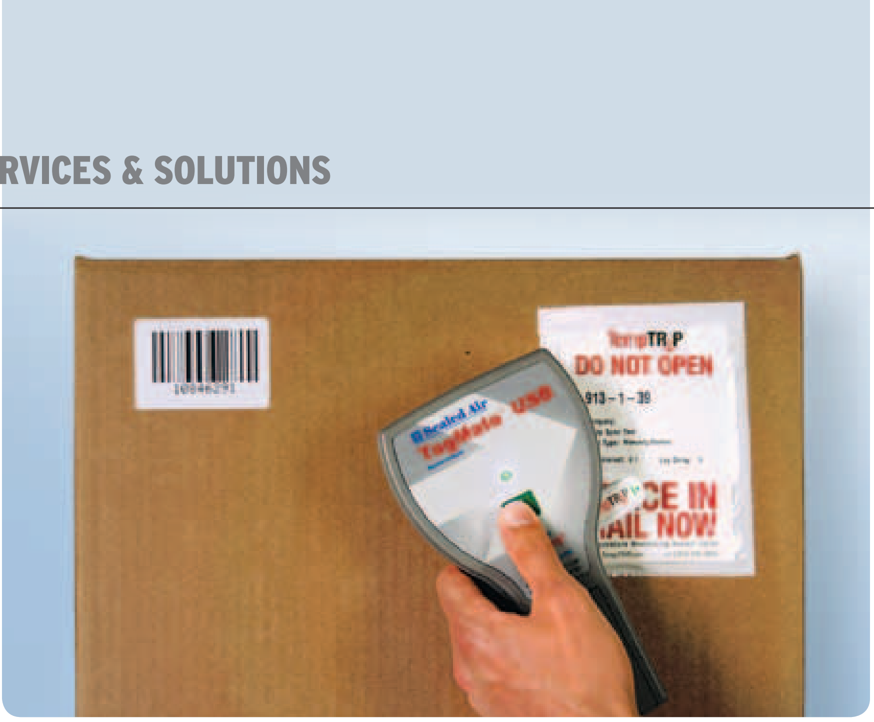

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www.temptrip.com | 303-895-3455

to pay, view, print, and download invoices; download invoice data for use in internal financial systems; and manage disputes.

www.maerskline.com 800-321-8807

SOFTWARE

Epicor

The new version of the Epicor *Prophet 21* wholesale distribution enterprise resource planning solution features customer buying trend analysis, demand replenishment planning, and rewards program functionality.

www.epicor.com 800-776-7438

Transportation Costing Group

Enhancements to the *TL/CIS* cost information system for truckload carriers include features such as freight impact modeling, driver productivity monthly reports, mileage parameter checks, and a lane defaults feature that compares the ratio of driven miles to direct miles.

www.tcgcis.com 240-399-0730

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New 18-inch deep pick racks feature angled shelves for easy access, and part and supply visibility. The rack-and-bin system provides up to 50 percent more storage capacity than 12-inch deep racks, and offers weight capacity of more than 100 pounds per shelf when secured to a wall or floor, for total capacity of 900 pounds when configured as a single-sided rack, and 1,800 pounds when double-sided.

