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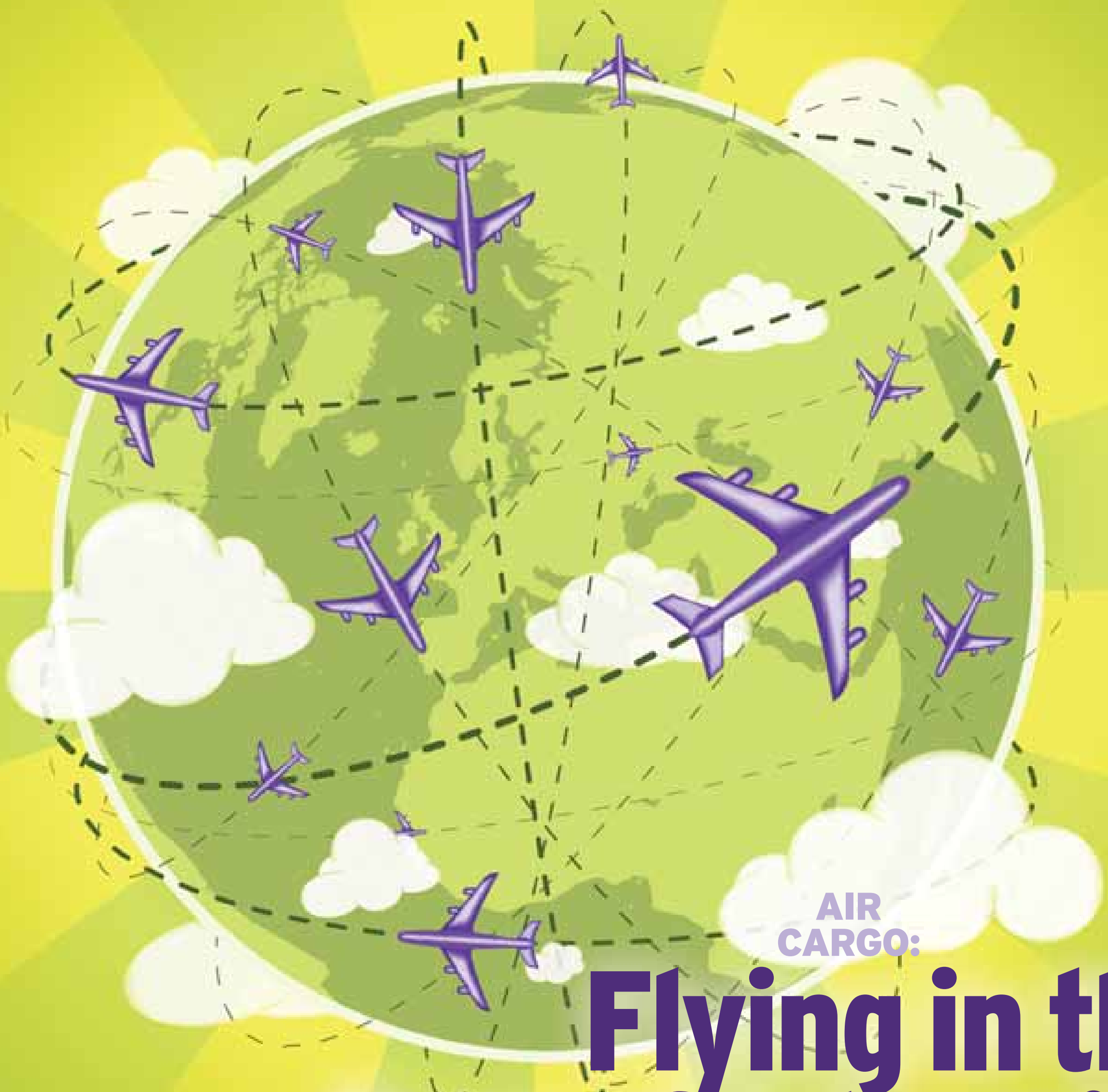

AIR CARGO:

## Flying in the Face of Adversity

Despite Challenges, Shippers Stay Loyal

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## INBRIEF



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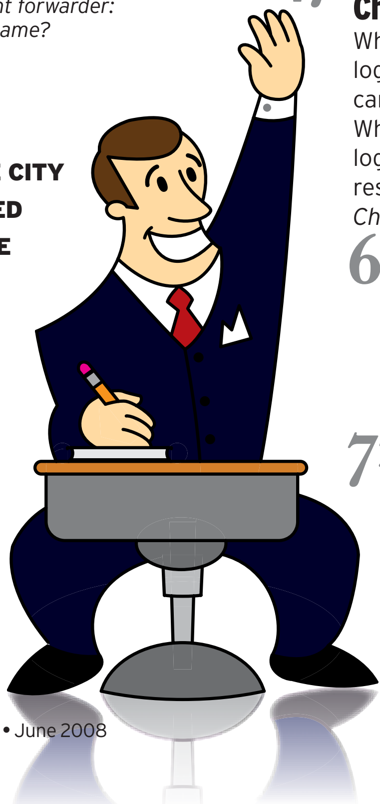
## INSIGHT



## INFO





## INDEPTH




We don't see it as a reward for work done.
We see it as a sign of even better things to come.
Accolades from our customers mean a great deal to us – because it means that all the hard work and investments we're making to become North America's number one railroad are paying off. So it's with great pride that we accept the latest industry awards we've received. Thank you to all those who've recognized our efforts – and here's to even greater things ahead.
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# CHECKING IN

Felecia Stratton

by Felecia Stratton | **Editor**

## Seeing the Supply Chain For its Parts

In simple terms, this issue might be best compared to a capacity-maxed Boeing 747 freighter scheduled for on-time arrival at Brazil's São Paulo/Guarulhos International Airport. How else can you conceptualize a jam-packed editorial agenda that brings together timely analysis of airfreight transportation, chemical logistics, and Latin America?

Reductionism aside, the complexity of supply chain management necessarily brings into play many elements of transportation and logistics, including mode selection, specialized cargo handling, and offshore site location. Businesses are challenged to create efficiencies and reduce costs within these functional areas, while understanding the broader picture and capturing visibility among these disparate parts. This month's issue reflects that mix.

The airfreight industry is in the midst of a major transition as global markets prosper and some U.S. sectors grow sluggish. Airlines are shifting and downsizing assets to account for soaring fuel costs and varying demand, shippers are struggling with pass-along fuel surcharges and looming U.S. security regulations, and forwarders are opportunely positioned to help carriers fill space and shippers plug cost and compliance gaps. Our *Airfreight Forwarders Perspectives* (page 28), together with the *Who's Who In Airfreight Forwarding* (page 34), identifies trends and companies that are shaping the industry's new trajectory.

While the current fuel crisis remains a concern for the airfreight industry, companies transporting fuel and chemical-related materials face the daunting task of rationalizing volatile energy costs for volatile cargoes. From shifting demand patterns to innovative technologies, contingency planning, and outsourced distribution strategies, *Inbound Logistics'* joint Chemical Logistics supplement with *ChemicalWeek* (page 47), provides an overview of how shippers and service providers are meeting the demands of the marketplace abroad and at home.

One global market that is swiftly making a name for itself in the chemical logistics sector is Brazil, which exports more ethanol than any other country in the world. Years of economic isolationism have given way to more liberal global trade policies, stimulating domestic production, consumption, and foreign investment. *IL's* annual Latin America Logistics supplement–available in English, Spanish, and Portuguese, in print (page 63) and online–demonstrates how Brazil's emerging fortunes serve as an appropriate microcosm for Latin America at large.

Understanding the interrelatedness of global supply chains, the potential synergies that exist between modes, among verticals, and across geographic regions requires equal measures of logistics subjectivity and supply chain objectivity. If you can't see the supply chain for all its integrated parts, and vice versa, what good is a rerouted, half-empty, fully-fueled freighter bound for somewhere? ■


inbound logistics

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THE NEW COMMERCIAL STANDARD
GRAB LIFE BY THE HORNS
DODGE
E
F

# 10TIPS

STEP-BY-STEP SOLUTIONS

by Deborah Catalano Ruriani

## Managing Expedited Shipments

There are two kinds of expedited shipments: critical and time-sensitive. Knowing the difference between the two and understanding your customers' supply chains can help you make decisions that translate into cost-effective expedited shipment strategies. Here's some advice from Greg Humes, president of Detroit-based third-party logistics provider NLM.

1 **Hire the right people.** Employing a staff experienced in logistics management ensures that you can proficiently assess shipments to determine the most economical transportation mode. Your logistics team must be able to effortlessly evaluate a shipment and convert it to the most cost-effective–but expeditious–mode.

2 **Let technology work for you.** Leveraging the right technology to manage shipments and link your customers allows you to easily access and implement best practices. Your technology platform should also offer your customers ease of use and configurable options. Harnessing a single control point will help you drive quality assurance and streamline your customers' entire supply chain management processes.

3 **Ensure visibility.** Do your customers have true door-to-door visibility of every shipment? To successfully manage expedited shipments it is imperative that your system link shippers, suppliers, and carriers. Whether through the Web or some other platform, customers need to see where their freight is every step of the way.

4 **Operate 24/7/365.** Expedited shipments are often unpredictable, and they certainly don't keep bankers' hours. To provide customers with the level of visibility an expedited shipment requires, have a logistics specialist available at all times to identify and resolve any potential problems that may arise.

5 **Know your customers' supply chain.** Not all expedited shipments are critical shipments. Understanding your customers' supply chain enables you to provide flexible solutions. Is the freight truly time-critical or is it just time-sensitive? With a little more time for delivery, you can save customers a lot of money.

6 **Use only the best carriers, not the cheapest.** Lowest cost often does not translate to highest value. Use a quality of service/cost mix to choose your providers and reevaluate them often.

7 **Build a comprehensive coverage network.** Many expedited shipments originate outside common carrier lanes. When you get a call from a customer at 2 a.m. for a shipment originating in Smallest Town, U.S.A., be sure you have a plan of action to support that region.

8 **Provide key data.** Timely and accurate information is integral for long-term success with expedited customers. Arming them with the key details of all their shipment activity provides the opportunity for supply chain improvement.

9 **Be creative.** Routinely review the shipment data you collect in an effort to identify emerging trends. Keep your eyes open and develop solutions before your customers even realize they have a need.

10 **Maintain protect times.** This is an obvious tip, but an expedited shipment manager should never lose sight of how important it is. Deliver on time, every time. For those situations when it is genuinely impossible, make sure customers are informed well before the delivery time draws near and provide them with an alternative solution. ■

READER

# PROFILE

## Autumn Bayles Takes the Cake

Autumn Bayles has a big job, but it's also a sweet one. Most people who grew up in the mid-Atlantic region know the Tastykake brand as a popular lunchbox staple. Bayles' employer, the Tasty Baking Company, has been turning out snack-sized cakes and pies under that name in Philadelphia since 1914.

During three tough years as chief information officer, Bayles led Tasty Baking through 12 successful projects to rebuild the company's technology platform. That goal accomplished, she started scoping out the future. "I was looking for the next challenge to tackle," she says.

Then, Tasty Baking's senior vice president for supply chain left the company. Bayles was no stranger to supply chain management: she held a degree in industrial engineering and had years of experience in management consulting. She was working on the company's new plant strategy project. And, of course, much of the technology she worked with involved the supply chain. "So I raised my hand and volunteered," she recalls.

The company promoted her lieutenant to CIO and named Bayles senior vice president of strategic operations and technology. Gradually, she took on more responsibility for supply chain operations. Finally, Tasty Baking dropped pure IT from her responsibilities, appointing her to her current position, senior vice president, strategic operations.

Reporting to the CEO, Bayles is responsible for manufacturing, distribution, transportation, and supply chain analytics, which focus on demand-driven manufacturing. She's also in charge of constructing the new manufacturing and distribution facility where Tasty Baking plans to move in 2010.

One of the many improvements Tasty Baking will gain at the new site is streamlined process flow. Today, the company ships finished goods from its plant–a six-story structure built in 1922–to a separate DC. "It's only one mile away, but it might as well be 15," Bayles says. "We still have to pack the products, load them on trucks, move them, and unpack."

The new site will integrate manufacturing and distribution in a single complex. "Goods will flow off the back of the production line

### JUST DESSERTS

| | |
|---|---|
| NAME | **Autumn Bayles** |
| TITLE | Senior vice president, strategic operations, since 2006. |
| COMPANY | Tasty Baking Company, Philadelphia, Pa. |
| PREVIOUS EXPERIENCE | Several management consulting positions with PricewaterhouseCoopers Consulting; technology management consultant, Safeguard Scientifics; director of consulting, Destiny Websolutions; managing principal consultant, PricewaterhouseCoopers Consulting; managing principal consultant, IBM Business Consulting Services; chief information officer, Tasty Baking Company. |
| EDUCATION: | BS, industrial engineering, Lehigh University, 1992; MBA, Wharton School of the University of Pennsylvania, 2000. |

by Merrill Douglas

right into the distribution center," Bayles notes.

Streamlining is crucial for a company that ships fresh-baked goods. "Not only do we bake for every customer every day, but we ship almost every day to every customer," Bayles says. "It's a high-cost environment."

The enterprise resource planning system that Bayles implemented as CIO helps Tasty Baking control costs by instituting just-in-time principles. The company bakes only as much product as it needs each day to fill existing orders.

To stick to those principles, Tasty Baking must maintain just the right inbound flow of ingredients. That's not easy in a high-velocity business, a fact that hit home hard in 2005, when Hurricane Katrina wiped out the refinery that supplied Tasty Baking's sugar.

"Following our just-in-time theory, we don't store much inventory and ingredients," Bayles says. Besides, the bakery uses so much sugar that storing a large buffer supply isn't practical. So as company officials watched the news, sympathizing with victims in the Gulf states, they suddenly realized they were running out of sugar for their Krimpets and cupcakes.

They paid higher prices to bring in an alternative supply from Canada. "And the sugar didn't come by rail; it came in bags," Bayles says. "We had to use extra labor to open them."

That costly experience forced Tasty to rethink its sourcing strategy. "We looked at different sugar markets, including beet sugar from the Midwest," Bayles says. "We learned a lot about commodities from that experience."

Now, come hurricane or high water, Tasty Baking always has enough sweet stuff to satisfy customers. ■

## The Big Questions

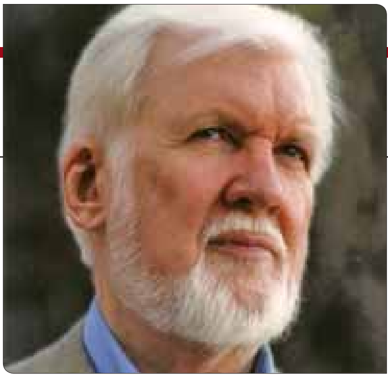
**What do you do when you're not at work?**
I work out every day. I try to make it home for dinner every night so my significant other doesn't forget what I look like. I play racquetball, and try to throw a little arts and culture in there as well.

**Ideal dinner companion?**
Harriet Tubman, Oprah Winfrey, or Mother Teresa. I often look to women who have undergone adversity, and would be curious to discover how they found the strength to carry on.

**What's in your laptop bag?**
My computer and my files. I don't carry a purse, so my wallet is also in there.

**Business motto?**
My favorite motto comes from Ben Franklin: 'We will find a way, or we will make one.'

**Favorite Tastykake?**
The buttercream-iced chocolate cream-filled cupcake.



# SC PERSPECTIVES

BY ROBERT A. MALONE
Contributing Editor, Inbound Logistics
RMalone@inboundlogistics.com

## Our Wiki, Wiki Ways

### The best way to move forward in these challenging times is to innovate collaboratively—emphasizing the quality of openness and the values of networked connectivity, shared knowledge, and rapid information exchange.

Humanity has generally been successful when "we the people" act in concert–but we didn't arrive at the "we" factor overnight.

Adam Smith's detailed illustration of needle-making in 18th century Britain sparked a revolution in productivity. His division of labor called for workers to specialize in specific functions. One worker, for example, might concentrate on making the eye of the needle; another might get stuck honing the point. "I made this needle" became "we made this needle."

This huge labor change made Britain rich, at least for a while. By acting as a "we," Britain dominated mass textile production, became a world supplier, and in many ways anticipated the complexity of today's global supply chains.

Two hundred years later, Alan Turning and John von Neumann's shared computer concepts divided data into input, processing, and output. With the advent of computers, information became a process involving many a "we." Some people entered data, some processed it, some received it, and some used it.

Information grew dependent on the integration of hardware and software. It also evolved into a global business that called upon the talents of hundreds of thousands of people.

In the mid-20th century, Claude Shannon developed a communication theory that had senders using a device to encode their data. The data was then sent through a channel to a receiving device that decoded the data, and voilá!, delivered it to users who turned data into information. Information was no longer confined to a computer room. In time, with personal computers, it could be shared.

"We" was written all over the forces of computing and communicating. Each year, the speed of communication increased exponentially and the volume of global communication rose rapidly.

The advent of the Internet allowed computing and communicating to work with data on a global scale. This convergence and devotion to the open "we" spawned such jewels as Wikipedia, a collective encyclopedia, and Google, a "we" search engine.

The cumulative value of these combined forces is derived in decentralized points of control–many entities doing their thing and adding to the cumulative effect and resultant profit. The value lies in a distributed and open network, rather than a large power node that tries to dominate.

The network derives its strength from sharing among a broad and accessible community of users. As we increase connections, we increase opportunities, value, and profitability.

For example, UPS, DHL, and FedEx delivery drivers may not be empowered by their trucks. But these workers are greatly empowered by the interconnection among information, supervisors, and customers. UPS, FedEx, and DHL are an enormous collection of interacting people and machines. Collectively, they are a distributed and powerful organism, more than just a mere business. As such, their job now involves a move toward greater innovation.

True value is achieved when many bodies use and enhance innovation to such an extent that they outrun the marketplace, rather than let their products and services become commodities. Innovation has therefore become far more than the province of the traditional R&D department; it has become democratized.

Innovation in a "we" world reflects feedback from employees and customers. The solution to today's shortages and increased costs is found within an arena dominated by collective innovation, not by business as usual.

United we grow our business; divided we diminish it. ■

# TRENDS

## Trucking Industry Steering Toward Summer Daze

by Joseph O'Reilly

In light of the recent and sudden news that New Jersey-based LTL trucking company Jevic Transportation terminated operations and filed for Chapter 11 bankruptcy, motor freight carriers will likely find the road noticeably more barren this summer. If the past is any indicator, the industry will be beset by further insolvency as trucking companies continue to struggle with soaring fuel prices, slack freight demand, and general economic malaise.

"Many motor carriers have little ability to absorb rapid changes in fuel costs. Historically, trucking firm bankruptcies have been closely correlated with fuel price increases," reports a 2003 study, *Evaluation of U.S. Commercial Motor Carrier Industry Challenges and Opportunities*, by Fairfax, Va.-based ICF Consulting.

Jevic's demise comes as diesel prices rise higher than $4 a gallon, with prices in California climbing perilously close to the $5 threshold. Because capacity is flush – a consequence of conservative consumer spending and drops in import trade – smaller carriers without the benefit of scale are finding it difficult to pass along fuel surcharges to shippers who are looking around corners for less expensive alternatives.

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**Even the largest carriers are feeling the impact of high diesel prices. FedEx, for example, scaled back Q4 earnings projections because surcharges can't keep pace with fuel costs.**

What is even more worrying for the industry is the fact that large carriers such as FedEx are beginning to feel the pinch as well. At the beginning of May, the carrier scaled back its fourth-quarter earnings predictions.

"While we have dynamic fuel surcharges in place, they cannot keep pace in the short term with rapidly rising fuel prices," explains Alan B. Graf, Jr., FedEx Corp. executive vice president and chief financial officer.

Rapidly rising diesel prices are by far a bigger problem for the motor carrier industry than freight volumes, largely because fuel volatility directly impacts consumer confidence, reports American Trucking Associations (ATA) Chief Economist Bob Costello. "Surging fuel prices are weighing heavily on consumers," he says.

Because trucks haul virtually all consumer goods at some point in the supply chain, the industry will be significantly impacted both directly through higher diesel prices and indirectly as consumers pay more for gas and have less money to spend on truck-transported goods.

The ATA and its member carriers recently ramped up efforts to lobby Congress for additional support in reducing fuel consumption and costs.

The dramatic increase in the price of diesel, combined with a downturn in the economy and softening demand for freight transportation, has many trucking companies struggling to survive, testified ATA State Vice President Mike Card before the Subcommittee on Highways and Transit of the House Transportation and Infrastructure Committee.

Card, who is also president of Combined Transport, a Central Point, Ore., carrier, asked Congress to create incentives and expedite the introduction of auxiliary power units that reduce main engine idling, establish a

## Gloomy Outlook Has STBs Looking Inside

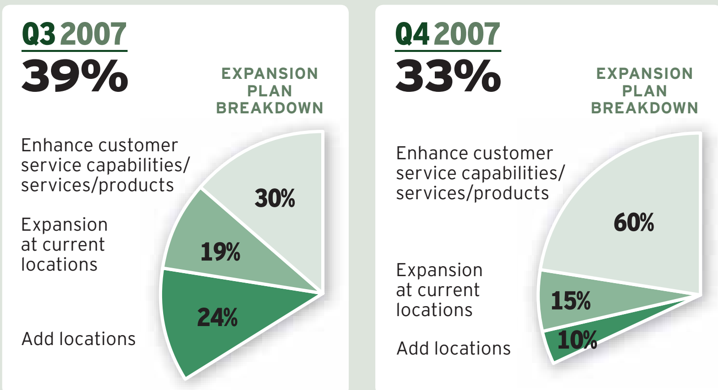
As threats of a recession bear down on the transportation industry, only one-third of small transportation businesses (STB) responding to a fourth-quarter poll by the Small Business Research Board (SBRB), Northfield, Ill., plan to expand during the next 12 to 24 months, a six-percent drop from the third quarter of 2007 (*see chart, right*).

Participants in the study, co-sponsored by International Profit Associates (IPA), indicate they are re-calibrating their operating plans to contend with customer issues and human resources as opposed to investing in facilities and technologies.

In terms of human resources investment, small transportation businesses prefer improving staff training, enhancing employee incentive programs, and adding staff rather than investing in existing or new automation and technology, according to the SBRB poll.

### STBs SLOW DOWN EXPANSION PLANS

**In Q3 2007, 39 percent of STBs said they planned to expand in the next 12 to 24 months. By Q4, that number dropped to 33 percent.**




SOURCE: Small Business Research Board

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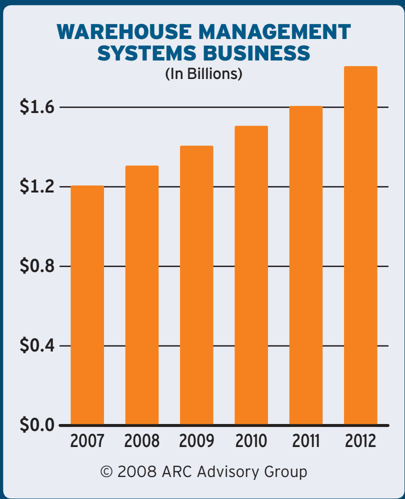
## WMS Scales New Heights

Global penetration, interest from new users, and more vertical-specific applications are raising the importance, and consequently, investment stakes in warehouse management technologies. The warehouse management systems (WMS) market continues to expand at an unprecedented pace, with a compounded annual growth rate over the next five years projected at 7.5 percent, according to a new ARC Advisory Group study. The market was $1.2 billion in 2007 and is forecasted to surpass $1.8 billion by 2012 (*see chart, right*).




"This growth has been driven by a technology refresh among companies with older systems, and the emergence of WMS in new verticals and parts of the world that have not historically bought this solution," observes Steve Banker, ARC's service director for supply chain management and author of *Warehouse Management System Worldwide Outlook*.

Emerging industries are combining WMS with traceability and proof of delivery to create a solution that spans from the point of storage to the point of use. In effect, they are creating a form of extended WMS, Banker reports.

65-mile-per-hour national speed limit, and offer additional support to the Environmental Protection Agency's SmartWay program.

"Our industry can't simply absorb this rapid increase in fuel costs," he said. "We must pass some of these costs through to our customers, which ultimately translates into higher prices on store shelves."

The trucking industry overall is on pace to spend $141.5 billion on fuel in 2008, $29 billion more than last year.

## Where's the Beef?

Last year's rash of product recalls and resulting media coverage generated buzz about the need for more government oversight and/or industry-wide standards to prevent and manage future supply chain mishaps.

But now that Congress is actually acting on the call for reform, legislative efforts have gone largely unnoticed by many within the consumer product goods (CPG) industry, according to a recent survey by Waukesha, Wisc.-based IT company, RedPrairie.

Earlier this year, the U.S. Senate and House passed legislation to beef up the Consumer Product Safety Commission, toughen penalties for violating safety laws, ban lead in children's products, and require the government to maintain an online database of product hazard complaints.

Despite this activity, 56 percent of respondents to RedPrairie's poll of retailers, grocers, CPG companies, food and beverage manufacturers, and third-party logistics providers report they are unaware of pending legislation in Congress.

Furthermore, the survey indicates a lack of consensus as to whether industry-wide standards or legislation would prove more effective. For example, while 79 percent of respondents indicate that recall legislation is needed, 75 percent believe that industry standards can be more effective in managing recalls than legislation. ■

# GLOBAL LOGISTICS

by Joseph O'Reilly

Swiss authorities recently finalized plans for building the Gotthard Base Tunnel's railroad infrastructure. The landmark project is expected to be operable by 2017.

## Alp Tunnel Gets On Track

Moving forward with Switzerland's much-anticipated Alpine tunnel project, AlpTransit Gotthard and the Transtec Gotthard Consortium recently finalized a contract for building the railway infrastructure of the Gotthard Base Tunnel.

The contract is for installation of railway infrastructure systems for the Gotthard Base Tunnel, which involves equipping two single-track tunnels, each 35 miles in length, as well as nearly seven miles of over-ground lines to the north and south, all to the point where they connect with the existing railway network.

The Gotthard Base Tunnel, expected to be commercially operable by 2017, will be the longest tunnel in the world, surpassing the current record holder, the Seikan Tunnel in Japan. Upon completion, capacity through Gotthard is expected to increase from 150 freight trains per day to more than 200 trains; and with less severe elevation gradients, trains will be able to haul double their current tonnage.

CONTINUED FROM PAGE 19

## UK Manufacturing Spot On

As manufacturing across the Western hemisphere forcefully moves eastward–to Eastern Europe and Asia, in particular–the United Kingdom has experienced a slight increase in projected factory production, according to data released by the UK Office for National Statistics. Figures show that manufacturing output rose 0.4 percent, better than the original 0.1 percent forecast.

This information confirms survey findings carried out by the Manufacturing Advisory Service (MAS) South East, which recently reported that more than 70 percent of the region's manufacturers feel confident about the future. It may also be a further indication that rising transportation costs and product quality concerns are compelling some companies to reconsider offshoring strategies.

"UK manufacturers realize they cannot compete with low-

## Taking a Bite Out of Supply Chain Crime

As companies expand globally, outsource business operations, and add new IT systems they become more vulnerable to fraud, according to a report from Kroll, a New York-based risk consulting company.

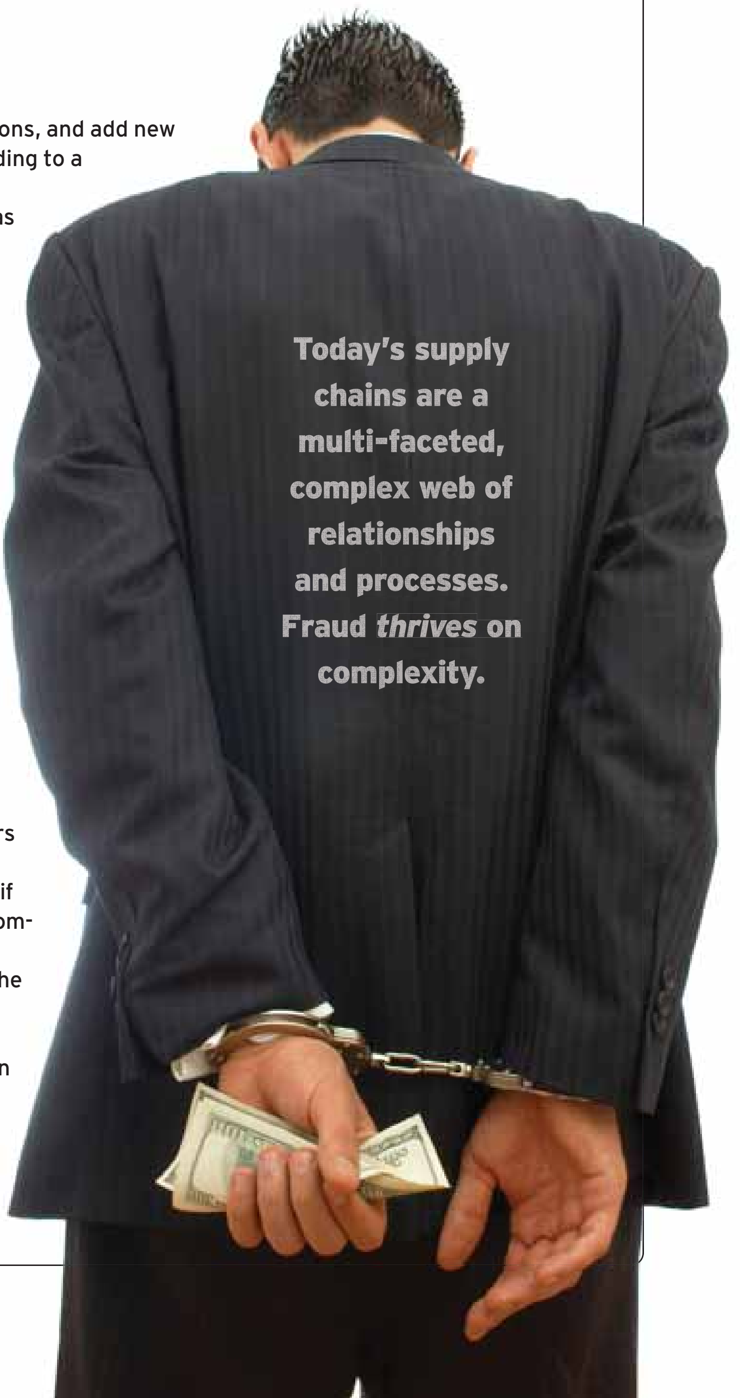
Large companies have become "extended enterprises," and as a consequence are more vulnerable to an array of frauds ranging from simple theft and the misrepresentation of inventory to counterfeiting and piracy.

"Fraud thrives on complexity and companies are facing fraud from the beginning of the supply chain, in every factor: raw materials, production, and delivery," says Richard Abbey, a London-based managing director at Kroll. "Today's supply chains are a multi-faceted, complex web of relationships and processes that often spans a number of continents as companies grow larger and more global in scope."

While companies work to secure their supply chains, thieves are working just as hard to exploit vulnerabilities. Cargo theft, for instance, is estimated to be a $12-billion problem in the United States alone, according to the International Cargo Security Council. Unfortunately, thieves don't always prey on companies from the outside. Internal theft throughout the supply chain is a major risk as well.

Kroll has identified the following red flags to possible internal fraud:

- **Abnormal selection of vendors:** When a single individual selects service providers, related, controllable, or illicit players may be chosen.
- **Payments outside the normal accounts system:** Be warned if payments are hand-delivered, approved manually, or not accompanied by a proof of delivery.
- **Unusual payment patterns:** Falsified invoices rarely follow the same patterns as those from honest suppliers. Watch for an increase in payments to one vendor, a high volume of transactions falling under audit thresholds, or multiple invoices on the same day.
- **Rates paid are out of line with the company's standing in the market:** It is difficult for a carrier that earns a fair profit to distribute part of its revenues in kickbacks or illicit payments, so their charges may be higher.



**Today's supply chains are a multi-faceted, complex web of relationships and processes. Fraud *thrives* on complexity.**

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cost regions on low-value goods–but they are winning through innovation, quality, and adopting the best available tools and techniques to enhance productivity," says David Caddle, principal specialist at MAS South East.

Still, manufacturers continue to express concern over the issue of future skills shortages–more than 35 percent of MAS survey respondents believe that the skills gap could have a negative impact on future productivity.

"Despite concerns around a number of issues–including the global credit crunch and rising energy and commodity prices–the survey shows that the manufacturing community remains positive about its future," Caddle adds.

## Qualifying Quality Concerns

Recurring product and material recalls from China and other low-cost labor countries may have buyers rethinking their global sourcing choices. Consequently, supply chain partners need to act quickly to improve the quality and transparency of their operations, according to a new study, *The Quality Imperative: Averting a Crisis for Suppliers in Developing Countries*, by Industry Directions, a Boston-based market research firm.

When and where labor costs are low, some companies assume they can just throw people at quality assurance problems, the report indicates. As companies in emerging economies grow rapidly, however, their costs, complexity, competition, and rate of change also rise. Adding skilled employees cannot fix the quality threat, and may even exacerbate it. Employees with no standard guidance may jeopardize a supplier's ability to comply with government safety and environmental regulations such as Restriction of Hazardous Substances (RoHS) and Waste Electrical and Electronic Equipment (WEEE) directives.

Suppliers, therefore, need to build in quality and manufacturing execution systems, particularly those with integrated quality functionality that can support such efforts.

## A Turn in the Motorway

Spiraling fuel prices, shippers unwilling to accept higher costs, and fears of an economic slowdown are gathering force at the grass-roots level in Europe's motor freight industry. As a result, many small and medium carriers find themselves pushed to the limit as they absorb costs they can't support, according to a *European Road Freight 2008* study by UK-based market reserach firm Transport Intelligence (TI).

Market leaders, however, continue to invest heavily, largely through significant mergers and acquisition activity, but with patchy profitability. Kuehne + Nagel, Schenker, and DSV have been among the most aggressive, building scale and networks across the region.

"The European road freight market is becoming more challenging for all operators struggling to pass on cost increases to their customers. The major European players, however, especially those with strength in fast-growing Central and Eastern Europe (CEE), are at a distinct advantage. Scale is definitely key to success—and even survival—under current market conditions," observes John Manners-Bell, TI's chief analyst.

CEE countries will see the highest growth over the next five years, with the motor freight industry growing as much as 26 percent in Slovakia, according to the report. This is a result of a vibrant supply side, huge investment in production by Western manufacturers, and increasing domestic demand. By comparison, pan-European growth is expected to rise 6.6 percent over the same period.

In turn, the international motor freight market will significantly outstrip its domestic counterpart, benefiting from the trend toward extended cross-border supply chains that feature more freight moving longer distances, especially in and out of CEE countries. This sector will grow at an annual average rate of 9.8 percent over the next five years, the report forecasts.

CONTINUED FROM PAGE 22

## Asian IT Spend Points to Increasing Sales

While the technology market has shown signs of slowing growth in many parts of the world, IT spending in Asia continues its torrid pace, according to a recent study by IHL Group, a Franklin, Tenn.-headquartered global research and advisory firm that serves retailers and retail technology vendors. As a corollary to growing middle-class demographics, increasing consumer demand, and new opportunities for U.S. businesses to market and sell product, India and China are investing heavily in retail IT infrastructure, driving high double-digit growth in point-of-sale (POS) terminals and other technologies such as radio-frequency identification.

"Both home-grown retailers and global retailers entering the market are driving the increased IT spend," says Greg Buzek, president of IHL Group. "Marks & Spencer's investment in Reliance, an Indian retailer, and concerted efforts by retailers such as Wal-Mart and Carrefour to expand in the region are helping to increase the overall investment in POS and other technologies."


**Global retailers such as Marks & Spencer are helping steer Asian investment in point-of-sale technologies such as RFID.**

For the first time, POS terminal shipments to China have increased beyond those of the region's traditional retail juggernaut, Japan. As road and other infrastructure investments increase across the region, IT outlay will continue to expand throughout Asia.

Among other findings from IHL Group's *2008 Asia/Pacific POS Terminal Market* study:

- POS terminal shipments to China increased 19 percent in 2007 and should post similarly high double-digit growth in 2008.
- The influx of nearly 800,000 foreign visitors to the 2008 Beijing Olympic Games will be a major test of China's retail infrastructure.
- Microsoft Windows shipments dominate POS deliveries to the region; however, counterfeit versions in many countries remain a challenge.
- Linux enjoys strong growth opportunities, particularly in China, where it is the central government's operating system of choice.

## China Passes U.S. as Second Largest Exporter

Global trade growth is expected to slow to a six-year low of 4.5 percent this year but China has overtaken the United States as the world's second largest exporter, the World Trade Organization (WTO) reports. Heavily influenced by the turmoil in financial markets and sharp economic slowdown in leading Western economies, global merchandise trade is forecast to rise by 4.5 percent this year vs. last year's 5.5 percent.

But the WTO warns that a stronger slowdown in global economic growth could cut trade sharply, to significantly less than the projected 4.5-percent level. WTO economists are also skeptical about how long developing countries that have spearheaded global growth can maintain a strong pace in the face of sluggish demand in major developed markets and rising inflationary pressures.

In 2007, buoyed by strong performances in dynamic emerging economies such as China, India, Brazil, and Russia, world merchandise trade in value terms increased by 15 percent to $13.6 trillion. Meanwhile, trade in commercial services, boosted by big increases in transport and travel services, grew by 18 percent to $3.3 trillion last year, the WTO says.

Another stellar performance by China, which recorded a 26-percent rise in merchandise exports to $1.2 trillion, enabled the country to surge ahead of the United States as the world's second biggest exporter to Germany.

The United Kingdom's decline in recorded exports of three percent to $436 billion, associated with fraudulent VAT declarations, pushed it to eighth place behind Italy. On the plus side, the United Kingdom retained its position as the world's second-largest commercial services exporter (after the United States) by registering a 17-percent increase to $263 billion. ■

Brad Dechter is CEO of DHX-Dependable Hawaiian Express, DGX-Dependable Global Express, and DAX-Dependable AirCargo Express.
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# VIEWPOINT

**by Brad Dechter**

## 3PL or Freight Forwarder: What's in a Name?

After 30 years in the transportation business, I am still waiting for a clear, simple explanation of the differences between third-party logistics providers (3PLs) and freight forwarders or consolidators.

Is 3PL just a fancy name for a freight forwarder, or do they actually provide services that an old-fashioned consolidator does not?

Yes, there are differences between the two. But many 3PL executives muddy the waters by spouting rhetoric that almost no one understands.

For example, one 3PL executive recently claimed that his company provides "business process platforms" to customers. Another offers "enterprise applications" to shippers. Can anyone explain what these phrases mean? What happened to using clear, simple English when describing services to shippers?

### WHAT'S THE DIFFERENCE?

Let me attempt a simple explanation of the different functions carried out by freight forwarders and third-party logistics providers.

Basically, forwarders move cargo from one point to another. Third-party logistics providers move, store, and process inventory, and in doing so, may provide traditional forwarder services.

An important question arises from this overlapping of services. Do shippers obtain genuine value for the transportation segment of the 3PL's service? The answer is often ambiguous.

To determine if they are getting real value, shippers should ask their 3PLs some hard and straight questions about the transportation part of their services. For instance:

- Are your transportation charges less expensive than freight forwarders?
- Will a shipment under your supervision arrive at its destination any faster than utilizing a freight forwarder?
- Once a shipment arrives, will it clear Customs more quickly than using a freight forwarder?
- Because you are non-asset-based and rely on air carriers and shipping lines to move your customers' freight, can you obtain lower rates and more reliable service than forwarders?

Forwarders are specialists that focus on the cost and logistics of transportation. Third-party logistics providers are usually generalists who expect to be compensated for providing an overall service. This compensation may or may not be cost-effective for shippers.

How many people will shippers eliminate from their staff by turning over complete logistics management to a 3PL? Ironically, 3PLs may use forwarders to move customers' freight. How effective are they in negotiating rates with forwarders so that the total cost to the shipper is no greater than using a consolidator directly?

Shippers must balance the "one-stop" convenience of a 3PL who claims to handle every aspect of the logistics process against the generally higher cost of that service.

### ROOM FOR EVERYONE

Unlike many forwarders who claim 3PLs provide the same services as traditional consolidators–while charging much higher fees–I believe there is a legitimate place for both parties.

The DHX-Dependable Hawaiian Express division of our company acts both as a forwarder and third-party logistics provider. For one customer, for example, we provide receiving services by inventory item. Each inventory item is linked to purchase orders on a specialized software platform.

Our other two divisions, DGX and DAX, act primarily as forwarders, moving cargo with no detailed receiving or specially developed software. This concentration strictly on forwarding activities, however, is changing at DGX, our worldwide cargo service. For imports into the United States, we have developed a network that links shippers/manufacturers, consignees, and forwarders. This network acts in real time, communicating every order placed with the vendor.

Interestingly, the business of companies calling themselves third-party logistics providers has slowed considerably, with many smaller entities looking to merge or be acquired. Many freight forwarders whose primary business is transporting goods from Point A to Point B, with ancillary 3PL services, are thriving. This balanced combination of freight forwarding and 3PL services creates genuine value for shippers.

### FORWARDERS STILL GOING STRONG

Traditional freight forwarders continue to play a dominant role in international trade, controlling 90 percent of all heavyweight international air shipments. This percentage has remained remarkably constant during the past 30 years, despite all the technical and operational changes during that time. For ocean shipping, traditional forwarders control 75 percent of less-than-containerload revenues.

Air carriers and ship lines that in the not-too-distant past employed huge numbers of salespeople to market their services have cut these staffs to the bone. Direct carriers increasingly rely on the forwarders' ability to sell their transportation services instead of marketing directly to end customers.

Yes, there are differences between 3PLs and freight forwarders. Increasingly, however, these services are blending. To remain successful in today's fiercely competitive logistics market, both freight forwarders and third-party logistics providers must never forget that despite all the technical advances and innovations, logistics remains a people business. ■

In a recent survey, *Inbound Logistics* asked airfreight forwarders how they are expanding their global coverage and services to meet shipper and corporate expectations. Listen in as they air their thoughts.

# Airfreight Forwarders Perspectives 2008

IL Exclusive Research

**by Joseph O'Reilly**

Changing trade patterns driven by new manufacturing centers and burgeoning consumer markets have created a vacuum for airfreight forwarders that can deliver value-added logistics services beyond commoditized capacity and customs brokerage services – services that penetrate farther and drive value and efficiency deeper in the supply chain. This global complexity, compounded by a weakening U.S. economy and competition from third-party logistics providers (3PLs), is swiftly changing the face of today's airfreight forwarder.

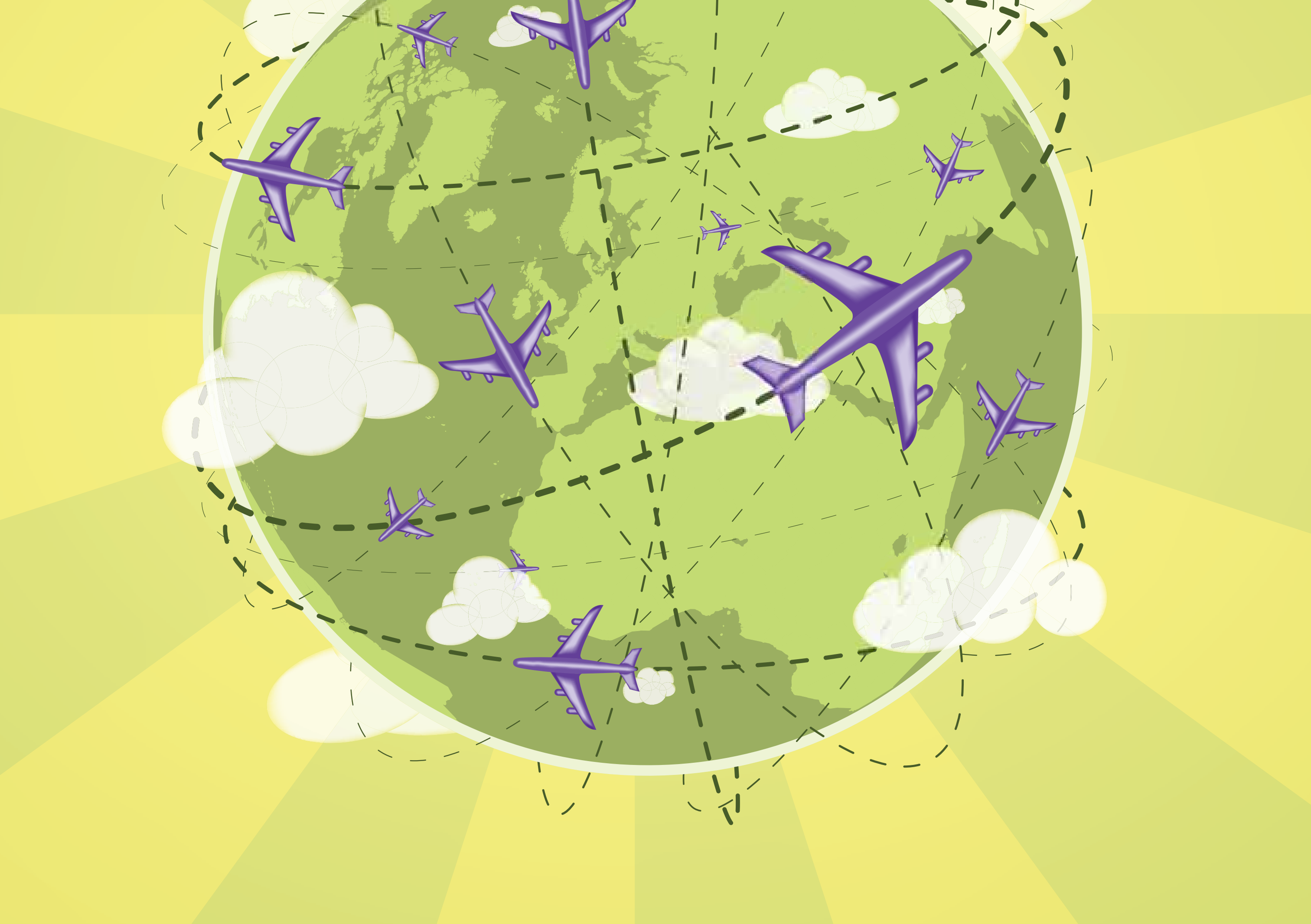
*Inbound Logistics' Air Freight Perspectives 2008* provides a contextual mirror that reflects the changing complexion of the airfreight forwarding community.