www.akro-mils.com 800-253-2467

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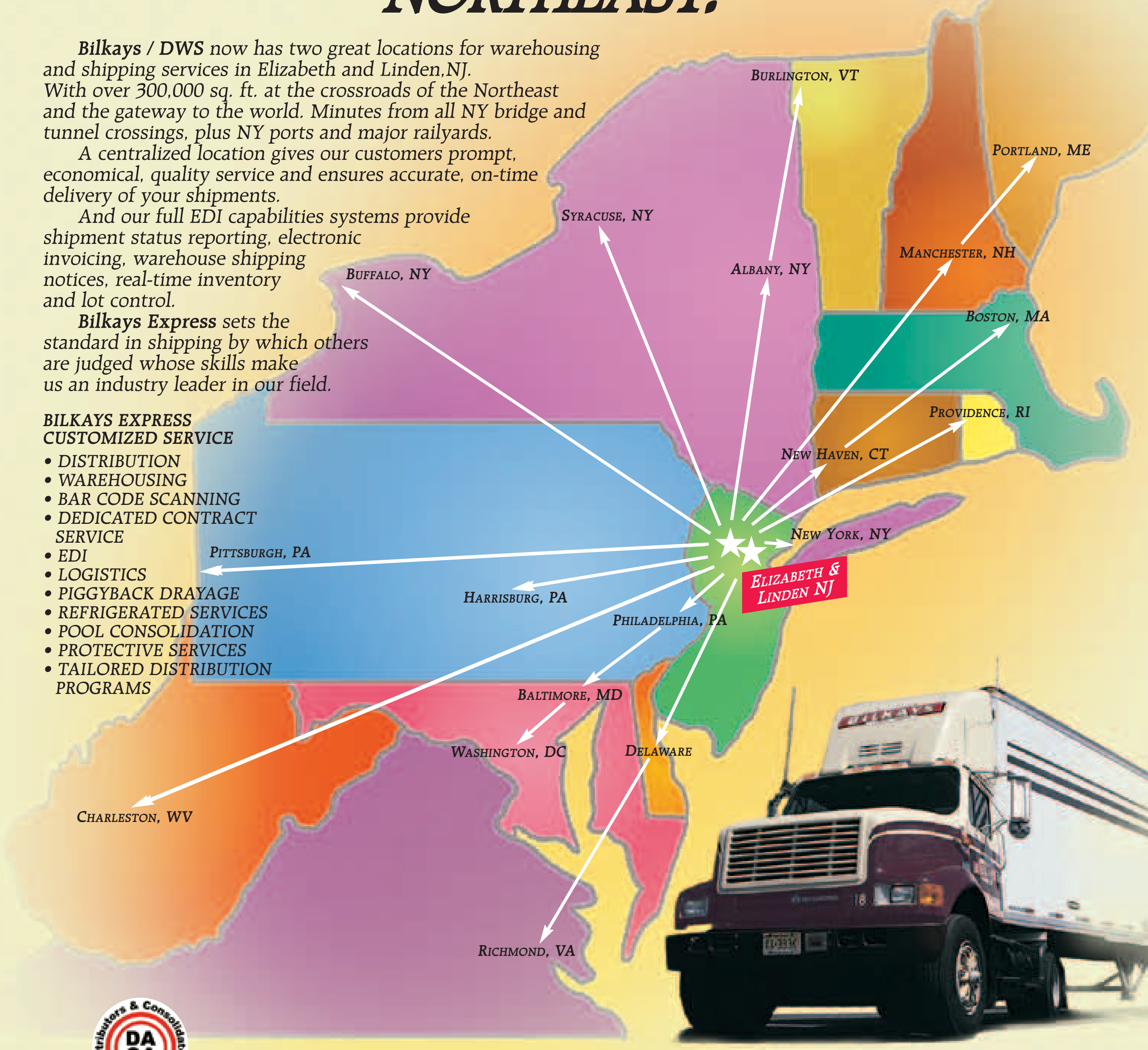

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September 6-7, 2012, Fall 2012 Supply Chain Leaders Forum, University Park, Pa. Sponsored by the Center for Supply Chain Research at Penn State's Smeal College of Business, this program for mid- to senior-level supply chain managers and executives addresses how organizations are struggling to manage internal talent inventory and external talent resources to attract, retain, and develop the right people for the job.

814-865-0585
www.smeal.psu.edu/cscr

September 9-11, 2012, SCOPE Fall, Dallas, Texas. The Supply Chain Operations Private Exposition delivers a mix of strategic presentations and panels from industry thought leaders; shipper-led case studies; targeted research meetings with leading solutions providers; and networking opportunities with high-profile industry peers. Speakers include Robert Boller, vice president of sustainability, Jackson Family Wines; Steve Sigrist, vice president of supply chain and sales operations, Newell Rubbermaid; and Dr. Omera Khan, senior lecturer in logistics and supply chain, Hull University Business School.

310-706-4150
www.scopewest.com

September 13-15, 2012, National Private Truck Council (NPTC) Safety Conference, Herndon, Va. This program includes an update on federal regulations; private fleet case studies; liability mitigation strategies; data mining and predictive modeling; and safety best practices. Featured speakers including Anne Ferro, administrator of the Federal Motor Carrier Safety Administration; and more than 15 private fleet practitioners.

703-683-1300
www.nptc.org

September 30-October 3, 2012, CSCMP Annual Conference, Atlanta, Ga. At the Council of Supply Chain Management Professionals' conference, learn ways to cut supply chain costs, boost efficiency, and improve your bottom line; network with colleagues; and discover new and innovative ideas that will keep you and your supply chain competitive.

630-574-0985
http://cscmpconference.org

October 2-4, 2012, Transportation and Distribution Planning and Management, Atlanta, Ga. This Georgia Tech Professional Education course focuses on understanding capacity development, freight consolidation, network alignment, and synchronization. Attendees develop the principles, practices, and tools required to address all major issues and tradeoffs in domestic and international transportation, including key financial and performance indicators for transportation, and designing supply chains to minimize transportation and distribution costs.

855-812-5309
www.pe.gatech.edu

October 14-16, 2012, APICS International Conference & Expo, Denver, Colo. At the Association for Operations Management's annual conference, educational sessions focus on finding solutions to the challenges supply chain and operations management professionals face today – and in the years to come. Educational sessions cover topics including globalization opportunities and challenges; integrated supply chain management; and inventory optimization.