First, our *Airfreight Forwarding Market Insight Survey* provides an up-close look at the industry and how forwarders are expanding their global coverage and services to meet customer and corporate expectations. Soliciting input from more than 40 air cargo forwarders, we supplement statistical and anecdotal data with our analysis of challenges and opportunities awaiting air cargo service providers and their customers.

Second, *IL's Who's Who in Airfreight Forwarding* (*page 34*) puts names to these changing faces, presenting a snapshot of industry players and their service portfolios and providing a bridge to connect readers with airfreight service providers.

## Forward Motion

As airfreight carriers face the challenges of restructuring routes, downsizing fleets, and expanding services in more lucrative international lanes, forwarders have the luxury of perspective – following at a close distance, understanding and mitigating cost bleeds, and looking for opportunities to grow their businesses.



While U.S. economic uncertainty, a weak dollar, soaring fuel prices, and demand lulls in certain sectors are fast becoming apparent in the airfreight forwarding sector, the industry's broad global coverage and a structural model that is both counter-cyclical and readily adaptive have helped service providers momentarily ride out the fuel- and credit-fed fiscal storm.

Among these survivors and conquerors, forwarders responding to our *Airfreight Forwarding Market Insight Survey* have been in business an average of 29.5 years, with 87.5 percent providing global coverage and 12.5 percent serving the North American market alone (*see Figure 1, right*).

This global penetration suggests that when the going gets tough, airfreight forwarders get going, following capacity and carriers as and where demand dictates. While U.S. recessionary trends are visible, many global markets are otherwise thriving. GDP growth in China, the Middle East, and Latin America is projected to continue on an upward path, translating to steady domestic consumption and airfreight demand. Forwarders serving these markets will likely counter economic instabilities in the United States and other underperforming markets.

Survey respondents overwhelmingly report positive sales during the past year, with 87 percent citing growth of five percent or more and 50 percent indicating sales above 15 percent. Net revenue was slightly less positive, with 79 percent of airfreight forwarders recording profits more than five percent and 40 percent clearing revenue in excess of 15 percent. Reflecting some of the expected consequences of deteriorating economic conditions and rising operating costs, nearly one quarter of respondents recorded a loss or break-even numbers.

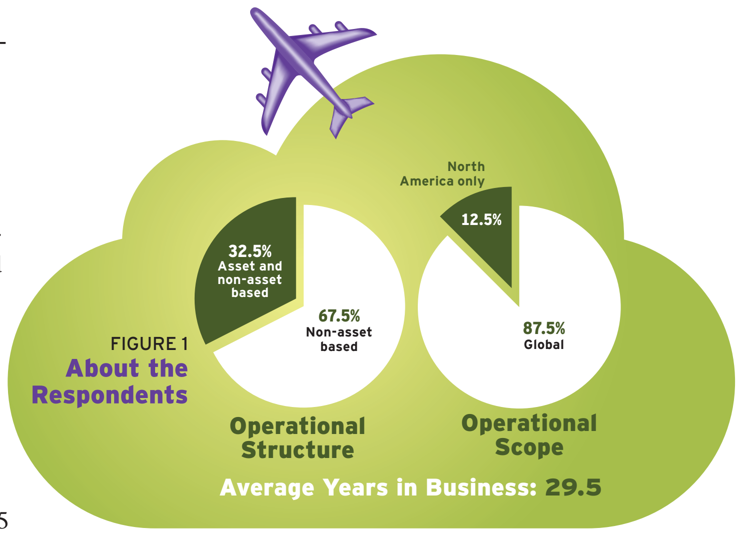


FIGURE 1
**About the Respondents**

Airfreight forwarders with negative financials point to a weak dollar and prevailing economic conditions as reasons for their poor performances.

"Customers are shipping less frequently and opting to hold orders and gain some economy of scale by shipping larger shipments less frequently," observes one respondent.

By and large, though, airfreight forwarders indicate that attention to customer service, new service offerings, and increased sales efforts are driving positive revenue growth. Some are, in fact, capitalizing on U.S. deflation and foreign demand for products to expand export services and generate additional revenue streams.

"The weak U.S. dollar has stimulated our direct and indirect customers' global sales, thus increasing export traffic," shares one forwarder.

Across the board, and regardless of profitability, airfreight forwarders report they have grown their customer base in the past year, with 92 percent expanding by five percent or more and 24 percent indicating a 15-percent-plus growth in new clients. Even companies experiencing slack revenue growth are looking at mining new sales opportunities to stimulate business.

"Profits are down due to a challenging economy," one respondent observes. "But our customer base is increasing and profits are starting back up due to expansion of services."

Expanding services beyond traditional capabilities is key to the continued success of the airfreight forwarding sector, especially as 3PLs with like services compete for market share. Among survey respondents, more than two-thirds report being non-asset-based, 97.5 percent provide logistics services, 92.5 percent offer ocean freight forwarding competencies, and 80 percent operate as consolidators.

Technology services are fast becoming the standard among forwarders, with nearly all indicating they offer both online customs and trade compliance solutions. Web-based tracking (95 percent), online documentation services (75 percent), and rate quote accessibility (72.5 percent) also rank high among those polled.

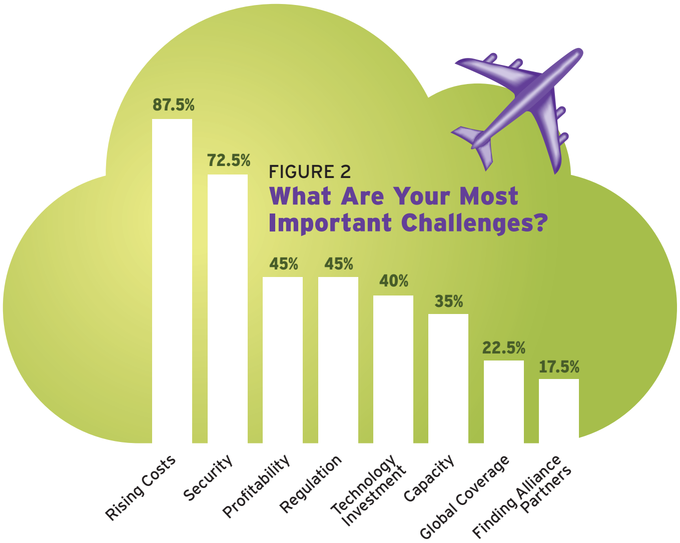


FIGURE 2
**What Are Your Most Important Challenges?**

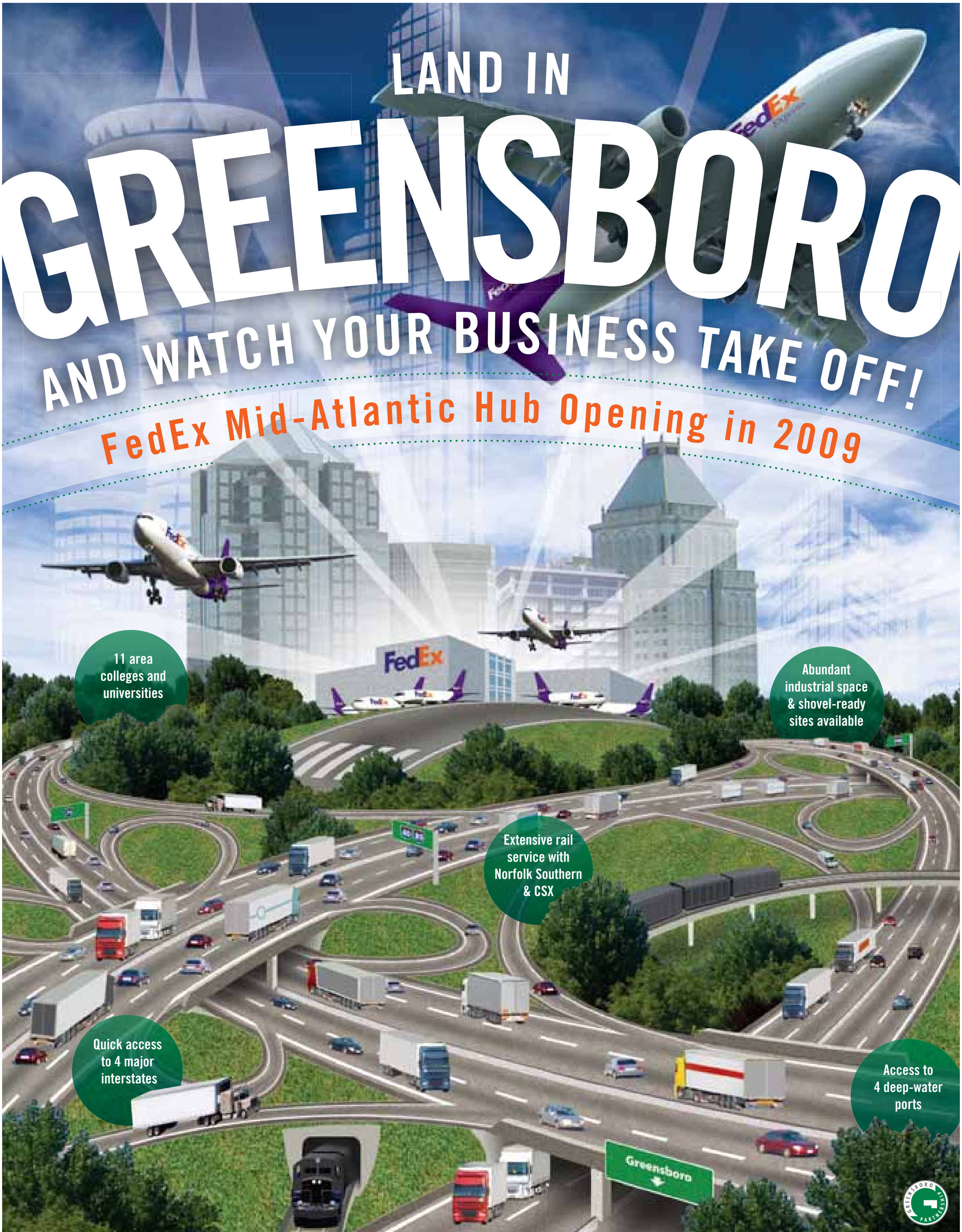
In terms of airfreight-specific services, heavy freight, door-to-door, overnight, next-flight-out, and charter capabilities are standard among forwarders, with at least 90 percent of companies surveyed meeting these requirements. Hazmat (72.5 percent) and perishable cargo (67.5 percent) handling capabilities are more specialized and a smaller, but rising, segment of forwarders (7.5 percent) are going the last mile with white glove services.

### Looking Forward

As airlines and airfreight buyers reckon with the manifestations of a slowing U.S. economy, institutionalized fuel costs, and shifting freight demand patterns, airfreight forwarders will invariably feel some of the pinch as their respective carrier partners, competitors, and shipper customers look to rationalize spend throughout the supply chain.

Expectedly, 87.5 percent of forwarders responding to the survey cite rising costs as their single greatest challenge moving forward, with security (72.5 percent), regulation (45 percent), and profitability (45 percent) rounding out the top priorities (*see Figure 2, above*).

Reducing transportation costs is also the foremost concern for air cargo customers, according to 90 percent of forwarder respondents. Managing supply lines (57.5 percent), security/compliance (55 percent), globalization (52.5 percent), vendor management (45 percent), and expansion (45 percent) are other hot-button issues for airfreight shippers (*see Figure 3, page 32*).




Centrally located in North Carolina, Greensboro is fast becoming the heart of East Coast commerce with over half the U.S. population and most major markets within 650 miles. With the new FedEx Mid-Atlantic Hub set to open next year, more companies will be using Greensboro as their runway to success.

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As these two sets of data suggest, shipper expectations and the role of the airfreight forwarder are swiftly adapting to the needs of the marketplace. Consequently, creating value goes well beyond simply matching capacity with demand. That forwarders rank security and compliance as high as they do reflects their perceived value to customers in negotiating an increasingly complicated web of bureaucracy.

Concurrently, airfreight forwarders discern similar customer demand for services and technologies that help shippers gain better control of information and product flow farther back in the supply chain, work with vendors and carriers more collaboratively, and leverage these synergies to consolidate shipments, rationalize equipment utilization, and reduce costs.

As additional evidence of forwarders' evolving "outsourcing" role, 52.5 percent of survey respondents report that their customers are challenged by reducing inventory, with cutting labor costs and reducing assets cited by 32.5 percent and 22.5 percent, respectively.

Even as current fuel price factors confound air cargo shippers, the industry is headed toward a major watershed with looming regulatory legislation that threatens to impede air cargo's expediency and economy.

Where air cargo shippers have historically relied on intermediaries to manage tactical responsibilities such as accessing capacity, negotiating rates, facilitating customs, and other regulatory due diligence, these imminent changes place global airfreight forwarders in a more strategic space at the point of origin. U.S. businesses, already struggling with inflating transportation expenses, will likely expect forwarding partners to play an even greater role in managing this complexity.

The Department of Homeland Security and the Transportation Security Administration plan to phase in "100 percent" screening of air cargo carried in passenger planes over the next few years, which will place additional burdens on shippers to account for supply chain partners and shipments and mediate possible delays.

Additionally, U.S. Customs and Border Protection's (CBP) Importer Security Filing (10+2) mandate, which is expected to roll out in 2009, will require importers to electronically submit a security filing specifying 10 data elements plus an additional two carrier requirements to CBP 24 hours prior to loading vessels at foreign ports.

With many businesses currently unaware and/or ill-equipped to efficiently meet the 10+2 requirements, they will alternatively rely on offshore supply chain intermediaries to manage these new rules. There is also speculation that in the short term, some shippers will shift more freight to air transport to offset expected delays with CBP's new security protocol. This means forwarders will play a critical role in aggregating information deeper in the supply chain, disseminating this data to necessary partners and authorities, and helping customers find appropriate solutions to move product without undue cost or holdup.

### Technology Tops the List

Not surprisingly, 40 percent of forwarders responding to the survey indicate that technology investment remains a top priority. With minimal fixed assets, forwarders have to invest in IT systems to drive greater value and differentiate themselves within an increasingly competitive sector. In turn, technology strategy and implementation is less of a concern for air cargo shippers, with only 22.5 percent of respondents indicating this as a concern for their customers.

Importantly though, as U.S. security and compliance efforts ratchet up, cargo shippers and consignees will favor forwarding partners that have customer-facing technology capabilities – purchase order management, for example – to help seamlessly connect with vendors and carriers.

Consequently, access to more detailed and objective information about shipments, transit routings, times, and costs, provide shippers with a better idea of performance and the opportunity to leverage this historical data to further increase efficiencies and reduce spend. ■

### Who's Who In Airfreight Forwarding?

To give air cargo shippers a better idea of the service providers and capabilities currently flooding the market, *Inbound Logistics* invited airfreight forwarders to submit their credentials for our annual directory. From smaller forwarders with dedicated equipment and niche operational areas to non-asset-based, airfreight-centric 3PLs with global coverage and wide-ranging logistics resources, *IL*'s *Who's Who In Airfreight Forwarding* presents a reference point for shippers to match their unique needs with an equally diverse group of service providers. **Turn the page and find out who's who and what's what in the global airfreight forwarding industry.**

# Who's Who in Airfreight Forwarding

**To get your search for an airfreight forwarder off the ground, check out this list of leading players.**

| Company Name / Web Address | Phone | Asset- or Non-Asset-Based | Air Freight Services: Customs Clearance | Compliance * | Heavy Freight | Hazmat | Door-to-Door | Perishable | Overnight | Next Flight Out | Charter | High Value | Other Services: NVOCC | Ocean | Customs Broker | Consolidator | Logistics |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **A.N. Deringer** www.anderinger.com | 888-612-6239 | N | ✈ | ✈ | ✈ | ✈ | ✈ | ✈ | ✈ | ✈ | | ✈ | ✈ | ✈ | ✈ | ✈ | ✈ |
| **Agility** www.agilitylogistics.com | 714-513-3000 | B | ✈ | ✈ | ✈ | | ✈ | ✈ | ✈ | ✈ | ✈ | ✈ | | ✈ | ✈ | ✈ | ✈ |
| **Airgroup Corporation** www.airgroup.com | 425-462-1094 | N | | ✈ | ✈ | ✈ | ✈ | ✈ | ✈ | ✈ | ✈ | ✈ | ✈ | ✈ | | ✈ | ✈ |
| **AIT Worldwide Logistics** www.aitworldwide.com | 800-323-6649 | N | ✈ | ✈ | ✈ | ✈ | ✈ | ✈ | ✈ | ✈ | ✈ | ✈ | ✈ | ✈ | ✈ | ✈ | ✈ |
| **ALG Worldwide Logistics** www.algworldwide.com | 630-350-7000 | N | ✈ | ✈ | ✈ | | ✈ | ✈ | ✈ | ✈ | ✈ | ✈ | ✈ | ✈ | ✈ | | ✈ |
| **Argents Express Group** www.argents.com | 843-216-8301 | B | ✈ | ✈ | ✈ | ✈ | ✈ | ✈ | ✈ | ✈ | ✈ | ✈ | ✈ | ✈ | ✈ | ✈ | ✈ |
| **Bellair Expediting** www.bellair.com | 847-928-2500 | N | ✈ | ✈ | ✈ | | ✈ | | ✈ | ✈ | ✈ | | | ✈ | | ✈ | ✈ |
| **Concert Group Logistics** www.cglship.com | 630-795-1300 | N | ✈ | ✈ | ✈ | | ✈ | ✈ | ✈ | ✈ | ✈ | ✈ | ✈ | ✈ | ✈ | ✈ | ✈ |
| **DB Schenker/BAX Global** www.baxglobal.com | 800-CALL BAX | N | ✈ | ✈ | ✈ | ✈ | ✈ | ✈ | ✈ | ✈ | ✈ | ✈ | ✈ | ✈ | ✈ | ✈ | ✈ |
| **DHL Global Forwarding** www.dhl-dgf.com | 866-257-2177 | N | ✈ | ✈ | ✈ | ✈ | ✈ | ✈ | ✈ | ✈ | ✈ | | ✈ | ✈ | ✈ | ✈ | ✈ |
| **Dimerco Express Group** www.dimerco.com | 516-708-4500 | B | ✈ | ✈ | ✈ | | ✈ | | | ✈ | ✈ | ✈ | ✈ | ✈ | | ✈ | ✈ |
| **EA Logistics** www.ealogistics.com | 800-863-5948 | N | ✈ | ✈ | ✈ | | ✈ | | ✈ | ✈ | ✈ | | ✈ | ✈ | ✈ | | ✈ |
| **Expeditors** www.expeditors.com | 206-674-3400 | N | ✈ | ✈ | ✈ | ✈ | ✈ | | | | ✈ | ✈ | ✈ | ✈ | ✈ | ✈ | ✈ |
| **Freight Solution Providers** www.shipfsp.com | 800-562-9915 | B | ✈ | ✈ | ✈ | ✈ | ✈ | ✈ | ✈ | ✈ | ✈ | ✈ | | | | | ✈ |
| **Hassett Air Express** www.hassettair.com | 800-323-9422 | B | ✈ | ✈ | ✈ | | ✈ | | ✈ | ✈ | ✈ | ✈ | | ✈ | ✈ | | |
| **IJS Global** www.ijsglobal.com | 203-504-9760 | N | ✈ | ✈ | ✈ | ✈ | ✈ | ✈ | ✈ | ✈ | | | ✈ | ✈ | ✈ | ✈ | ✈ |
| **K Line Logistics** www.us.klinelogistics.com | 630-250-0337 | B | ✈ | ✈ | ✈ | ✈ | ✈ | ✈ | ✈ | ✈ | ✈ | ✈ | ✈ | ✈ | ✈ | | ✈ |
| **K2 Logistics** www.k2logistics.com | 651-209-8770 | N | ✈ | ✈ | ✈ | ✈ | ✈ | ✈ | ✈ | ✈ | ✈ | ✈ | ✈ | ✈ | ✈ | ✈ | ✈ |

**KEY:**

**Asset- or Non-Asset-Based:**
N = Non-asset-based; B=Both

*** Compliance:**
Shipments comply with government, security, and trade regulations

**** Documents:**
Shippers can book/create customs or import/export documents online

| VALUE-ADDED SERVICES AND SPECIALTIES | WEB SERVICES: RATE QUOTES | REAL-TIME TRACKING | DOCUMENTS ** | OTHER WEB SERVICES | CERTIFICATIONS |
|---|---|---|---|---|---|
| Warehousing and distribution, cargo insurance, logistics consulting | | ✈ | ✈ | PO management | |
| Supply chain management, defense and government services, project logistics, fairs and events management, procurement | | ✈ | ✈ | | |
| Warehousing and distribution, transborder services, finished goods distribution | ✈ | ✈ | ✈ | | C-TPAT, TAPA |
| Ground service, in-home, pharmaceuticals, government, automotive | ✈ | ✈ | ✈ | EDI, PO, and inventory management | IATA, TAPA, C-TPAT |
| Letters of credit, carnets | ✈ | ✈ | ✈ | | C-TPAT |
| Warehousing, domestic and international truck brokerage, project cargo | | ✈ | ✈ | | FMC, IATA, C-TPAT, DOT |
| Warehousing and distribution, hand carry, deferred, trade show and convention services | ✈ | ✈ | ✈ | POD tracking | |
| Time-critical, LCL, FCL, vessel charter, onboard courier, documentation, banking, domestic surface transportation solutions | ✈ | ✈ | ✈ | Shipper's letter of instruction | |
| Constant surveillance service in North America | ✈ | ✈ | ✈ | | ISO 9001 |
| Duty drawback, consolidated distribution services, project cargo | ✈ | ✈ | ✈ | | ISO 9001:2000 |
| Cross-border, project cargo, personal effects and household movement, shipper's consolidation, hand carry | | ✈ | ✈ | B2B e-commerce | ISO 9001, IACSSP, IATA, C-TPAT |
| Documentation, trade show and event freight forwarding, warehousing, distribution and rollouts | ✈ | ✈ | ✈ | Automatic shipment status updates, reporting tools | |
| Order, vendor, and cargo management, distribution planning, site selection, risk management | | ✈ | ✈ | Shipment booking, quote monitor | ISO 9000 |
| White glove | ✈ | ✈ | ✈ | | TAPA, C-TPAT, IATA, HazMat |
| Documentation, full ground options, expedited ground, trade show shipments | ✈ | ✈ | | Pick up requests, custom tracking and report detail | ISO 9001 |
| Export licensing, consulting, consolidation | ✈ | ✈ | ✈ | Report downloads | OTI, IACSSP, C-TPAT |
| International air and ocean services | | ✈ | | | ISO, C-TPAT |
| FTL, LTL, and warehousing | ✈ | ✈ | | EDI, reports, and customized software solutions | CNS, IATA, C-TPAT, NMFTA, HazMat |

# Who's Who in Airfreight Forwarding

To get your search for an airfreight forwarder off the ground, check out this list of leading players.

| COMPANY NAME / WEB ADDRESS | PHONE | ASSET- OR NON-ASSET-BASED | AIR FREIGHT SERVICES | | | | | | | | | | OTHER SERVICES | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | CUSTOMS CLEARANCE | COMPLIANCE * | HEAVY FREIGHT | HAZMAT | DOOR-TO-DOOR | PERISHABLE | OVERNIGHT | NEXT FLIGHT OUT | CHARTER | HIGH VALUE | NVOCC | OCEAN | CUSTOMS BROKER | CONSOLIDATOR | LOGISTICS |
| **Kuehne + Nagel** www.kuehne-nagel.com | 201-413-5500 | N | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| **Lynden International** www.laf.lynden.com | 800-926-5703 | N | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| **Mach 1 Global Services** www.mach1global.com | 480-921-3900 | N | ✓ | ✓ | ✓ | | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ | ✓ |
| **Panther Expedited Services** www.pantherexpedite.com | 800-685-0657 | N | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | | | | ✓ |
| **Pegasus Logistics Group** www.plg.cc | 800-997-7226 | N | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ | | ✓ | | ✓ | ✓ |
| **Phoenix International** www.phoenixintl.com | 630-766-6395 | N | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ |
| **Pilot Freight Services** www.pilotdelivers.com | 800-HI-PILOT | N | ✓ | ✓ | ✓ | | ✓ | | ✓ | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ |
| **Priority Worldwide Services** www.priorityworldwide.com | 410-766-7470 | N | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| **Quick International Courier** www.quickintl.com | 800-488-4400 | N | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ | | | ✓ | ✓ | ✓ |
| **SDV International Logistics** www.sdvusa.com | 718-481-4912 | N | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| **SEKO Worldwide** www.sekoworldwide.com | 800-228-2711 | N | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ |
| **Service By Air** www.servicebyair.com | 888-466-9722 | B | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ |
| **Team Worldwide** www.teamww.com | 800-527-1168 | B | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| **Total Transportation Concept** www.totaltrans.com | 310-337-0515 | B | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| **TransGroup Worldwide** www.transgroup.com | 800-444-0294 | N | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| **UPS** www.ups-scs.com | 800-443-6379 | B | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| **US Express Freight Systems** www.usexpressfreight.com | 800-328-8000 | N | ✓ | ✓ | ✓ | | ✓ | | ✓ | ✓ | | ✓ | | ✓ | | | ✓ |
| **Worldwide Express** www.worldwideexpress.com | 610-521-5450 | N | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |

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**** Documents:**
Shippers can book/create customs or import/export documents online

| VALUE-ADDED SERVICES AND SPECIALTIES | WEB SERVICES: RATE QUOTES | WEB SERVICES: REAL-TIME TRACKING | WEB SERVICES: DOCUMENTS ** | WEB SERVICES: OTHER WEB SERVICES | CERTIFICATIONS |
|---|---|---|---|---|---|
| Air, sea, and overland services including time-defined express products, product-specific services, transborder services | ✈ | ✈ | ✈ | Order management integration | ISO |
| Supply chain and logistics, warehousing and distribution, RMAs, pick/pack | ✈ | ✈ | ✈ | Customizable reports | C-TPAT |
| Warehousing, ground expedited, truckload, local cartage, repackaging, crating | ✈ | ✈ | | EDI | ISO 9001:2000, C-TPAT, FAST, CBSA |
| Time-critical, custom-critical transportation, recoveries, transportation protective services, ground expedited | ✈ | ✈ | ✈ | Order entry | ISO 9001: 2000 |
| Warehousing, freight optimization, reverse logistics, inbound PO management, white glove, global routing center | | ✈ | | EDI, handheld POD | |
| Warehousing and distribution, vendor management, project moves, global textile logistics, vendor assembly and consolidation | ✈ | ✈ | | Shipment status information, printable forms | C-TPAT |
| White glove, automotive services | ✈ | ✈ | ✈ | E-mail alerts, global tracking | ISO 9001:2000 |
| Customs bonded warehousing, trucking, packing, crating, warehousing | ✈ | ✈ | ✈ | Inventory management services | C-TPAT |
| Global priority shipping and logistics solutions, time- and temperature-sensitive materials | | ✈ | ✈ | Warehousing and real-time inventory management | ISO 900: 2001, C-TPAT |
| International logistics and supply chain management, cross trade in 88 countries, aerospace, oil and gas, healthcare, cosmetics | | ✈ | | Project and PO management, WMS | ISO 9001-2000, ISO 14001-2004, ISO 18001:2004, C-TPAT, HazMat, IATA |
| DC bypass, vendor management, consulting, pharmaceutical sample distribution, trade shows, inventory, PO, and vendor management | ✈ | ✈ | ✈ | PO management | ISO 9001-2000, C-TPAT |
| Remote location filing, import/export, government services | ✈ | ✈ | ✈ | | |
| Warehousing and distribution, cross border, crating, white glove | | ✈ | ✈ | EDI compatibility, logistics management tools | C-TPAT, ISO 9001:2000 |
| Warehousing and distribution | ✈ | ✈ | ✈ | | |
| White glove, local cartage, trade/entertainment shows, asset recovery/disposition, reverse logistics, green logistics | ✈ | ✈ | ✈ | PO management, WMS, reports | C-TPAT, IATA, FMC, EPA SmartWay Partner |
| Consolidation, transload/crossdock, DC bypass, hand carry, rail intermodal, ground freight | ✈ | ✈ | ✈ | | |
| Convention freight services, medical equipment and trade show division, warehousing and distribution | ✈ | ✈ | ✈ | Automatic e-mail updates | |
| Duty drawback, consultation | ✈ | ✈ | ✈ | Customs status | |


## AIRFREIGHT LOGISTICS:

# Plane and Simple Strategies

by Lisa Harrington

**Although high fuel costs cloud the view, airfreight forwarders still play a vital role in transportation and supply chain strategies.**


It costs more for your cargo to fly the friendly skies these days. Jet fuel prices have risen 90 percent in the past 12 months, and global airlines will spend an additional $67 billion on fuel this year, according to the International Air Transport Association.

"Shippers are concerned about the cost of fuel," says Gary Schulties, senior vice president, air freight, North America, DHL Global Forwarding. "Fuel cost is the single largest issue facing the airfreight industry today."

To cope with higher airfreight prices, many shippers are re-thinking their supply chains and shifting freight to slower modes when possible. Such shifts mean carrying more inventory in the pipeline, however, a strategy that clashes with lean ideals.

As a result, businesses continue to depend on airfreight forwarders to help strike a balance between efficiency and cost-effectiveness.

Three multi-billion-dollar companies – Electrolux AB, Rohm and Haas, and Tyco International – share their thoughts and strategies on leveraging air cargo in tough times.

**Electrolux AB: The Challenge of Geography**

The global supply chain at $17.5-billion Swedish appliance manufacturer Electrolux AB has changed radically in the past five years. No one knows this better than Bjorn Vang Jensen, vice president of global freight and logistics services. From his offices in Singapore, he manages the company's cross-border/cross-continent movements of finished goods and components.

"Like other consumer-durables and electronics companies, Electrolux has experienced a tremendous shift from local manufacturing in high-cost countries to low-cost country sourcing," Vang Jensen says. "We now source and deliver all over the world."

Vang Jensen's not exaggerating. He controls freight flows from manufacturing plants in the remote interior of China, sources components and delivers finished goods to Eastern Europe and Russia, and manages supply lines to Mexico and the United States.

This trend toward global sourcing, coupled with a number of factory closures in high-cost areas of North America, Europe, and Australia, has intensified the complexity of Electrolux's supply chain.

"From a sourcing and corporate finance perspective, there's no doubt we're taking the right approach," says Vang Jensen. "But from a supply chain perspective, this strategy runs counter to what's taught in any supply chain management course."

Supply chain management best practices tout moving suppliers closer to production, becoming lean and agile, reducing inventories, and shortening lead times. "But we are lengthening lead times, and by default, increasing supply chain inventory," Vang Jensen says. "We're introducing additional risk, adding suppliers far from home, and sourcing finished product from distant locations. The company sees major net benefits from managing tradeoffs and risk, so our supply chain managers have to make the best of it."

To make the best of it, Electrolux sometimes relies on air freight to move products and components.

"We strategically plan to use air freight for high-value components such as circuit boards," Vang Jensen continues. "We also use air freight where the value-density of the component is so high that using ocean would result in excessive inventory. Filling an ocean container with circuit boards, for example, would create about three years' worth of inventory. And, with rapid technology changes, we'd end up with a huge number of obsolete boards. This is a prime example of where air freight clearly makes sense."

Electrolux moves about 3,000 tons of air cargo globally each year and ships a similar volume, predominantly components, by air courier.

In spite of wildly skyrocketing airfreight costs resulting from fuel price increases, the company is not likely to change its methods. "Unless someone invents a vessel that can cover the Pacific in two days, we'll always need air freight," Vang Jensen says.

Electrolux just completed a global airfreight tender and locked in two-year contracts with its air forwarders. These contracts include "fair and equitable caps" on fuel surcharges.

As a result of the airfreight tender process, Vang Jensen selected two global service providers and three niche players that specialize in serving specific, difficult-to-reach parts of the world.

"Rates are our main selection criteria," Vang Jensen says. "We also consider global coverage and scale. We want the air carrier to assign us a key account manager. And we want senior-level access to resolve any disputes or problems. We never had to pull that trigger in the last four years. That speaks to the quality of the providers and our process."

Electrolux is at a disadvantage when negotiating airfreight rates because it cannot commit to specific volumes. That's why it selects only large service providers–forwarders that can randomly guarantee uplift.

Vang Jensen also considers the degree of visibility the air forwarder can provide.

"Providing basic track-and-trace functionality is the price of entry in air freight today," he says. But Electrolux requires capabilities beyond that–specifically, that the provider can interface with its Oracle Transportation Management Solution, which currently is being installed worldwide. The Oracle solution will manage the company's global air, ocean, and land transportation, and is about one year away from full deployment.

"We need real-time total supply chain visibility from every supplier we use," Vang Jensen says. "Because one provider cannot serve all the modes we use, we decided to implement an in-house solution."

Vang Jensen admits that Electrolux's solution has its weak points.

"Our supply chain is not very pretty," he says. "We don't ship from port to port. It would make life simple if we could locate all our facilities right at the ports in Shenzhen, China, and Long Beach, Calif. Unfortunately, that's not likely to happen because our suppliers and factories are located all over the world.

"It's not good enough for an air carrier to move freight from Pudong to Memphis," he adds. "We need origin and destination services, including the ability to pick up and deliver to remote locations. If a carrier can't deliver cargo to Springfield, Tenn., then it can't move our air freight–because that's where we need it."

### Rohm and Haas: Delivering Critical Products

Rohm and Haas, a Philadelphia-based specialty chemicals company, serves a variety of industries, including construction, electronics, household goods, packaging, transportation, pharmaceu-

Alutiiq ceremonial masks contain whalebone, so they needed special permits from the U.S. Fish and Wildlife Service and the equivalent agency in France before they could be shipped by air.

## The Art of Moving Priceless Cargo

Shipping priceless works of art is itself a fine art of choreographed global logistics. Artwork shipments require special handling, extraordinarily high levels of security, and a great deal of babysitting and handholding. To accomplish these moves, museums and collectors work with an elite group of 3PLs experienced in art export/import and familiar with the extensive permitting processes required for these shipments. Recently, some of these experts transported a collection of rare American Indian ceremonial masks from a museum in northern France to the Kodiak archipelago of Alaska.

In 1872, French anthropologist Alphonse Pinart traveled the Kodiak archipelago of Alaska by skin boat accompanied by Alutiiq men native to the area. During the course of his expedition, Pinart assembled multiple journals of notes and one of the most extensive collections of Alutiiq ceremonial masks in the world. His journals remained in Alaska, but the masks went home with Pinart to France.

Last month, the Alutiiq Museum in Kodiak received the priceless collection from the Château Musée, a municipal museum in the city of Boulogne-sur-Mer that now owns the collection. After six years of negotiation and planning, the artifacts made the arduous journey to Alaska via a multi-legged air route.

Memphis-based 3PL Mallory Alexander International Logistics' Fine Arts Division handled the logistics for the exhibit. Moving the masks involved fine art truck transport from Boulogne-sur-Mer to Paris; widebody airfreight transport from Paris to Chicago and from Chicago to Anchorage; freighter transport from Anchorage to Kodiak; and truck transport to the Alutiiq Museum. Mallory Alexander coordinated with the fine art shipper LP ART, Paris, to ensure proper packing and crating, obtain export permits related to wildlife materials and to the export of artworks, and manage customs formalities.

For insurance and security purposes, the lending museum in France hired an onboard courier to travel with the artwork door-to-door. The courier is trained in fine arts shipping, and knows exactly what every crate carries, its value, and whom to call in case of emergency.

Thanks to the efforts of the logistics group, the collection arrived safely in Kodiak and the museum team installed the exhibit, reuniting a native community with its ancestors' artifacts.

Because on-time delivery and product integrity are critical, Rohm and Haas relies on air freight to serve customers in the semiconductor wafers market.

ticals, food, and industrial process. Each industry carries different supply chain requirements and characteristics, but the electronics sector, with its extreme time sensitivity and high-value products, drives the company's use of air freight.

"We make everything from monomers to materials used in the semiconductor industry," says David Pope, the $8.9-billion company's North American region logistics director. Pope manages North American-based logistics for both domestic and international transportation, and has counterparts in Asia and Europe.

The company's electronics materials include advanced photolithography chemicals and chemical mechanical polishing pads and slurries used to manufacture semiconductor wafers. These products are consumed in "fabs" – semiconductor wafer manufacturing plants around the world, especially concentrated in North Asia.

The criticality of Rohm and Haas' products in this market is high because of the extraordinary value of the semiconductor wafers it produces. Delivery timing and supply chain service and integrity are critical.

"We can't rely solely on ocean to serve these customers," Pope says. "We do use ocean if we are sending photolithography products to a warehouse for safety stock. But air freight plays a large role in our transportation strategy, even with slurries." Slurry products are heavy – comprising 95 percent water – so although they would normally be transported by ocean, they are packaged in

## Can You Top This?

**Airfreight forwarders handle all sorts of unusual freight in addition to the standard flowers, seafood, fresh fruit, electronics, and pharmaceuticals. We asked a few forwarders to describe their most unusual airfreight shipment.**

**EA Logistics** of Chicago shipped **a brand new $500,000 Mercedes-Benz SLR McLaren Roadster** from a dealer in the United States to a wealthy customer in the United Kingdom. **DHL Global Forwarding** has moved a lot of odd cargo, including: **7 million kilos of powdered milk** to Venezuela via 117 chartered aircraft; **Marilyn Monroe's clothing**; Lamborghinis for wealthy princes; and **temperature-controlled life-saving vaccines** on behalf of UNICEF to Uzbekistan. **OH Logistics**, a division of Barthco International Inc., routinely handles shipments of **German Shepherd police dogs** from Europe to the United States. OH also shipped giraffes from Los Angeles to India.

***What is your most unusual airfreight shipment?*** *We'll share your experience in an upcoming issue. Email editor@inboundlogistics.com.*

totes and drums and shipped by air to meet customer demand.

When selecting transportation modes, Rohm and Haas always considers a combination of service and price. "Cost is important, but we look at the entire value proposition–from pick-up, air transport, and customs clearance to final delivery," says Pope.

As part of this service, Rohm and Haas expects forwarders to provide exception-basis visibility to cargo at any time, anywhere in the world.

"All carriers offer tracking on their Web sites, but that's not what we're looking for," Pope says. "We want to manage air freight by exception, so we need real-time visibility and alerts."

Rohm and Haas prefers to concentrate its airfreight spend with regionally based forwarders, as opposed to one or two global forwarders.

"A forwarder may claim to be global, but all of its locations may not be able to communicate with each other," Pope says. "Regional carriers have a hands-on, personal touch. The big players sometimes have to scramble to offer personalized services. They may maintain a cost advantage over regional carriers, but for us, it comes down to service."

### Tyco International: A Situational Need

With corporate offices in Princeton, N.J., Tyco International serves a broad array of industries around the world, including electronic security and fire protection, valves and controls, and other industrial products. Air freight makes up eight percent of the company's total freight profile; air freight small package comprises 12 percent.

Chris Corrado, director of global logistics for the $18-billion company, views selecting air service as a matter of balancing the service-price-value equation. For Tyco, air freight is often the go-to transportation mode for time sensitive shipments.

"In our flow control business, for example, a customer may need a replacement valve in an oil refinery right away, so we send it by air," explains Corrado. "Or a technician installing a new security system for a customer may need certain components that he doesn't carry in his truck. We airfreight those."

Although air freight is not the mode used most often in Tyco's supply chain, the company still chooses its partners wisely.

"Most of our air freight moves with three core-endorsed global airfreight forwarders," Corrado says. "We have negotiated service and price packages, as well as the terms and conditions regarding carrying our freight."

Tyco chose to concentrate its air freight with three forwarders for two primary reasons: to take advantage of their global footprint and to gain visibility. Additionally, consolidating freight with fewer providers gives Tyco greater price and service leverage. "If a shipment goes south, the forwarders know who we are and they respond," Corrado says.

This year, fuel prices have driven Tyco to shift freight to slower, less-expensive ground alternatives whenever possible. When its shipping needs do require air freight, however, Tyco can be assured that it is well covered. ■

# CL

# Chemical Logistics

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# Chemical Supply Chain Comes of Age

*Chemical shippers now view supply chain management as integral to success.*

For years chemical supply chain managers have been trying to educate senior management that logistics is not just a line-item cost, but a vital part of the organization, as important as manufacturing and sales. Their mission is far from accomplished, but several recent developments show they are making progress.

First is the trend toward supply chain integration. Major chemical producers increasingly are integrating logistics into the highest levels of corporate planning. They are sharing proprietary systems to achieve greater connectivity with third-party logistics providers (3PLs), carriers, and customers.

In one recent example, Pilot Chemical, a surfactants and emulsions producer based in Cincinnati, closed its Santa Fe Springs, Calif., plant and consolidated manufacturing at its Midwest and East Coast facilities.

Rather than surrender its West Coast market, Pilot retained a 3PL – Ventura Transfer Company, based in Los Angeles – to handle transloading, storage, and distribution of bulk and packaged chemicals. Pilot's bulk liquids move through Ventura Transfer's Wilmington terminal, while packaged goods are handled at its Long Beach warehouse.

Pilot's move was a straightforward business decision to rationalize production. But for a small specialty-chemicals company to substitute distribution for manufacturing, and to do so at the end of a supply chain thousands of miles long, is a ringing endorsement of its supply chain managers, carriers, and distributors.


**HEADING WEST: After consolidating manufacturing in the Midwest and on the East Coast, Pilot Chemical turned to Ventura Transfer Company to handle its transloading and other chemical distribution services on the West Coast.**

*"We had to find out why we were the most expensive producer for our customers. We never considered freight because we assumed it was a fixed cost. But we discovered that there's more to freight than linehaul charges."*

– Michael Rohrbaugh, supply chain manager, Pilot Chemical

The fact that the transition to outsourcing has been essentially seamless is even more noteworthy considering the lack of organization in Pilot's logistics management operations until recently.

"When I started at Pilot, supply chain was called purchasing," says Michael Rohrbaugh, the company's supply chain manager. "For the past three years, I concentrated on basic blocking and tackling. Our priorities were security and continuity of supply."

Those priorities were blown apart a few years ago by 85-mile-per-hour winds. "We found ourselves in single-supplier situations when hurricanes hit the Gulf Coast," says Rohrbaugh. "That was a bad place to be, so we have expanded our inbound supply chain. We now use one or two primary suppliers for most of our needs, and buy spot opportunities from discretionary suppliers. This approach not only gives us flexible supply, it also gives us outstanding market intelligence."

For outbound transportation, Rohrbaugh has prevailed upon Pilot's senior managers to take an introspective approach.

"We had to find out why we were the most expensive producer for our customers," he says. "We never considered freight because we assumed it was a fixed cost. Well, we discovered that freight was not a fixed cost, and that there is more to it than linehaul charges."

## Starting From Scratch

Rohrbaugh started from scratch to measure transportation costs, which previously were only guessed at. He also retained a third-party logistics provider to help with metrics and implement more efficient processes.

"We tried to create a supply chain that is as hands-off as possible for both Pilot and our customers," says Rohrbaugh. "One result has been incredibly enhanced visibility."

Rohrbaugh, however, has not been able to change everything. For instance, the corporate structure still has traffic managers reporting to individual plant managers, rather than to him. He is also working on centralizing Pilot's transportation management software.

One advantage Rohrbaugh does have is that he can easily share best practices, thanks to the concentration of large chemical producers and national companies headquartered nearby. "Some big players in chemicals and logistics are located in Cincinnati, and we have talked to all of them," he says.

Pilot brings raw materials in by marine tank containers, bulk parcel tankers, barge, rail, and truck. Most

# 3PLs Move Up the Chain

Chemical logistics has organically evolved to the point where 3PLs are moving up the supply chain – practically to the reactor.

"We have been taking on more and more operations for chemical companies," affirms Doug Den Adel, chief operating officer of 3PL Jacobson Companies' warehouse division. Parent company Jacobson Inc., based in Des Moines, Iowa, includes trucking and logistics divisions. Each division operates independently, but can coordinate to meet shipper needs.

"We now provide packaging services, and fill drums and totes," says Den Adel. "But we also handle re-labeling, sampling, and even some contract manufacturing. We have engineers and chemists on staff."

**Jacobson and other 3PLs increasingly perform value-added services, such as liquid fill, for chemical companies.**

Jacobson's warehouse division includes 17 commercial chemical warehouses, plus an additional 12 facilities operated on-site or near a customer's plant.

In situations where the shipper owns the facility and Jacobson operates it, the service company charges a management fee and receives payment on actual throughput.

The 3PL has also developed an additional revenue stream in some of those cases. "If a shipper does not use all of the space in the facility, we market it," explains Den Adel. Jacobson and the facility owner split the revenue.

Jacobson is not yet a formal partner in Responsible Care, but is looking into adopting the codes. For now, the firm is thoroughly familiar with safety practices and follows them closely, according to Den Adel.

products are bought on a delivered basis.

Finished materials go out to customers primarily by truck, but the company uses some rail. About 60 percent of outbound shipments are sold on a delivered basis, but Pilot does accommodate 40 percent of sales ex-works.

Just as the number of suppliers was pared down, all plants now use only two or three core carriers. Truckers usually supply dedicated assets and drivers.

### The Logic of Logistics

With the big Ventura venture now in place, Rohrbaugh is turning his attention to the next challenge: electronic integration with Pilot's third-party logistics provider. While the system is currently in place, back-up is handled manually.

"I would like to eliminate that safety net, which takes a huge amount of time," he says. "The more transactional tasks I can get off my plate, the more I can focus on core functions."

For instance, Rohrbaugh's goals for next year are to gain better control of inventory, improve velocity and order management, and do more forecasting and demand planning. "We need to conduct reality checks of our forecasts against actual sales, and get a better feel for safety stock levels," he says.

Even getting to this point has been a challenge for Rohrbaugh, managing both down and up the corporate ladder. "I have spent the better part of one year educating senior management about what is included in 'freight costs.' This education will continue to be a challenge, but we are making progress."