800-444-2742
www.apics.org

October 21-25, 2012, American Association of Port Authorities 101st Annual Convention, Mobile, Ala. Through committee meetings, business sessions, and networking opportunities, port professionals and others in the marine transportation industry explore the latest global economy trends and expectations; the need for infrastructure investment; and how shippers, carriers, service providers, and the local business community can help green the cargo supply chain.

703-684-5700
www.aapa-ports.org

October 25-26, 2012, Aerospace & Defense Manufacturing Summit 2012, Las Vegas, Nev. Representatives from NASA, Lockheed Martin, Northrop Grumman, Honeywell Aerospace, Office of the Secretary of Defense, and Harris Corporation address the current supply chain challenges and opportunities for aerospace and defense manufacturing executives.

312-540-3000 x6583
www.aerospacedefensesummit.com

November 11-13, 2012, IANA Intermodal Expo, Anaheim, Calif. The Intermodal Association of North America presents its 30th annual trade show, highlighting the latest products and services for freight transportation and distribution operations.

866-438-3976
www.intermodal.org

November 12-14, 2012, SCMchem 2012, Phoenix, Ariz. Addressing the supply chain concerns of chemical manufacturers, this event provides the insight and strategies necessary to maximize resiliency and security within the entire value chain.

888-482-6012
www.wbresearch.com/scmchem

January 21-24, 2013, ProMat, Chicago, Ill. See the latest materials handling solutions and innovations the industry has to offer. At this event, sponsored by the Material Handling Industry of America, attendees learn to streamline operations and improve visibility; maximize efficiency, flexibility, and supply chain security; cut costs; and reduce their carbon footprint.

800-345-1815
www.promatshow.com

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www.casestack.com	866-828-7120	
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www.clg-inc.com	866-455-4633	
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Freight Payment Services

CT Logistics pg. 275
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Packsize pg. 269
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www.therelianceneteork.com none

Saia pg. 137
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INDEX

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◯ Compliance/Customs	837
◯ Consolidation/Deconsolidation	836
◯ Consultants – Career	805
◯ Consultants – Logistics	804
◯ Critical Parts	838
◯ DCC	806
◯ Economic Development/Sites	807
◯ Education – Training	808
◯ Emergency Ground/Air	809
◯ Expedited	810
◯ Food Logistics	840
◯ Forklifts	839
◯ Freight Forwarders	811
◯ Freight Matching	812
◯ Freight Payment Services	813
◯ Insurance	842
◯ Intermodal	814
◯ Logistics IT – SCE, ERP, CRM	816
◯ Logistics IT – WMS, TMS	815
◯ LTL	817
◯ Materials Handling Equipment	818
◯ Materials Handling Systems	819
◯ Mexico	841
◯ Ocean Shipping	820
◯ Organizations – Logistics	821
◯ Ports	822
◯ Rail	823
◯ Real Estate Logistics/Construction	824
◯ Reverse Logistics/Returns	825
◯ RFID	834
◯ Security Equipment/Systems	826
◯ Temp-Controlled Services	827
◯ Trucking Equipment–Tractors	830
◯ Truckload	829
◯ Trucks – Lease/Fleet	828
◯ Warehousing/DCs	831
◯ Wireless Communication	832
◯ Yard Management	835

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Landmarks in Transportation and Supply Chain History

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Logistics in Early Literature
The word "logistics" appears in an article as early as 1898, according to Simpson and Weiner (Oxford English Dictionary 3/1989).

1919

Beginning of Supply Chain Education
Syracuse University's business degree, with specialization in Traffic and Transportation, said to be the earliest supply chain education program in the United States.

1927

Mass Production
Production of Ford's Model-A car utilizes "mass production" concept to achieve economies of scale.

1952

Bar Coding
US Patent no. 2612994 issued to Norman Woodland and Bernard Silver for their bar-coding system.

1957

American Production and Inventory Control Society
American Production and Inventory Control Society established to develop body of knowledge in operations management.

1982

Inception of the Term Supply Chain Management
Keith Oliver of Booz, Allen and Hamilton Inc. coins the term "supply chain management."

1985

First Supply Chain Analysis
Kurt Salmon Associates conducts full-scale supply chain analysis for textile and apparel industry.

Early Development of Third-Party Logistics Concept
Ken Ackerman and Dean Wise present paper on the early state of third-party logistics at the Council of Logistics Management's annual conference.

1988

Establishment of the Term Lean Manufacturing
John Krafcik introduces the term "lean manufacturing" after studying the Toyota Production System.

1991

Operation Desert Storm
The military logistics community achieves superb performance during Operation Desert Storm in Iraq.

2002

Container Security Initiative
Container Security Initiative released to address threat to border security and global trade.

2010

Supply Chain Transparency
California introduces Senate Bill 657, the Supply Chain Transparency Law, to combat human trafficking in the global supply chain.

2012

Global Supply Chain Security
The Obama Administration announces National Strategy for Global Supply Chain Security to minimize impact of various global supply chain risks.