The work has also taken some courage because Rohrbaugh is arguing that detention charges and order changes – costs that had been charged to production – are, in fact, distribution costs. He is actually bringing costs into his operation, but only because he believes that they can be managed, reduced, and even eliminated. CL

# Eastman Eases Into Global SC Strategy

***Internal and outsourced IT systems, efficiency gains, and sustainability are the building blocks of Eastman Chemical's ambitious global supply chain initiative.***

**PUMPING UP: Eastman Chemical's facilities benefit from a supply chain improvement program that includes technology upgrades and enhanced railcar management and planning.**

Eastman Chemical, Kingsport, Tenn., manufactures and markets chemicals, fibers, and plastics worldwide. In April, the company hired OM Partners, a global supply chain software integration and consulting company with U.S. offices in Atlanta, to provide logistics software and supply chain support as part of a broad, multi-year, strategic global supply chain initiative.

"We will implement an integrated planning tool that better enables us to create supply plans to meet dynamic demand patterns," explains Kevin Pruitt, Eastman's director of global chemicals and fibers supply chain. "We believe the integrated planning tool will provide the foundation for inventory optimization, which is another goal of our overall strategic initiative."

As part of its broader supply chain program, Eastman also developed in-house IT capabilities. "After researching available products and tools to improve railcar management, we decided to develop an internal system," says Pruitt. "This system has given us capabilities that were not available in products on the market.

"We are, however, dependent on the railroads to provide up-to-date fleet location information to enable effective utilization of our internal technology capabilities," he adds.

The impetus for the supply chain

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development is aggressive business growth. But Eastman prefers to think of its supply chain improvements as reciprocal efforts as well as mutual challenges, considering that it is always difficult to balance flexibility with low cost.

"One objective of our supply chain is to enhance efficiency to support corporate growth initiatives without significantly increasing headcount," says Susan Armstrong, a supply chain associate at Eastman.

"These efficiency gains should provide the resources we need to support more volume and more customers," she adds. "The objective of our long-term supply chain strategy is to drive high performance. This initiative depends heavily on technology to enable productivity and service improvements."

### Gaining a Global Advantage

The service provided by Eastman's supply chain group gives the company a competitive advantage globally, according to Armstrong and Pruitt.

"Logistics is part of the service equation," says Armstrong. "Eastman's supply chain organization, including logistics, is centralized in Kingsport, with regional groups in Asia/Pacific, Latin America, and Europe. That centralized supply chain is aligned with each of Eastman's businesses because we believe it is the responsibility of the supply chain to execute business strategies."

*"Our centralized supply chain is aligned with each of our businesses because we believe it is the responsibility of the supply chain to execute business strategies."*

— **Susan Armstrong,** supply chain associate, Eastman Chemical

She adds that Eastman's supply chain operates with common goals, metrics, and processes globally.

"With the objective to optimize our entire logistics network, we continuously evaluate options for 3PLs, distributors, and carriers who are an extension of our supply chain," says Armstrong. "We always try to balance our objectives to be efficient and effective. We want to be more productive internally while improving service options for customers."

Looking ahead, Pruitt sees several significant opportunities in supply chain management: supporting Eastman's aggressive growth strategies; managing rising fuel costs and constraints in the logistics infrastructure, specifically limited marine capacity when the volume of export shipments is increasing; supporting Eastman's commitment to Responsible Care, the chemical industry's safety initiative; and global compliance as a good corporate citizen.

"We are also focused on sustainability," adds Pruitt. "Manufacturing sustainable products is becoming more important to the chemical industry. We have developed a long-term strategy that will enable us to manage enviromental issues and improve our ability to contribute to Eastman's success." CL

# Riding the Virtual Supply Chain Train

***For chemical producers pulling into the integration station, Elemica holds the ticket.***

The broadest integrated system among chemical producers is Elemica, a global network of manufacturers and distributors based around an electronic order processing and supply chain management system. When it started operations in 2001 in Wayne, Pa., with a large infusion of venture capital from participating firms, adoption was slow.

But business picked up during the past few years. Today, "we have resumed our growth," says Rick Bushnell, Elemica's vice president of global marketing and vice president of sales for North America. "Business this year is up quarter-over-quarter to date, and we are bringing more buyers and sellers to the network and adding more resources in North America and Europe."

"While we have experienced the largest growth from eastern Europe to South America to southeast Asia, the largest area of growth is local–working with terminals, warehouses, and distribution centers," adds Bill Harvey, logistics director for the Americas.

In addition to network growth, Elemica also sees an accelerating trend toward enlightened self-interest among shippers.

"With all the money chemical

producers are investing in their supply chains, they want truly integrated information technology among shippers, carriers, and consignees," Harvey notes. "As a result, producers are often willing to license or even share their proprietary systems."

BASF, the world's leading chemicals company with close to 100 large and a multitude of small production sites worldwide, is one example.

"About one year ago, BASF began to implement a new transportation management program that connects its system to its carriers' systems," says Harvey. "BASF brought Elemica into the program early. The initiative was unique because BASF did not start by determining what it needed from carriers. Instead, it asked what carriers needed from each shipping point. BASF, its carriers, and Elemica had a productive three-way conversation."

Eventually the initiative spread to include John Conley, president of National Tank Truck Carriers, as well as top executives at several large highway haulers such as Schneider National. BASF is rolling out the new program plant by plant.

### Supply Chain Plugs In

At the manufacturing end, Elemica participant producers have focused on integrating the supply chain with terminal and warehouse operations, which includes managing replenishment and outbound shipments from production plants. Among Elemica partners, Dow, Celanese, and Rohm & Haas are leaders in this area, Bushnell says.

Elemica has formed a logistics advisory group to smooth the transfer and application of proprietary innovations to other shippers and carriers. "The idea is to have the early adopters lead the initiative toward standardization," Bushnell says. "We want to create a common solution."

"I am thrilled by the willingness of early adopters to help with standardization," Harvey notes. "This is true even among competitors. Elemica illustrates real sharing of best practices." CL

# Coping With a Crisis

***What do you do if your core rail carrier goes on strike? Chemical shippers learn the hard way.***

Information sharing becomes crucial in a crisis, such as the strike against the Canadian National Railway (CN) that halted a large volume of movement on the railroad for most of February 2008. The strike was particularly vexing to chemical producers and to those producing dry bulk commodities such as inorganics or polymers, which depend heavily on rail transportation.

Chemical shippers and carriers learned a combination of preparation and acceptance from the CN strike. They got more notice than they would have for a flood, mud slide, or derailment, but with production and transportation already running flat out, there was little spare capacity for arranging alternate routes.

"First, the strike reinforced the need for chemical plants to be served by at least two railroads," says Marty Cove, manager of logistics for Vancouver-based Canexus Chemicals Canada, a major inorganics company and third-largest producer of sodium chlorate in the world.

Both the CN and the Canadian Pacific serve Canexus' Brandon, Manitoba, plant; and a short switch on the CN gives the company access to the two Class 1 railroads in the United States: the Union Pacific and the Burlington Northern Santa Fe. Management personnel were able to handle that switch during the strike, rendering Canexus luckier than some other shippers, acknowledges Cove, who operates a fleet of about 1,500 leased railcars.

"During the strike the soft issues – such as communications, carrier relations, and information systems – were extremely important," says Cove. "We took the strike seriously and were in constant communication with our sales team and customers. That created a lot of credibility with our customers."

Once the strike began, Cove and his team were also in contact with the railroads every day.


**A STRIKING LESSON: Through preparation, communication, and strong carrier relationships, chemical shippers were able to keep their cargo moving during the CN strike in February 2008.**

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"We received daily updates from our customers, and were able to make tactical decisions based on good information," Cove recalls. "Everyone was pulling in the same direction. Our customers, and even competitors, stepped up."

Competing producers in most chemical commodity markets are often willing to swap shipments when they can't meet delivery obligations. They do that knowing that the volume will be replaced as soon as possible, and that the favor will be returned when they experience an outage.

*"During the strike, soft issues such as communications, carrier relations, and IT systems, were extremely important. They created credibility with our customers."*

— **Marty Cove,** manager of logistics, Canexus Chemicals Canada

"We had producer swaps during the strike," says Cove. "But we also had customer swaps, which was unique. One customer, for example, was willing to release half a shipment of chlorate to a nearby competitor whose inventory was nearly depleted. Companies were not only worried about themselves."

Maintaining strong relationships with carriers was also essential to weathering the crisis. "We tried to stay out of CN's way," says Cove. "We made our preparations, and we knew that the sky was not falling. During the month of the strike, we only had to ask CN for a favor three times, and it was able to deliver all three times.

"We never shorted any of our customers," he adds. "We came perilously close, but it never happened." **CL**

# Chemicals See Sea Change

***A shift to 'hub complexes' casts the spotlight on deepsea logistics.***

Supplying commodity chemicals has traditionally been a regional or local transaction. While global production centers such as Houston or Antwerp were always available, every major metropolitan area operated petrochemical plants so buyers could stay close to home.

That trend is changing as chemical producers shift operations to massive, integrated complexes to gain access to feedstocks and economies of scale. As a result, familiar over-the-fence or down-the-road sales have declined, thrusting logistics managers into the spotlight.

No commodity chemical illustrates this sea change more than methanol. This fundamental industrial alcohol is a building block for many plastics, solvents, and intermediate chemicals. Its most familiar application is windshield washer fluid. Natural gas is the raw material in a relatively simple process, so methanol plants have traditionally been small and numerous.

Demand for methanol has been growing strong for several years, especially in developing economies. At the same time, natural gas prices are rising. Total global methanol consumption reached 44.5 million tons

in 2007 and is forecast to reach 49.3 million tons this year, according to PCI-Ockerbloom & Co., a Kittery, Maine-based consultant to the global methanol and derivative markets.

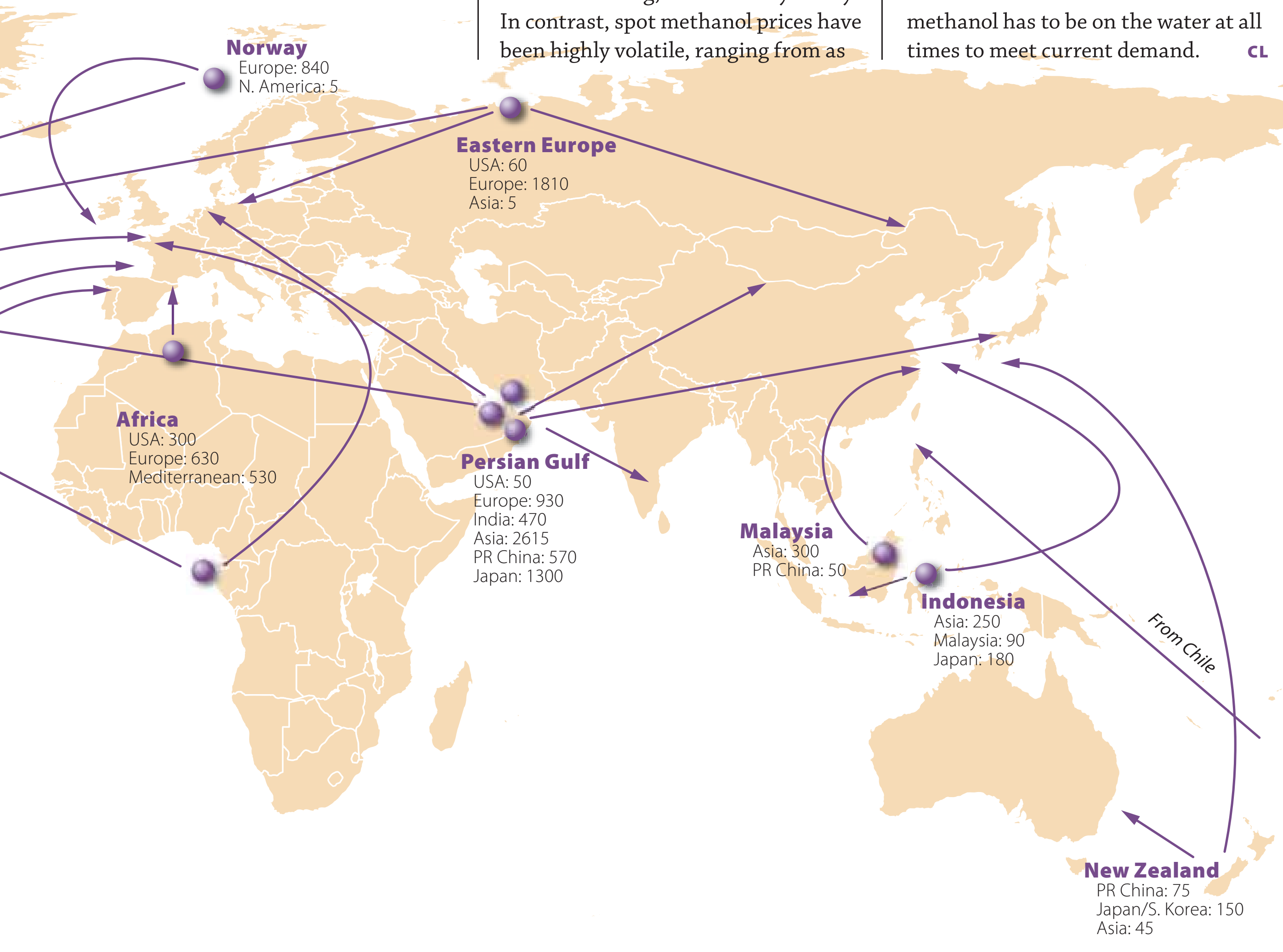
More importantly, global trade in methanol has risen from 42 percent of the market in 1986, to 50 percent in 1996, to 65 percent in 2006 (*see chart below*). That growth is a result of producers closing many smaller plants in North America and Europe, and concentrating production in hub centers in the Caribbean, South America, and the Middle East, close to high-volume, low-cost gas.

Deepsea tankers and tank terminals have become pivot points of global methanol trade. The largest methanol producer, Methanex, based in Vancouver, British Columbia, operates its own fleet of tankers trading under the name Waterfront Shipping. Methanex also has about one million dwt (deadweight tonnage) under charter, and makes extensive use of commercial terminal space. Its 100,000-ton dedicated tanker, the *Millennium Explorer*, makes shuttle runs from major production sites to large terminals. From there, parcel tankers deliver to customers, or customers can pick up using their own vessels or charters.

The challenge for supply chain managers is to spend capital budgets on transportation and storage – either build or charter – or to preserve capital but risk the spot market for both materials and shipping. Freight rates have been rising, but relatively slowly. In contrast, spot methanol prices have been highly volatile, ranging from as high as $3 per gallon f.o.b. (free on board) U.S. Gulf last year to $1.20 per gallon at the end of March. Contract buyers, by comparison, paid $1.90 per gallon in March and $1.60 per gallon in April.

And there lies the dichotomy: The new reality in supply chain management argues for long-term buying and contracts, but pricing trends argue for just-in-time spot purchases.

It gets even more complicated, given methanol's demand growth, particularly in China and India. For the first time in history, production can no longer match consumption on a direct basis. Production has to stay ahead of demand, given the realities of transportation distances and production upsets. Ockerbloom estimates that 1.3 million to 1.5 million tons of methanol has to be on the water at all times to meet current demand. CL




Source: Methanol & Derivatives Global Outlook 2000-2012
PCI – Ockerbloom & Company, Inc.

# Ultimate Outsourcing

***Acquiring Dow's caustic soda distribution business causes a chemical reaction at Univar.***

The ultimate expression of outsourcing is when a shipper sells its distribution network to a service provider outright. One of the largest such transactions ever was completed early this year when Dow Canada sold its caustic soda distribution business to Univar Canada.

The transaction's value was not disclosed, but its scale is vast – as much as 280,000 dry metric tons of caustic soda, a key ingredient in a variety of industrial uses. The base of operations is a modern terminal in North Vancouver, British Columbia.

When Dow ceased chlor-alkali production at its vast petrochemical complex at Fort Saskatchewan, Alberta, the distribution business was no longer essential. But for Univar, gaining the business was a strategic move.

"Acquiring Dow's caustic soda distribution business cemented our position on the West Coast," says Barry Nicholls, vice president of marketing and strategic development for Univar Canada, based in Richmond, British Columbia. "Before the acquisition, we were present in the market, but not truly a player."

Univar first began importing liquid caustic soda from Asian producers to the West Coast – to its Long Beach, Calif., terminal – in 2000, and added terminals in Richmond, Calif., and Vancouver, Wash. The company also operates three deepsea terminals on the East Coast, six barge terminals up the Mississippi River system, and rail shipments from producers to Univar branches in all points of Canada and the United States.

"Univar is now the largest caustic soda distributor in both countries," says Sandy Wilson, product director for caustic soda with Univar USA, Seattle. "Relative to the overall market, however, we are still small, but growing."

On the inbound side, Univar inherited supply contracts from several Asian producers, some of which also supply its U.S. West Coast terminals. The company has no plans to make major changes when the deals come up for renewal, but is likely to consolidate U.S. and Canadian orders with each supplier to achieve better pricing. It will also seek to rationalize freight rates.

On the outbound side, Univar has barge, rail, and truck-loading capabilities at the North Vancouver terminal. The Dow acquisition included a fleet of 374 owned railcars, which Univar is keeping on its books. The company also maintains a smaller fleet of about 100 leased cars for U.S. distribution. Univar plans to operate the existing fleets with no changes. Even though there is quite a size difference, the fleets are appropriate to their geographical markets and average car cycle times.

### Tapping Employee Expertise

Growth, rather than rationalization, was the driving strategy behind the acquisition of Dow's caustic soda distribution business. "Seven valuable employees at the terminal decided to stay on with us," says Nicholls, "and we are taking advantage of their expertise."

The only substantial consolidation may be among customers. "We have a lot of new caustic soda customers in Canada, but we already serve many of them for other products," he says.

Growth potential also exists at the North Van terminal, where the tanks Dow used to export ethylene dichloride reside. Univar could put the tanks into caustic-soda service, or use them to open the facility to handling a different commodity. Importantly, the tanks are clean and in good condition.

"Dow built a great facility with many advanced safety features," says Nicholls. "We have also been able to integrate Dow's safety procedures into our own."

That was made easier because both Dow and Univar are Responsible Care companies in Canada and the United States, so personnel operated under the same management practice codes. CL

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# Chemical Logistics on the Web

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# A New World Venture

As rising fuel costs and lengthening supply lines give businesses further pause assessing total landed logistics costs and proximity to market, Latin America finds itself squarely in the middle of an emerging logistics land swap. Thanks to the pioneering efforts of visionary 3PLs, U.S. companies are prospecting sites in Mexico, Brazil, and elsewhere as they explore new sourcing and selling opportunities.

# Brazil Stakes Its Claim

## Shifting trade winds, strong domestic industries, and the presence of leading 3PLs have positioned Brazil in the middle of a global trade rush.

With so much attention directed toward the Asia-Pacific theater, and U.S. businesses bent on digging deeper into countries such as China in search of less-expensive labor, Latin American markets have largely remained untapped. Mexico notwithstanding, countries such as Brazil have been discreetly, albeit progressively, developing transportation infrastructure, absorbing intellectual capital and best practices, and creating a business climate that is rapidly attracting foreign interest from businesses and logistics providers alike.

Latin America is far from a new venture for U.S. industry. Henry Ford's foray into Brazil's rubber-rich Amazonian market and the ill-fated development of "Fordlandia" in the 1920s foreshadowed the automobile's inevitable importance to the region's economic prospects.

Today, the automotive sector is among Brazil's top export industries and the country's emerging role as one of the world's

leading ethanol and flexible-fuel vehicle producers bodes well for continued growth. In less overt ways, the development of the automotive industry, corollary demand for logistics and supply chain execution capabilities, and the swift migration of U.S. 3PLs to the region have helped reinforce a nascent transportation and logistics network that is beginning to pay major dividends for regional economic growth.

Ryder System first made inroads into Mexico, Brazil, and Argentina in 1995, notes Gene Sevilla, vice president and managing director of Ryder, Latin America. The Miami-based 3PL started selling into the Mexico market and its cross-border business organically evolved. Its expansion into Brazil and Argentina has largely been through strategic acquisitions, and Ryder entered Chile two years ago with an existing customer.

"Mexico was a greenfield effort, beginning with automotive and consumer products," Sevilla says. Its economy has been greatly helped by the North American Free Trade Agreement (NAFTA), evidenced by an upswing in manufacturing integration, international traffic, internal consumption, and general business growth. "NAFTA has been the wind under Mexico's wings," he observes.

South America, by contrast, has not enjoyed the benefit of a contiguous border or liberalized free trade and, consequently, is still internally market driven and focused. Brazil, however, is beginning to reap the benefits of social and economic reform and increasing domestic consumption, and this growth is spilling out beyond the continent.

South America's slower growth has been a windfall in terms of sustainable development. Political and economic protectionism over the past few years have helped stabilize fiscal management and strengthen domestic industries. In the face of a weakening U.S. market and an otherwise thriving global economy, Latin America at large and Brazil in particular are positioned to capitalize on a potential economic development bonanza.

"More people are buying consumer product goods in Brazil, including three million vehicles a year, many of which are manufactured in-country," says Sevilla. "Automobile producers are also exporting product to other South American countries as well as Mexico and China."

Strong government leadership has curbed once-rampant graft and is encouraging private investment. A more secure financial footing, controlled inflation, and greater public/private collaboration are further indications that Brazil's

### Ryder in Latin America:

**ARGENTINA:**
- 724 employees
- 600 vehicles (17% owned, 83% dedicated)
- 200 carriers under contract
- 11 locations*

**BRAZIL:**
- 1,100 employees
- 1,000 vehicles (60% owned, 40% dedicated)
- 600 carriers under contract
- 12 locations*

**CHILE:**
- 5 locations*

**MEXICO:**
- 1,800 employees
- 1,000 vehicle fleet (60% owned, 40% dedicated)
- 145 carriers under contract
- 26 locations*

*including crossdock, warehouse, maintenance facilities

traditionally domestic-driven economy can sustain and grow commodity and specialized export trade.

"For exports, Brazil remains a low-cost producer of commodities. It has resources and can produce inexpensively," says Sevilla. "Despite infrastructure concerns, Brazil can export cheaply and is becoming more efficient at achieving scale with manufactured goods."

But the infrastructure gaps are glaring, and inland transportation needs improvement to support warehousing networks as in Mexico and the United States. The cargo transportation network in Brazil depends heavily on trucking, with 62 percent of freight moving on roads, followed by rail (20 percent) and inland waterways (13 percent), says Adolfo Pimentel Filho, director of business development, Ryder Brazil.

"There are some efforts toward privatizing roads. Brazilian authorities are aware that they need to make strong investments in local infrastructure – especially transportation – to support short- and long-term growth plans," he says.

Mauricélio Gomes Faria, general manager of logistics, Latin America for Fiat Auto in Brazil, perceives road transportation as the foremost challenge and opportunity for business growth in the region. The South American arm of the Italian automobile company manufactures components and assembles vehicles in Brazil and Argentina.

Fiat Auto in Brazil has partnered with Ryder to handle international transportation management for Iveco-Fiat Group's truck and commercial vehicle division in Argentina and Brazil, and the Fiat Group's automobile business in Brazil and Mexico.

Growing consumerism, market competitiveness, and progressive technology investment have made Brazil attractive to Fiat despite bureaucracy and infrastructure issues. The value of working with Ryder is evident in its "ability to react to new transportation demands," says Gomes Faria.

While the broader difficulties of managing local transportation and warehousing, and linking these domestic components to global supply and demand chains are readily apparent, they have yet to dam the tide of foreign speculation. In fact, these obstacles have created demand for the type of responsiveness that third-party logistics companies can provide, hastening the pace of manufacturing and logistics outsourcing growth in the region.

As 3PLs continue to expand their presence throughout Latin America, they are also leveraging experience and service capabilities to attract U.S. and foreign businesses outside of the already entrenched automobile sector.

Ryder, which began working with automotive titans, has also developed local partnerships with leading consumer goods companies. Much of what it has acquired and developed in terms of cultural knowledge and value-added logistics services for the auto industry are transferable to other verticals.

On the transportation side, automotive companies' sophistication and focus on inbound and just-in-time require optimal routes for delivery to manufacturing plants. It's easy to predict demand, but any disruptions, such as transport delays, can greatly impact operations. These challenges necessarily impact local distribution.

"The automotive supply chain is contingent on network design and efficiencies gained or lost through warehousing and distribution strategies such as crossdocking. This level of sophistication is not available working solely with local partners," Sevilla shares.

In the consumer products sector, the network between local manufacturing plant and final consumer is considerably more arbitrary – businesses are less attuned to shifts in demand, and don't know what will be sold where. These companies require greater flexibility and scalability.

As interest in Latin American grows, the task of integrating local transportation and distribution links with global supply chains will define the evolving role of the 3PL – and give current outsourcing prospects a strike of certitude as foreign businesses explore new avenues for growth.

## BRAZIL

**GDP (OFFICIAL EXCHANGE RATE): 1.3 trillion**

**EXPORTS: $159 billion** (transport equipment, iron ore, soybeans, footwear, coffee, autos)

**IMPORTS: $116 billion** (machinery, electrical and transport equipment, chemical products, oil, automotive parts, electronics)

**EXPORT TO U.S.: 17.8%**

**IMPORT FROM U.S.: 16.2%**

**2006 U.S. FDI: $33 billion**

Brazil's historically dominant commodity trades, notably in the agricultural and mining sectors, have played a major role in the development of the country's port infrastructure, which to date touts four ports – Tubarao, Itaqui, Santos, and Sepetiba – among the world's top 50 in terms of cargo volume.

As Latin America's largest economy continues to consume, and maturing domestic industries pave the way for emerging global import/export trade, airfreight traffic to and from Latin America is projected to grow at a steady clip. São Paulo/Guarulhos-Governor André Franco Montoro International Airport, which currently ranks 37th in the world and tops in Latin America in terms of air cargo tonnage, is positioned to play a major role in Brazil's long-term economic growth.

Sources: Airports Council International, CIA World Factbook, American Association of Port Authorities, and U.S. Dept. of Commerce Bureau of Economic Analysis

# ¿? Expert Advice

## In a recent conversation with *Inbound Logistics*, Latin America guru Marcio Stewart shares his insight on the region's growing prospects.

**IL: Mexico and the United States' economic ties are well-documented with NAFTA trade. South America has had less success with the Free Trade Area of the Americas (FTAA) negotiations. How has the fruition and failure of these respective trade agreements impacted economic development in Mexico and Brazil?**

**MS:** While NAFTA improved Mexico's entire logistics system, Brazil never went through this type of catalytic experience. Consequently, Mexico's logistics efficiencies are closer to the United States' than Brazil's capabilities. Whereas the cost of logistics as a percentage of GDP is around nine percent in the United States, in Brazil it's approximately 13 percent, while Mexico lies somewhere between the two.

Protectionism always produces a smaller, less-efficient market, where customers pay higher prices for inferior goods. Brazil has come to realize this and is gradually opening up its market selectively.

**IL: Are Latin American governments working with the private sector to subsidize transportation and warehouse infrastructure development and attract foreign direct investment?**

**MS:** The Mexican government is aggressively promoting public-private partnerships to build up its infrastructure – which is attracting interest from the United States and elsewhere.

For example, last April, Chinese Ambassador Yin Hegmin visited the State of Sonora to discuss potential investment in the Port of Guaymas. According to local authorities, its preferential location close to the United States and improved logistics systems enable goods to reach the United States with greater speed.

Mexico and China already have burgeoning trade in grains, minerals, and fisheries. China is looking to improve its access not only to the Mexican market, but to the United States through Mexico. Worried about bottlenecks in Los Angeles, China is seeking supplementary conduits.

Leonel Godoy Rangel, governor of the state of Michoacán, met with Carlos Slim – the richest man in the world, according to *Fortune* Magazine – to discuss infrastructure investments. The state presented two different projects to the Grupo Carso, owned by Slim. One deals with the state's plan for highways, the other for its airport.

Slim also might be interested in several projects, including an infrastructure expansion at the Port of Lazaro Cardenas.

**IL: In terms of transportation infrastructure, how are Mexico and Brazil getting up to speed in developing networks that can accommodate growing freight transportation needs?**

**MS:** Mexico is very proactive with its infrastructure development. The government will invest US $8 billion in its railway system, and use some of this money to improve railway connections between the United States and Mexico in the border areas of Nuevo Laredo and Tamaulipas.

Mexico is also looking at creating multimodal complexes beyond the 66 already in existence. The objective is to have 124 facilities up and running by 2012. The corridors between the port of Salinas Cruz and Manzanillo will be upgraded to improve logistics output to Asia.

From a maritime perspective, Mexico is accepting bids to construct specialized container terminals at the ports of Manzanillo and Lazaro Cardenas.

In Brazil, improvements also focus on facilitating major trade lanes. To accommodate demand for ore from Vale Mining Company's Carajas mine, the country will invest US $7 billion in rail and port facilities within the next four years; $4 billion to upgrade its rail network; and $3 billion to construct a new port in Ponta da Madeira to expand export capabilities from northern Brazil. This will allow Vale to double its yearly exports through these facilities to 200 million tons by 2012.

Recently, Petrobras, the Maggi group, and the Amazon state government jointly constructed a $125-million private container port in the Amazon at Porto Velho, where barges take containers to the coastal port at Itacoatiara.

Despite these improvements, Brazil, Mexico, and Latin America in general, are far behind developed countries in terms of road, rail, waterway, and air infrastructure.

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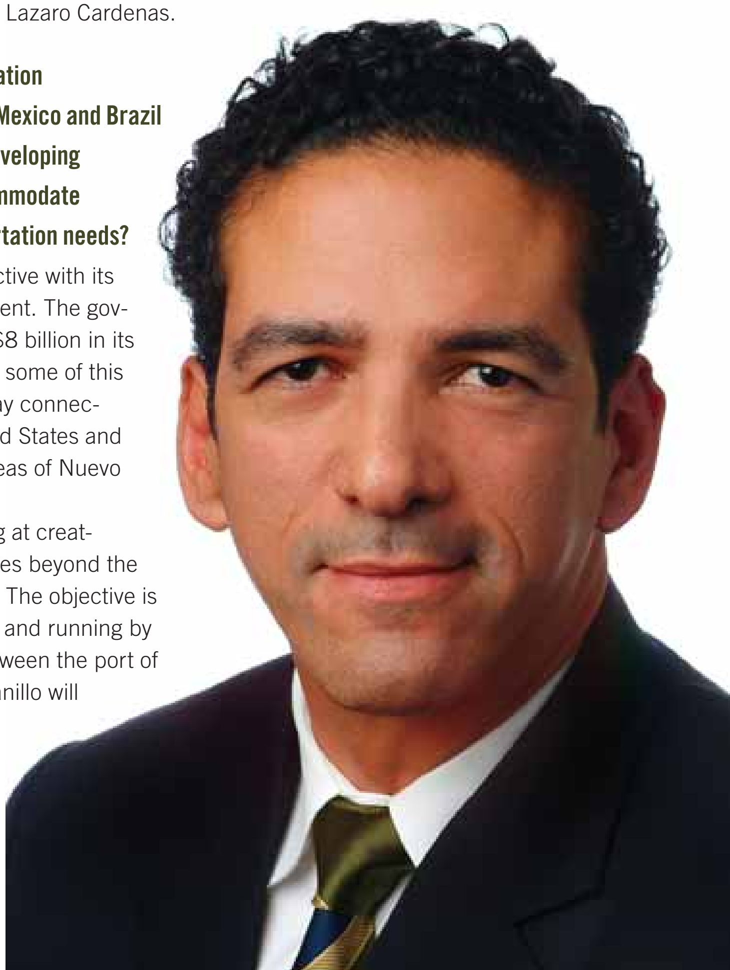
*Marcio Stewart runs AGI, a logistics market research company, and heads a collaborative group of Latin American logistics experts that contribute to www.latinamericanlogistics.org*




# Pilot Pen Notes the Write Way to Outsource

## To distribute its quality writing instruments in Mexico, Pilot Corporation of America relies on its 3PL not just for storage and transportation, but also a competitive edge.

Trumbull, Conn.-based Pilot Corporation of America, the U.S. subsidiary of Tokyo, Japan-based Pilot Pen, has maintained a U.S. operation since 1970. The company is authorized by its parent company to sell in the United States and in Mexico. Since 2000, Pilot Pen Mexico, a Guadalajara-based business unit of Pilot Corporation of America, has been purchasing products made at the U.S. company's manufacturing and distribution facility in Jacksonville, Fla., and arranging for their distribution in Mexico.

"We sell pens to Pilot Pen Mexico, which then sells the pens and makes its own profit," says Juan Estrella, director of supply chain for Pilot Corporation of America.

Pilot Pen does business in Mexico without dedicating major corporate assets to the market by relying on Miami-based 3PL Ryder to distribute its Florida-made goods south of the border.

The full line of Pilot Pen writing instruments spans 12 different categories, including a variety of pens and pencils, creative markers, highlighters, and a mixed bag of supplies including refills, lead, and erasers.

Only a limited portion of the Pilot Pen line is distributed in Mexico. For example, "we don't carry No. 2 pencils. We sell mainly refillable pens and markers," Estrella explains.

Equally focused is Pilot Pen's geographic concentration in Mexico. While it directs distribution operations throughout Mexico, the company's primary market is the capital, Mexico City. Other major markets for Pilot Pen products include Guadalajara and Monterrey.

The pen manufacturer contracts with Ryder to select Mexican ground transportation carriers and to provide additional operational support. Ryder is particularly careful about screening, selecting, and monitoring Mexican motor freight carriers

serving Mexico City. Pilot Pen depends on motor freight carriers "that can consistently deliver to Mexico City within a certain time window," Estrella says.

Pilot Pen began its relationship with Ryder in Mexico four years ago. The company had relied on another logistics company to handle product distribution in Mexico until it filed for Chapter 11. Ryder took over the lease on an inventory-handling facility in Guadalajara, signing new contracts with most of the former customers who moved merchandise through the facility, including Pilot Pen Mexico.

The transition to Ryder went smoothly. "We didn't want to diminish customer service," Estrella notes. "That's always the scary part of a transition, wondering how long you are going to be down. We weren't down at all."

In making the transition to Ryder, Pilot Pen protected the short-term stability of its operations and the long-term viability of its distribution cost structure in Mexico. Ryder maintained smooth shipping to key markets and integrated its management information system with Pilot Pen's at minimal business disruption.

Ryder handles order processing, customer service functions, inventory storage and management, and shipment tracking for Pilot Pen in Mexico. In addition, Ryder provides services related to importing U.S.-made Pilot Pen goods in Mexico. "We have our own import broker," Estrella explains, "but Ryder does the follow-up." This includes ensuring that extra import documents are provided, if necessary, and that import duties are paid promptly so products quickly clear Mexican customs processing.

All Pilot Pen products sold in Mexico pass through Ryder's warehousing and distribution facility in Guadalajara, where security is a top priority. "There's no pilfering in Ryder's facility; it does a good job securing the inventory," Estrella notes.

## WORKING AS ONE

Maintaining open lines of communication helps the partners keep things running smoothly. Pilot Pen and Ryder employees hold weekly meetings to fine-tune the distribution of Pilot Pen products in Mexico. Ryder works so closely with Pilot Pen in Mexico that customers tend to see them as one company. The Ryder manager who supervises its facility in Guadalajara, for example, responds to calls from Pilot Pen customers as if he were a Pilot Pen employee. "He answers the phone, 'Pilot Pen,'" Estrella says.

Ensuring order execution is critical to keeping major customers and attracting new ones in Mexico. "When Pilot went into Mexico, we guaranteed our service, as we always do," Estrella notes. "Our culture is: we're going to get the merchandise there, wherever the customer wants it."

This dependability has been crucial in dealing with larger retailers. Office Depot, one of Pilot Pen's largest customers in Mexico, insists on timely order execution, which Ryder has delivered.

With Ryder at its side, Pilot Pen hopes to capture the business of another U.S.-based retailer in Mexico: Wal-Mart. "We've been approaching Wal-Mart for a few years, and recently got some positive feedback," Estrella says.

Pilot Pen may have nowhere to go but up in Mexico, given its short five-year presence in the market. "We're still in the infancy stage there," Estrella notes.

Holding down distribution costs in Mexico is critical to accelerating its growth, so Pilot Pen works closely with Ryder to develop efficient ways to do business.

## MEXICO

**GDP (OFFICIAL EXCHANGE RATE): $886 billion**

**EXPORTS: $268 billion** (manufactured goods, oil and oil products, silver, fruits, vegetables, coffee, and cotton)

**IMPORTS: $279 billion** (metalworking machines, steel mill products, agricultural machinery, electrical equipment, car parts for assembly, repair parts for motor vehicles, aircraft, and aircraft parts)

**EXPORT TO U.S.: 85%**

**IMPORT FROM U.S.: 51%**

**2006 U.S. FDI: $85 billion**

Mexico's own meteoric rise as a back-door distribution hub for the United States' capacity-choked West Coast facilities is mirrored in the expected growth of the Pacific port of Lázaro Cárdenas. Hutchison Port Holdings, which operates the single-berth port that began operations in 2003, has big plans for the up-and-coming container facility. With phase one of redevelopment complete, future plans will expand the complex to four berths, with a continuous quay length of nearly 5,000 feet, and increase container throughput to more than two million TEUs a year.

Sources: Airports Council International, CIA World Factbook, American Association of Port Authorities, and U.S. Dept. of Commerce Bureau of Economic Analysis

One potentially money-saving idea under consideration would let Ryder handle Pilot Pen order-taking in Mexico. Currently, Pilot Pen Mexico inputs customer orders into its own IBM server, an AS400 system, and the orders are then transmitted in a transfer protocol designed specifically for Ryder's management information system. The partners may combine their systems to boost efficiency.

As Pilot Pen has become more comfortable working with Ryder, the pen manufacturer has begun to consider funneling customer orders in Mexico directly to Ryder. That step would free Pilot Pen to devote more internal attention to other operations. And that's exactly the kind of freedom a good partner provides.

# Latin American Beat

News and Trends Shaping a New World Order

**Benetton and Sears Mexico** have signed an agreement to expand United Colours of Benetton (UCB) in Mexico, extending the brand's presence with a total of 250 points of sale in both Sears Mexico department stores and new stores by 2010. Under the agreement, points of sale offering UCB fashion and accessories collections for women, men, and children will open in Sears department stores across Mexico. With the additional opening of 50 new UCB stores, Benetton Group will reach a total of 250 retail outlets in just three years, decisively expanding its presence in the country. Furthermore, Benetton is locating new offices in Miami to serve as regional headquarters, and monitor the market and identify business opportunities in the Americas. The Miami branch will also establish a sourcing hub to serve the whole area, distributing, among other things, collections designed specifically for the region.

In an effort to tap growing global consumer markets and scale back growth in the United States, **Starbucks** recently opened its first store in Argentina. The Seattle-based chain plans to debut as many as four stores in Argentina by year's end. Starbucks already has coffee shops in seven Latin American countries including neighboring Chile and Brazil.

**Lakeland Industries**, a Ronkonkoma, N.Y.-based protective apparel company has completed the acquisition of Brazilian protective apparel supplier Qualytextil S.A. in an effort to sell directly into the country. Qualytextil markets products directly to major state-owned companies and agencies and the main oil and chemical companies in Brazil. As the latest addition to Lakeland's expanding international presence, Qualytextil's regional Brazilian operations, including manufacturing, sales and marketing, warehousing, and distribution, benefit from state-provided tax incentives, favorable labor rates, and proximity to economical transportation for garment distribution throughout Brazil and into neighboring countries.

Responding to strong demand from European and Latin American airfreight customers, **Panalpina** has launched a new service called Palmair. Using the Miami gateway, the Swiss forwarder offers a direct transshipment concept for destinations in Latin America in cooperation with its long-standing partner Centurion Air Cargo and a sub-contractual agreement with Cargolux. The two companies have established a link between Latin American connections, their European road feeder network, and Cargolux's Luxembourg hub. This setup gives Panalpina total control of the cargo flow from origin to destination. The service covers Bogotá, Medellin, Barranquilla (Columbia), Caracas (Venezuela), Lima (Peru), and Manaus (Brazil), among others.

**Temasek**, Singapore's state investment company, is targeting Latin America and the fast-growing economies of Brazil and Mexico in its latest phase of global expansion. The group, which holds stakes in both Merrill Lynch and Barclays, has targeted the Latin American region because of its long-term potential and attractive investment prospects. With more than 75 percent of its current investments based in Singapore and Asia, Temasek has switched its attention to the West as the credit crunch offers more opportunities for sovereign wealth funds.

**Ford Motor Company** announced its new Ford Fiesta small car and a sporty European hatchback model for North America sales would be produced at the company's Mexico City plant beginning in early 2010. Transformation of the Cuautitlan assembly plant near Mexico City begins this year as the facility transitions from its current production of F-Series pickups for the Mexican market to small cars for all of North America. Ford's Chihuahua Engine Plant, which builds I-4 engines, will also expand to assemble diesel engines for light- and medium-duty trucks in global markets. And, through a joint venture with German transmission manufacturer Getrag, Ford will set up a transmission plant in Guanajuato to support various products.

**Australia and Chile** have negotiated a free trade agreement (FTA), covering all agricultural products including Chile's most sensitive commodity, sugar. Government authorities expect to sign the FTA in late summer with the legislation to enter into action Jan. 1, 2009, pending ratification. Under the agreement, all existing trade will be liberalized by 2015. Two-way trade between Australia and Chile is currently more than $850 million annually and Australia has invested US $3 billion in Chile. This is Australia's first FTA with a Latin American country and augurs further trade growth between the two regions.

# LEARNING FOR LIFE

## Logistics professionals who pursue continuing education keep up with industry innovations and move ahead in their careers. by Tamara Chapman

Logistics and supply chain management is a rapidly changing landscape that will present increasingly complex challenges. To meet those challenges, logistics professionals need to stay on top of trends and ahead of the curve. They need to understand their own corporate realm and the greater context in which they work. They need to be generalists and specialists, critical thinkers and problem solvers.

They need to be lifelong students.

Logistics professionals face career stagnation if they fail to keep learning. What's more, they could compromise the performance of their companies and the health of the U.S. economy, says Abe Eshkenazi, CEO of APICS The Association for Operations Management.

Ongoing training is so important that Eshkenazi ranks it first among his top five tips – before networking, developing expertise, sharing information, and taking pride in work – for how supply chain professionals can succeed in today's economy.

Continuing education is especially critical now that the economy is faltering, Eshkenazi adds. If businesses are to innovate and increase efficiency, they need educated professionals poised to harness new technology and implement new strategies.

"Professional development gives companies a competitive edge," he says. "Organizations that invest in training their employees tend to be more successful than those that don't."

Nonetheless, professional development budgets are often at risk when business declines.

"When manufacturing companies hit tough economic times, they tend to cut back on discretionary spending," Eshkenazi says. "They complain that trained employees become more knowledgeable, build their resumés, and go job hunting. But the flip side is, employees who are not trained, stay."

And that could subject the company to substandard performance.

Like Eshkenazi, Frank Breslin, dean of the New Jersey-based Institute for Logistical Management (ILM) sees professional development as an imperative for the logistics segment, noting that ILM enrolls students from more than 40 countries. Each of them will put their new knowledge and skills to work for their employers, making the marketplace that much more competitive.

"The thirst for logistics knowledge and skills is more critical today than ever before," Breslin says, "and it will continue to increase exponentially."

To quench that thirst, logistics professionals can dip into an increasing variety of opportunities. Their options range from hour-long brown-bag webinars hosted by trade associations to long-term university-level certificate programs that build expertise while providing resumé credentials.

Students can take courses at night, on weekends, online, or in traditional classrooms–whatever suits their learning styles and accommodates their busy schedules. Students can even mix and match, opting for what Eshkenazi calls "a blended learning opportunity," in which, say, an online course is complemented by an on-site workshop that affords the chance for students and teachers to troubleshoot scenarios.

Trade associations cater to those who need maximum flexibility, providing a wide array of schedule-sensitive education opportunities. Developed in response to member needs, much of the programming is application-based training that can be put to immediate use.

In contrast, university programs emphasize the theoretical foundation and big-picture framework necessary for strategic thinking and planning. In classroom programs, students should look not just to their instructors but also to their peers for advice, insight, and access to opportunities. Continuing education classes are filled with working professionals whose on-the-job experiences are as instructive as any textbook.

### Learning Beyond the Classroom

Greg Shelton, managing director of the University of Washington's global supply chain management program, encourages his students to rely on one another for information, and they often go beyond the classroom to do so. For example, one student, a supply chain manager for Boeing, arranged a tour of the 777 aircraft assembly line for his classmates–a learning opportunity that didn't appear on the syllabus but translated into new insight.

Continuing education students sometimes make the mistake of delaying–by months or even indefinitely–the deployment of new knowledge and skills.

"Start applying some of the concepts while the training is still in session," Eshkenazi advises. That way, students can consult the instructor if they don't get the expected result or problems arise.

While professionals in logistics programs may not apply all their new knowledge right away, they will be able to contribute to discussions about company performance and strategies. "They might be able to keep their company from repeating mistakes made by others," Shelton says.

Breslin reminds students that knowledge is power–power they can harness for the benefit of their careers and companies.

Read on to learn how logistics professionals Dana Regan, Joe Payne, and Thomas Jermann are making the most of continuing education.

# DRIVEN TO LEARN

**Logistics professionals who want to continue their educational journey have plenty of career development paths to choose from. Here are just five of many routes to success.**

**Institute for Logistical Management:** In operation since 1923, the Institute provides distance and online programs that span transportation, logistics, and supply chain management. Its Certified Logistics Practitioner program covers topics such as systems analysis and hazardous materials compliance. Because content is delivered over the Internet or via correspondence materials, course work is portable, and students can do their work at home or while traveling.

**APICS The Association for Operations Management:** This education-focused association offers conferences, workshops, self-study programs, and three certification programs that help students leverage best practices. Professionals who don't have time to take a full class can participate in one-hour webinars on subjects of interest. A recent APICS webinar, for example, explored the ramifications of peak oil prices on the global supply chain.

**The American Society of Transportation and Logistics (AST&L):** AST&L's programming, including three certifications, supplements undergraduate degrees. Demand led the AST&L to add a Professional Designation in Logistics and Supply Chain Management (PLS). To accommodate different learning styles and crowded schedules, its programs may be self-directed, instructor-led, or delivered to a corporate group.

**The Council of Supply Chain Management Professionals (CSCMP):** CSCMP presents workshops on everything from fundamentals to emerging challenges. The CSCMP University provides 40 online stand-alone self-study courses that address skill and knowledge deficiencies, and CSCMP's "conference-at-a-click" programming gives logistics professionals access to the educational sessions presented at its annual conference.

**The University of Washington in Seattle:** UW sponsors a certificate in global supply chain management. Program participants take classes alongside graduate business and engineering students to learn about intermodal freight; environmental and energy concerns; and the legal, regulatory, and technological infrastructures that facilitate global commerce and transportation.

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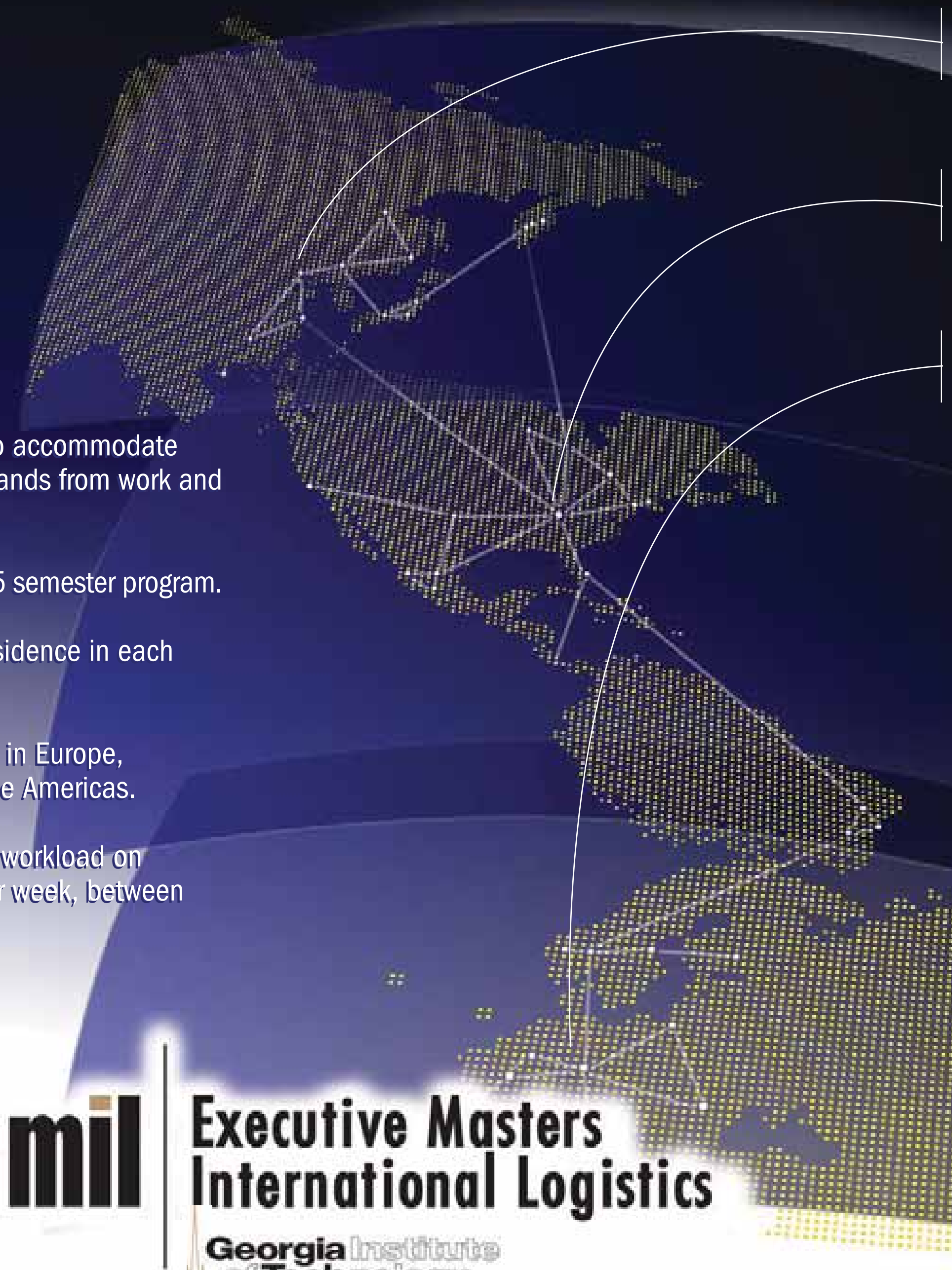


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LEARNING FOR LIFE

# DANA REGAN

## Certification Jump-starts a Budding Career

When Dana Regan graduated from Villanova University with a double major in accounting and marketing, her degree provided the perfect ticket to a decent first job.

Today, the 25-year-old is counting on a certificate in transportation logistics to pave the way for success in her second job.

That job–which she expects to keep indefinitely–is with the firm her father founded, TranzAct Technologies Inc., an Elmhurst, Ill.-based, privately held company specializing in logistics management solutions. At TranzAct, Regan divides her time between operations and sales in the truckload brokerage department.

With her father, Michael, serving as TranzAct's CEO and chairman of the board and her mother, Jean, as company president, Regan has had ample opportunity to boost her business expertise simply by attending family dinners. Fittingly, it was her parents who urged her to pursue additional education.

Regan

**"I'm a classroom person. I like having access to an instructor and resources."**

— Dana Regan

After exploring her options, Regan enrolled in a certificate program managed by the American Society of Transportation and Logistics (AST&L). The certificate is awarded to students who successfully complete six out of eight modules on international transportation, logistics, and supply chain management.

"My dad is involved in AST&L, and when I joined TranzAct, he encouraged me to earn this certificate," Regan says. She has been working on the certificate for nearly two years and expects to finish in fall 2008. During that time, she says, she has acquired a broader view of the industry, one that helps her understand the context shaping day-to-day business realities. For example, a study of the TranzAct books might reveal that truck traffic peaks in one season and slows in another. "But on the job," she says, "you don't learn what causes those peaks and valleys."

Regan opted to earn her certification by taking intensive all-day classes offered in weekend sessions at the University of North Texas, Dallas. She prefers this concentrated experience to the alternatives–night classes, occasional seminars, or self-paced sessions with textbooks and workbooks. "I'm a classroom person. I like having access to an instructor and resources," she explains, noting that the out-of-town location allows her to escape the demands of her job and concentrate fully on the course content.

At a recent computer-based session on logistics analysis, for example, she was able to ask the instructors to help her over some hurdles. “It was great because the resources were at my fingertips, and the instructors walked me through my questions,” she recalls. Because the session lasted several hours, Regan was able to absorb and process the information thoroughly.

And that meant she was able to put her new knowledge to work almost immediately. In fact, Regan says, her freshly honed data-analysis skills make her a more confident and informed sales associate. When she can analyze a potential client’s logistics data and show, numerically, how a partnership with TranzAct can increase profitability, decision makers take notice. “People are motivated by numbers. Presenting hard data is more persuasive than vague offers of cost-savings,” she explains.

As much as she has benefited from the instruction, Regan has also learned from her classmates, many of whom have more experience and are willing to stay in touch by email. That translates to networking opportunities and troubleshooting resources.

Thanks to her instructors and classmates, Regan believes she has a better grasp of the family business and a deeper understanding of the logistics world. Armed with that knowledge, she’s ready to make the most of her second job.

## JOE PAYNE

### Educational Resources Help Meet Expected and Unexpected Challenges

Joe Payne of Birmingham, Ala., started his career at a sizable retail chain. “That ballooned into warehousing and supply chain management,” he recalls.

Since then, Payne has consistently continued his education. He’s had to because, “every day I’m challenged with something new,” he says.

Currently, the 40-year-old Payne works as an operations quality representative in Alabama and Mississippi for CHEP, an international firm that issues, collects, repairs/washes, and reissues more than 250 million pallets and containers from a global network of service centers.

Before joining CHEP, Payne worked as a senior account representative for a trucking company. While there, a number of career opportunities surfaced, and he knew that if he wanted to take advantage of them, he needed to supplement his bachelor’s degree in logistics and his associate’s degree in liberal arts with additional education.

> “Every day, I’m challenged with something new. I needed textbook knowledge as opposed to hands-on knowledge.” — Joe Payne

To help him better understand the ever-changing nature of the logistics business, Payne turned to the Institute of Logistical Management, where he completed the coursework to become a Certified Logistics Practitioner (CLP). “I needed textbook knowledge as opposed to hands-on knowledge,” Payne says. What’s more, he wanted to understand the methodology behind his company’s practices.

The ILM certification program requires that students complete instruction in four core areas: transportation systems; transportation management; business logistics systems analysis; and business logistics principles. Elective courses cover the gamut from warehousing management to global transportation.

Payne completed the self-paced correspondence program in about 18 months, poring over study guides and workbooks at night and on weekends. Given the number of questions that arose while studying, Payne would have preferred the one-on-one contact and peer exchanges associated with classroom instruction. But the program’s distance and format didn’t stop him from seeking out interaction with his instructors. When he had a question, he e-mailed or called ILM. Generally, an instructor contacted him within 24 hours, and over the course of a phone call, Payne could pose his questions and get answers. Payne still calls ILM with questions. As an alumnus of the program, he’s referred to experts and resources that can help him research current issues.

Over the years, Payne has made continuing education a habit. A member of the American Society of Quality and the Society of Industry Leaders, he relies on professional organizations to provide the courses and materials that add to his knowledge and understanding. “Education is an ongoing process,” he says, one that helps him meet the expected and unexpected challenges of his job.

Payne’s next challenge? If there’s a course on converting pallet construction waste into an alternative fuel, sign him up.

# THOMAS JERMANN

## Going the Distance With a Certificate Program

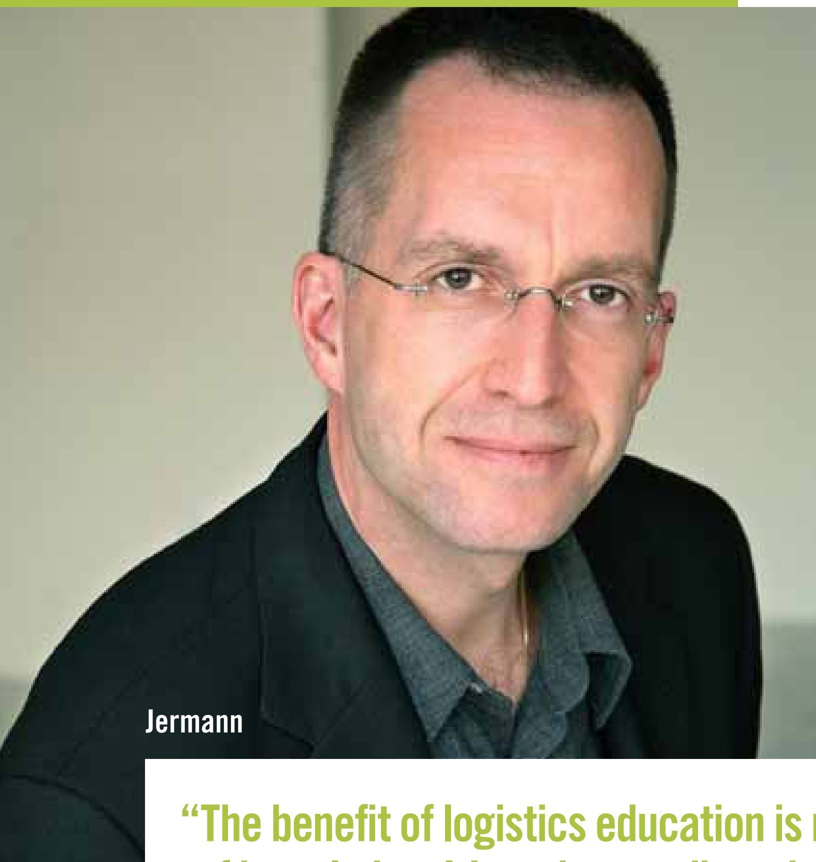
More than 20 years into his continent-spanning career in transportation, Thomas Jermann decided it was time to complement his extensive on-the-job experience with some classroom time.

To acquire in-depth insight into the changing nature of the global supply chain, the Seattle-based Jermann enrolled in a certificate program offered by the University of Washington's extension program. With two classes under his belt and the third required course currently underway, Jermann considers the effort a career-enhancing, perspective-expanding experience.

A native of Switzerland, the 47-year-old Jermann got his start in the transportation business with Basel-based Danzas Corp., an international 3PL specializing in logistics solutions. With Danzas, Jermann developed expertise as a traffic and tariff analyst and as an internal auditor, working out of various European offices and soaking up the intricacies of transportation and logistics.

"When Danzas bought a company in the United States, it sent me here to do due diligence," Jermann recalls. That was in the early 1990s, and since then, Jermann has lived in the Seattle area. In 2001, he left Danzas to work for American Fast Freight Inc., where he stayed until March 2008, when he joined Expeditors as an internal audit manager.

Operating under the assumption that the broader his view of the industry, the better his ability to do his job, Jermann sought a way to expand his knowledge base. The best way to do so–"short of switching jobs," he jokes– proved to be a program that would address the complete global supply chain–from forecasting and procurement to inventory management and lean manufacturing practices. The University of Washington extension program has given Jermann the mix of general and in-depth knowledge he wanted.


Jermann

"From a professional point of view, the benefit is more than acquiring a broader base of knowledge," he says. "It's understanding what a supply chain manager faces and why so much emphasis is placed on transportation quality. That was an 'aha' moment for me."

Other insights will help him execute his responsibilities at Expeditors. The program's analysis of data security and data integrity questions, for example, ties directly to Jermann's auditing role.

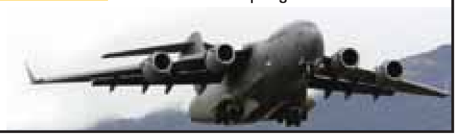
The program also offers an overview of sustainability and resilience topics, as well as insight into the challenges posed by global warming. Logistics professionals mindful of these issues regard their businesses as key components of larger systems that are vital to the economy and to the societies in which they operate.

Perhaps the best benefit, Jermann says, is the education environment's emphasis on openness to change and adaptability. His months in the classroom have reminded him to keep his antenna tuned to new possibilities.

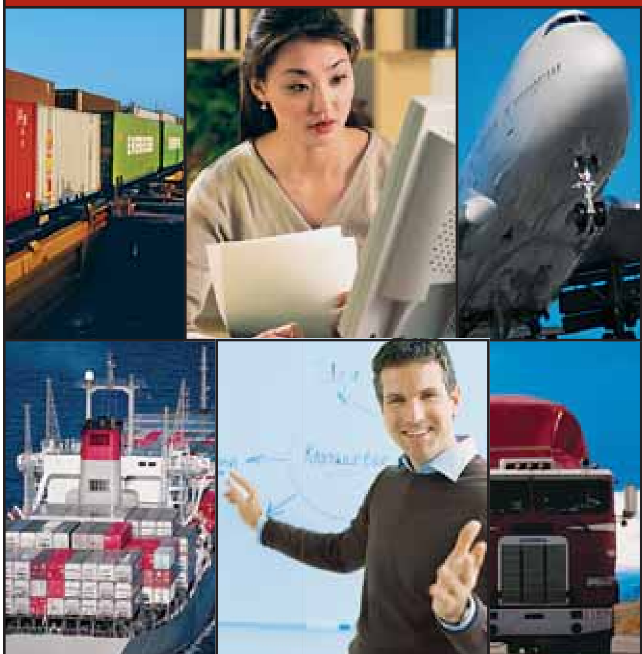
**"The benefit of logistics education is more than acquiring a broader base of knowledge. It's understanding what supply chain managers face and why so much emphasis is placed on transportation quality."** — Thomas Jermann



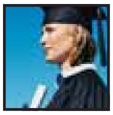












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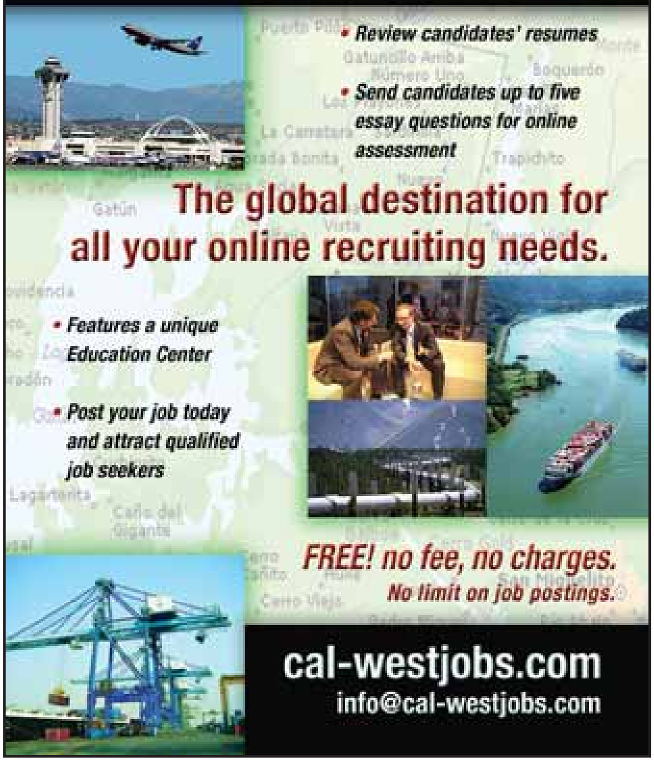


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# L.I.T. TOOLKIT

by Merrill Douglas

## Yard Guard

Armed with a powerful visibility tool, Continental Tire North America keeps watch over its trailers.

Even a robust supply chain can suffer from a missing link. For many distribution centers, this troublesome gap appears the moment a truck drops off a trailer in the freight yard and pulls away.

From that point, the carrier no longer is liable for the freight inside the box. But the customer only starts managing the content when the warehouse receives it. In the meantime, the loaded trailer sits on the yard, possibly among hundreds of others, and sometimes nobody knows where loads are parked.

"Some companies try to manage $20 million worth of inventory using a clipboard and a yellow pad," says Jim Harris, president of Cypress Inland Corp., the Houston area-based developer of the *YardView* yard management system.

Along with the freight inside them, trailers are assets that companies must manage. An information gap in the yard can cost dearly in trailer detention charges. When a carrier drops off a trailer, it may allow a company to hold it in the yard free of charge for a day or two. After that, the longer the company keeps the trailer, the more it must pay. A company that doesn't have reliable data on the status of trailers in its yards could rack up thousands, or even millions, of dollars per year in fees.

Continental Tire North America, headquartered in Charlotte, N.C., knows exactly where its freight trailers are and how long they've been there. Since the company implemented *YardView* last year, it is able to track the status of equipment in the yards at factories and distribution centers in the United States, Canada, and Mexico.

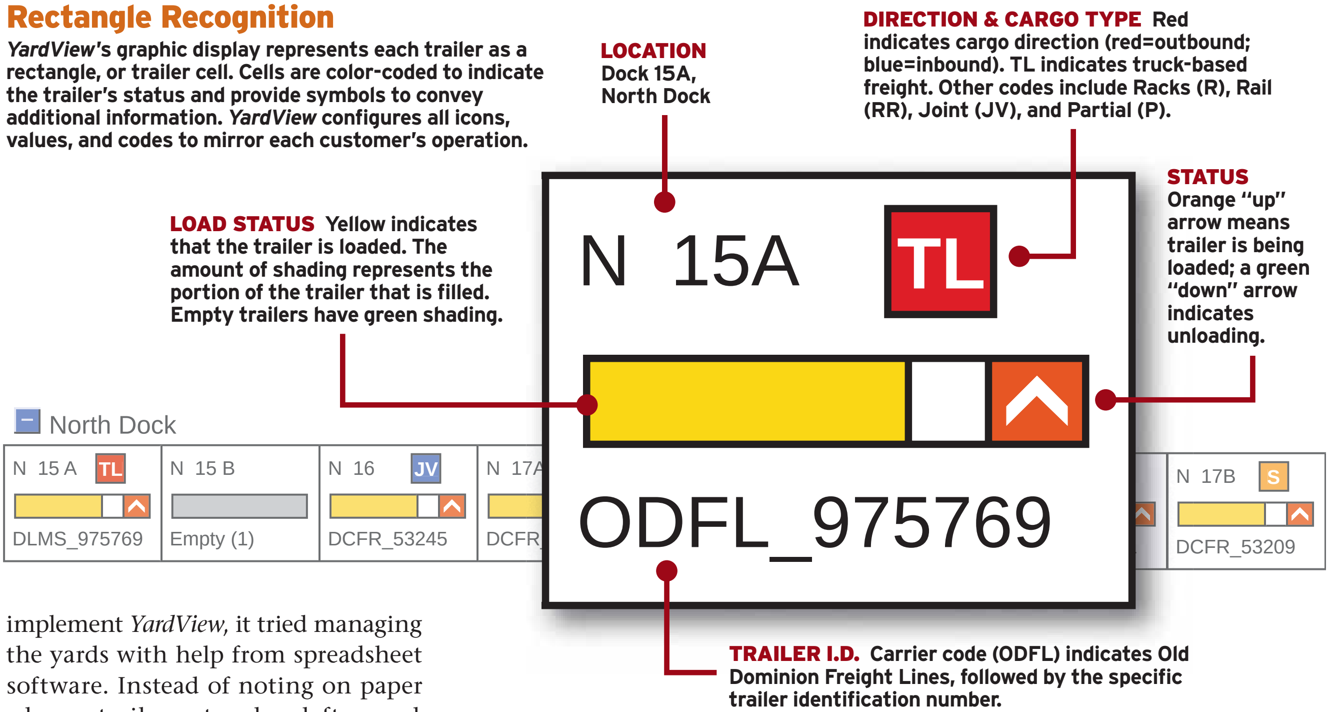
Continental Tire North America is part of Continental AG, a global supplier of tires and automotive components based in Hannover, Germany. The North American division makes a variety of vehicle tires, selling them to both original equipment manufacturers and aftermarket suppliers. The company manufactures in Charlotte, Mt. Vernon, Ill., and San Luis Potosi, Mexico, and operates DCs covering all regions that are part of the North American Free Trade Agreement (NAFTA).

Before the company decided to

CONTINUED FROM PAGE 87

## Rectangle Recognition

***YardView*'s graphic display represents each trailer as a rectangle, or trailer cell. Cells are color-coded to indicate the trailer's status and provide symbols to convey additional information. *YardView* configures all icons, values, and codes to mirror each customer's operation.**




implement *YardView*, it tried managing the yards with help from spreadsheet software. Instead of noting on paper when a trailer entered or left a yard, someone entered the information on a spreadsheet.

One problem with spreadsheets is that they're difficult to share, which makes it hard to ensure that everyone is looking at the most up-to-date information. As trailers roll in and out of a yard, a guard might enter data on one spreadsheet. Meanwhile, as dock workers load and unload trailers, an office employee might enter data on a different spreadsheet.

Continental was still using spreadsheets in its yards when distribution center analyst Adam Sepanski arrived in 2006. The company created his position so he could work on ways to reduce detention charges. By then, officials already had decided to replace the spreadsheets with a complete yard management solution.

*YardView*'s graphic display uses rectangles to represent trailers and their locations, color-coding them to indicate their status–empty or loaded, waiting to be loaded or unloaded, or in the process of being loaded or unloaded (*see illustration above*). By clicking on individual trailers and calling up various reports, users can learn what's going on in the yard–for example, the contents of a specific trailer, the locations of all empty trailers belonging to a certain carrier, which trailers are waiting to be unloaded, and which have been in the yard for more than 24 hours.

### THE LAY OF THE LAND

Continental implemented *YardView* in the spring of 2007, soon after Sepanski joined the firm. Getting it up and running was simple, he says, but the main task was explaining various yards' layouts to Cypress Inland. "We had to set up a strategic structure for shipping locations," he says.

Developers also needed a list of the company's carriers. It took about two hours to relay the information Cypress Inland needed to configure the software to Continental's requirements.

As part of the *YardView* setup, the user also defines the roles of different people on the system and the activities that each one is allowed to conduct.

"For companies with a well-defined yard process, configuring the software happens quickly," Harris says. Often, though, companies don't have delineated procedures for managing their yards. "Usually, installing *YardView* is the first time everybody's had to agree on how they operate," he says.

Companies can run *YardView* on their own hardware or have Cypress Inland host it for them. Continental Tire uses the hosted solution to manage outbound trailers at its factories and both inbound and outbound trailers at the eight North American DCs.

The primary users are security guards, who enter data in the system each time a trailer enters or leaves a yard. Also, as yard spotters move trailers from one location to another, they use walkie talkies to report those moves to the facility's office, where a worker enters data about the move. At the Mt. Vernon plant, Continental spotters use PCs installed in yard tractors to enter data about moves.

Sepanski uses *YardView* to run reports on the status of trailers in all the company's yards. He uses the reports during weekly conference calls with facility managers, identifying trailers that need quick attention. He also runs a report on the past week's activities so he can evaluate each yard's performance.

## AUTOMATED AUDITS

Continental originally implemented *YardView* as a stand-alone system, but now it's working with Cypress Inland to create interfaces to its transportation management system (TMS), enterprise resource planning (ERP) system, and freight payment provider's software. This integration will allow the freight payment provider to audit detention charges just as it does other charges on freight invoices.

The freight payment service currently can't audit a detention charge automatically because the carrier doesn't calculate the charge until the trailer leaves the yard. For every charge, a Continental employee has to check *YardView* to make sure the carrier and the software agree on how long trailers stood in the yard.

With the interfaces in place, the ERP system will use data drawn from the TMS and *YardView* to calculate detention charges. "Then it will transmit the information to our freight payment provider so it can automatically verify the charges, the same way linehaul shipments are verified," Sepanski says.

When this project is complete, yard managers also will be able to view real-time information about their trailers, color-coded to indicate costs.

"If a trailer is incurring us money, it will appear as a red box on the screen. If it's about to incur us money, it will be yellow. Otherwise, it will be green and blue," Sepanski says.

Even without that interface, *YardView* is already saving money for Continental. The software has increased administrative efficiency because Sepanski no longer has to comb through spreadsheets to cull the data he needs. "It has also saved our carriers a lot of headaches," he says. "They can log in and see their trailers without having to call us."

Besides giving carriers log-in privileges on the system, Continental also provides access to a customer in Canada that sends its own trailers to be loaded. "Instead of faxing forms back and forth with handwritten data, they can log into *YardView* and see a report of what trailers are loaded, their internal bill of lading numbers, and when they left the yard," Sepanski says.

Using *YardView* to close the information gap in Continental's freight yards has netted a big improvement over the old days of paper logs and spreadsheets. "It has changed our system from a manual-based structure to a technologically advanced reporting system," Sepanski says. "And it has saved a lot of time and money." ■

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National Air Cargo can deliver the world to any doorstep. Our integrated fleet and experience permit us to chart the shortest logistics route for your shipment until it reaches its destination, all along assuring that there's no delay, diversion, or misplacement. Whatever the cargo, it will be delivered on time, every time. That's what you can expect and that's what you will receive from National.


### Pilot Freight Services • www.pilotdelivers.com

Pilot Freight Services, one of America's largest independent transportation and logistics companies, provides a full range of domestic and international air, land, and sea capabilities. Our 65 North American locations offer customizable services with a personal touch, and are complemented by a worldwide network of partners, assuring pick-up and delivery to over 190 countries worldwide, 24/7. Contact 1-800-HI-PILOT or www.pilotdelivers.com

IN THIS SECTION:
# Economic Development • Education

## ECONOMIC DEVELOPMENT


### Hartz Mountain Industries, Inc. • www.hartzmountain.com

Hartz Mountain Industries, Inc. owns 22 million square feet of industrial and warehouse space within 10 miles of New York City, the ports, and Newark Airport. Between 25,000 and 325,000 square feet are immediately available. Hartz Mountain Industries is New Jersey's largest real estate developer. For leasing information, contact: Ernie Christoph, ernie.christoph@hartzmountain.com, 201-272-5201, or Charlie Reese, charlie.reese@hartzmountain.com, 201-272-5202.

## EDUCATION

### American Military University
**www.amuonline.com/transportation-logistics**


Earn a Transportation and Logistics degree 100-percent online at the American Military University. Transportation management and logistics planning are at the very core of manufacturing, retail, recreation, and the safeguarding of our national security and American foreign policy. Online, students will learn the cutting-edge processes, companies, and standards associated with transportation and logistics management. To learn more about career opportunities for students in the field of transportation, please visit the Web site, email info@apus.edu, or call 1-877-777-9081.


### Georgia Institute of Technology • www.isye.gatech.edu

The School of Industrial and Systems Engineering (ISyE) at the Georgia Tech College of Engineering is the largest academic program of its kind in the United States. With nearly 65 tenure-track faculty, ISyE is able to support not only a broad spectrum of academic concentrations but, importantly, several that have achieved world-class rank. Though the school functions administratively as a single cohesive unit, some of its sub-disciplines or academic specialties are so large and concentrated, they could be legitimately viewed as academic departments in their own right. Visit ISyE's Web site to learn about academic programs, research, students and faculty, and news and events.

### University of Michigan Ross School of Business
**www.bus.umich.edu/mscm**


The Ross School of Business' one-year Masters Program in Supply Chain Management (MSCM) provides a distinctive educational experience and unsurpassed preparation to assume a leadership role in supply chain management. Ross' MSCM program combines a comprehensive SCM curriculum, business electives, and extensive contact with SCM leaders. As a real-time complement to coursework, students consult for actual corporations to deliver data-driven solutions to real business issues. For information, contact us at 734-647-1396 or visit us on the Web.

# WEB_CITE CITY

www.inboundlogistics.com/web_cite

IN THIS SECTION:
**Global Trade/Logistics–Site Selection**

## GLOBAL TRADE/LOGISTICS


**Precision Software • www.precisionsoftware.com**

Established in 1984, Precision Software, a wholly owned subsidiary of QAD Inc., develops industry-leading global transportation, parcel, and desktop shipping software that allows companies to optimally manage their supply chains. Precision Software's integrated suite of logistics and visibility solutions increases supply chain velocity, improves profitability, and maximizes control of goods as they move throughout the organization and around the world. Precision Software's customers span multiple verticals including life sciences, consumer packaged goods, retail, industrial products, food and beverage, third-party logistics providers, and freight forwarding. For more information about Precision Software, visit www.precisionsoftware.com or email info@precisionsoftware.com

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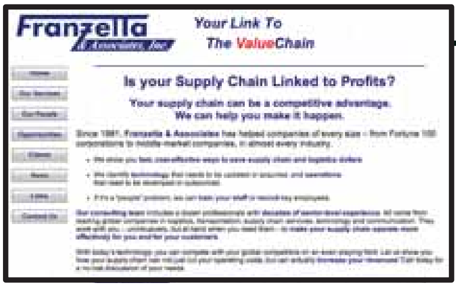
## RECRUITING




**Franzetta & Associates, Inc. • www.franzetta.com**

Franzetta & Associates, Inc. is an all-encompassing supply chain consulting firm. One of the services we provide for our clients is specialty-focused recruiting. Through the years, our impressive list of clients includes Fortune Top 10 as well as mid-market and small firms. We know the business and understand your needs. We have access to many top-notch logisticians, and will be able to more than accommodate your requirements. We nurture close relationships with both our clients and recruits to ensure success for both. E-mail: resumes@franzetta.com or call 814-466-9010.

## SITE SELECTION

**Greensboro Partnership • www.greensboro.org**

The Greensboro Chamber of Commerce is a member of the Greensboro Partnership, united with Greensboro Economic Development Alliance, and Action Greensboro to form a more powerful voice for business growth and advocacy, entrepreneurial development, urban livability, and economic development. For over 125 years, the Greensboro Chamber has been dedicated to building relationships, building business, and building success for companies in the Greensboro area. For information on site selection opportunities in Greensboro, visit this Web site.

IN THIS SECTION:

# Site Selection–Warehousing

## The Netherlands • www.nfia.com/logistics

There's no better way to access Europe than through its front door – The Netherlands. Its strategic location, market proximity, highly developed transport infrastructure, and efficient customs, logistics, and transportation professionals will help expedite your company's success. For more information, contact the Netherlands Foreign Investment Agency.


## TVA Economic Development • www.tvaed.com

TVA's GIS-based Web site helps businesses and site selection consultants identify the best properties available in the 80,000-square-mile TVA region. Search for available properties and buildings, find demographic data, and download maps at TVAsites.com. Your source for economic development information and services in the seven-state TVA region is TVAed.com.

# TMS

## Precision Software • www.precisionsoftware.com

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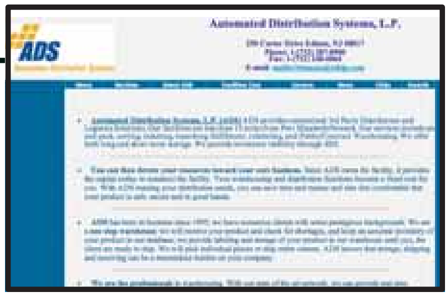
# WAREHOUSING




## Automated Distribution Systems • www.adslp.com

Automated Distribution Systems (ADS) is an award-winning, full-service 3PL provider offering public and contract warehousing and distribution services designed to move your product with maximum speed and accuracy. ADS has received *Warehousing Management*'s Warehouse of the Year award and *Inbound Logistics*' Top 100 3PL Providers award. ADS has the cutting-edge technology, extraordinary flexibility, and high level of expertise required to solve any logistics challenge. Visit www.adslp.com or call Bruce Mantz at 732-287-8900 x201.

# TECHUPDATE

## THE LATEST | IN LOGISTICS TECHNOLOGY


### FastPic Systems

**WHAT'S NEW:** Updated inventory management software.

**THE VALUE:** The *FastPic4* application displays a photo of the item the operator is required to pick, increasing accuracy rates. For replenishing inventory, this feature can be used to visually verify SKUs, increasing operator productivity by eliminating the need to verify part numbers.

www.fastpicsystems.com
✆ 207-854-8663

## software

### Raymond Corporation

**WHAT'S NEW:** A lift truck fleet management solution.

**THE VALUE:** The *iWarehouse* system allows warehouse and distribution center managers to collect and analyze real-time lift truck data to maximize fleet productivity and reduce costs. They can use the information to generate reports and benchmark lift truck and operator productivity; diagnose potential lift truck issues remotely; reduce the risk of impacts; and optimize lift truck capital and maintenance costs.

www.raymondcorp.com ✆ 800-235-7200

### McLeod Software

**WHAT'S NEW:** An updated TMS.

**THE VALUE:** Enhancements to version 9.0 of McLeod's *LoadMaster* software include the ability to view available credit information on the customer and order entry screens; filter late status information by driver, route, or dispatcher; create trailer detention reports to assist in negotiating rates and billing customers based on dropped days past the free-day limit; indicate whether customers allow their freight to be brokered; and generate payments directly to a vendor's checking account.

www.mcleodsoftware.com ✆ 877-362-5363

### Navman Wireless

**WHAT'S NEW:** A new version of vehicle tracking and logistics software.

**THE VALUE:** The *OnlineAVL2* solution includes an integrated maintenance module that tracks user-defined data, such as service date, time, cost, and provider, and alerts the fleet manager to service needs according to pre-set warning periods. The feature reduces downtime caused by breakdowns and other unforeseen mechanical problems resulting from neglected repairs. Other highlights of *OnlineAVL2* are new state mileage tracking and automated email reporting.

www.navmanwireless.com
✆ 866-527-9896

### OATSystems

**WHAT'S NEW:** A new RFID management platform.

**THE VALUE:** *OATenterprise* provides a single dashboard for deploying, monitoring, and optimizing processes, data, devices, and workflow rules. Real-time process management enables

To learn more, contact these companies directly. Remember to mention this issue date and page to get the right information.

companies to track orders, assets, and equipment, and address exceptions at any stage of the process, at any location.

www.oatsystems.com ✆ 781-907-6100

## SAP

**WHAT'S NEW:** Enhancements to the governance, risk, and compliance product.

**THE VALUE:** The new enhancements help shippers streamline cross-border trade and more quickly comply with new trade and safety regulations.

www.sap.com ✆ 800-872-1727

# hardware

## Pepperl+Fuchs

**WHAT'S NEW:** A handheld bar-code reader.

**THE VALUE:** The lightweight MAH120 handheld bar-code imager offers industrial quality and reads all popular 1D and 2D bar codes and more than 30 other formats. It is suitable for production work-in-process, point-of-sale, inventory management, supply chain functions, and point-to-point logistics. The MAH120 can withstand multiple drops of six feet, and provide reliable operation in 32° to 122° F temperatures.

www.am.pepperl-fuchs.com ✆ 330-486-0001

## Alien Technology

**WHAT'S NEW:** A high-performance integrated circuit (IC) for passive RFID tags.

**THE VALUE:** The H3 IC provides unique tag identification and extended memory capabilities required for secure tracking of high-value assets such as electronics, pharmaceutical drugs, and wines and spirits.

www.alientechnology.com ✆ 408-782-3900

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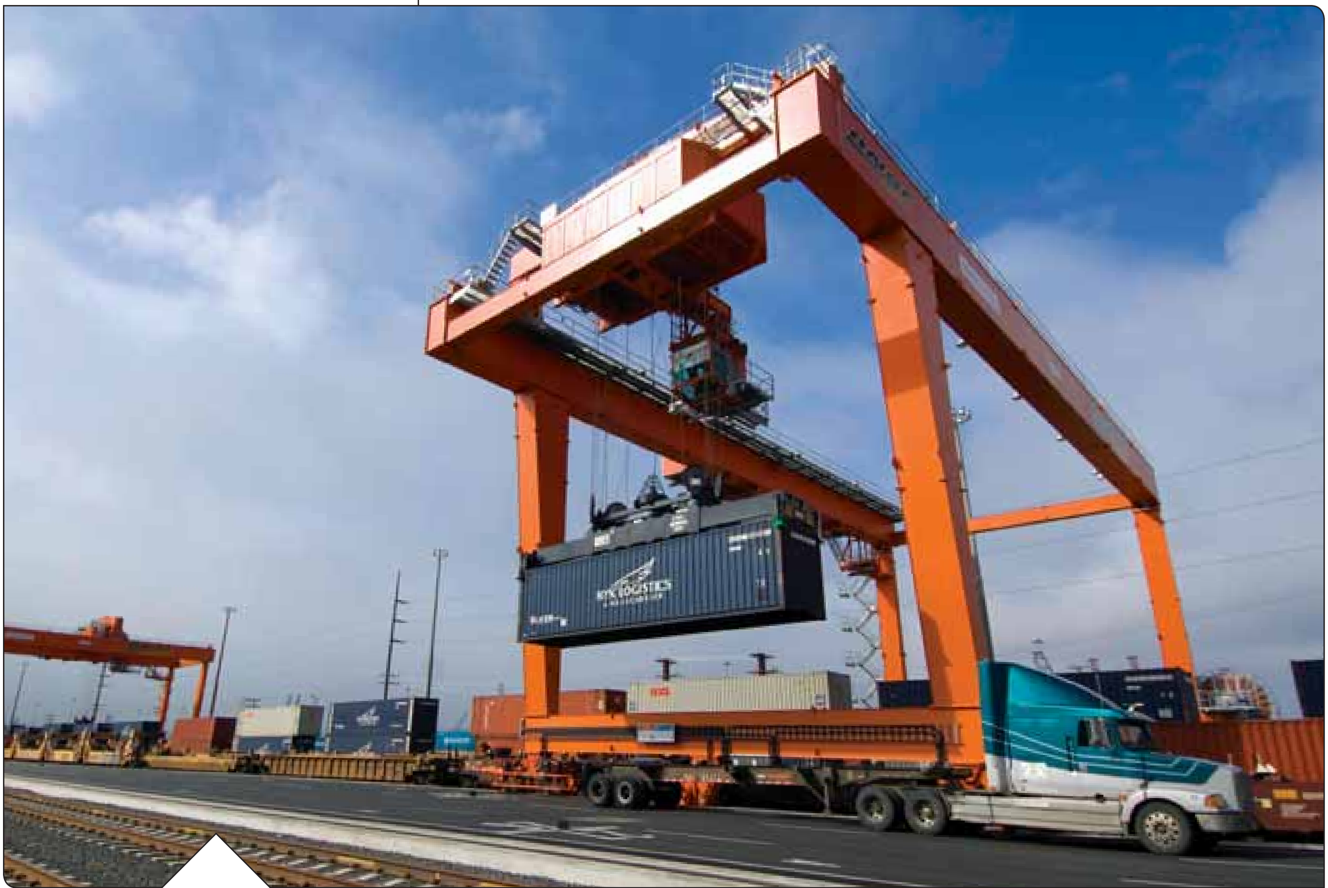

### BNSF

**WHAT'S NEW:** The installation of four wide-span gantry cranes.

**THE VALUE:** Installed at BNSF's Seattle International Gateway (SIG) intermodal facility, the electric, rail-mounted cranes produce zero emissions on site, double the facility's capacity, and reduce the need for diesel trucks to move containers. The cranes, which can stack containers and load and unload trucks and railcars, have increased throughput at the SIG facility by about 30 percent.

www.bnsf.com
✆ 800-795-2673

### Globe Express Services

**WHAT'S NEW:** The opening of a New York office.

**THE VALUE:** The new facility offers international logistics services including ocean freight, drayage, and customs brokerage.

www.globeexpress.com ✆ 614-501-9400

### American Airlines Cargo

**WHAT'S NEW:** An increase in the per-piece weight limit for expedited freight.

**THE VALUE:** AA Cargo's Expedite*fs* freight service now accepts cargo weighing up to 300 pounds for direct narrowbody flights, narrowbody flight routings connecting to or from an international flight, and shipments connecting to AA's truck feeder service. The previous limit was 100 pounds.

www.aacargo.com ✆ 800-227-4622

### Cathay Pacific

**WHAT'S NEW:** The launch of three weekly, all-cargo flights to Hong Kong from Houston.

**THE VALUE:** Scheduled to begin in September, the Tuesday, Thursday, and Friday service will provide shippers with improved access and connectivity between Asia and North America.

www.cathaypacific.com ✆ 800-233-2742

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## Purolator USA

**WHAT'S NEW:** The opening of a facility near Dallas-Ft. Worth.

**THE VALUE:** Located in Grapevine, Texas, the new 7,000-square-foot regional processing facility provides small-package and freight forwarding services to businesses that ship regularly to Canada and within the United States.

www.purolatorusa.com ✆ 888-511-4811

## CN

**WHAT'S NEW:** The start of intermodal service between the Eastern Quebec region, Toronto, and Western Canada.

**THE VALUE:** The service accommodates new traffic volumes between Toronto and Western Canada. Shippers of heavy products can load 60,000 pounds in a 40-foot container–equivalent to a 53-foot truck trailer's capacity.

www.cn.ca ✆ 418-832-3135

## Evergreen/COSCON

**WHAT'S NEW:** The start of a weekly independent service to cover the China/Arabian Persian Gulf route.

**THE VALUE:** Launching a combined total of 11 3,400-TEU size vessels, Evergreen serves China and the Arabian Persian Gulf, while COSCON covers China and Persian Gulf service.

www.evergreen-marine.com ✆ 201-761-3000

www.coscon.com ✆ 800-967-7000

## Multisorb Technologies

**WHAT'S NEW:** The introduction of a desiccant packing material.

**THE VALUE:** TranSorb prevents product damage by absorbing moisture in cargo shipping containers and warehouses. Available in standard single bags, bags with self-adhesive backing, and three-bag strips, TranSorb is non-hazardous and safe for disposal.

www.multisorb.com ✆ 716-824-8900

## Remstar

**WHAT'S NEW:** Product storage totes.

**THE VALUE:** For use in Remstar Shuttle vertical lift modules and carousels, RemStore totes are designed to increase storage capacity up to 15 percent. Angling and locking features provide secure, easy access for storage and retrieval operations.

www.remstar.com

✆ 800-639-5805

## Panalpina

**WHAT'S NEW:** Direct freighter service from Hungary to Russia and Hong Kong.

**THE VALUE:** Panalpina arranges scheduled freighter flights and manages the capacity for Eastern European shippers, especially in the telecommunications, automotive, and high-tech industries. A collaborative road and rail distribution service from Moscow, serving the main cities of the Russian Federation, extends the service's reach.

www.panalpina.com ✆ 973-683-9000


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# RESOURCE CENTER 06.08

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- **Agility** pg. 23
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  www.agilitylogistics.com 714-513-3000

- **Averitt** pg. 17
  Averitt offers fully integrated, built-to-fit programs for effective sourcing, manufacturing, order fulfillment, and transportation services.
  www.averittexpress.com 800-AVERITT

- **BAX Global** pg. 7
  BAX's Guaranteed Overnight transportation solution delivers goods throughout North America, time-definitely, or you don't pay.
  www.baxglobal.com 800-CALL-BAX

- **HTFN Global Logistics Partner** pg. 30
  HTFN is an established, reliable worldwide network of independent forwarding agents that provides an unmatched level of personal service, local expertise, global reach, and flexibility.
  www.htfn.com 925-262-8930

- **Lynden** pg. 15
  Lynden's EZ Commerce Center uses the latest technology to enable shippers to request pickups, generate documents, trace shipments, view delivery receipts, download shipment activity reports any time, and receive invoices electronically.
  www.shiplynden.com 888-596-3361

- **Ryder** pgs. 18, 67
  Name your product, and Ryder will customize a supply chain for it. Unmatched experience, flexibility, and expertise make Ryder the one to turn to all over the globe.
  www.ryder.com 888-88-RYDER

- **SDV International Logistics** pg. 41
  Covering each corner of the world, SDV meets your logistics needs.
  www.sdv.com 718-525-8100

- **TransGroup Worldwide Logistics** pg. 45
  It's easy to lose track of shipments when you're managing the supply chain by yourself. Why not try TransGroup Worldwide Logistics, one of the big guns in the logistics business?
  www.transgroup.com 800-244-0294

### Air Cargo

- **Lufthansa Cargo** pg. 16
  Network the world with Lufthansa Cargo, offering cargo services tailored to meet your needs.
  www.lufthansa-cargo.com 800-LHCARGO

- **National Air Cargo** pg. 40
  Need to ship anything, anywhere, anytime? National Air Cargo delivers.
  www.nationalaircargo.com 800-635-0022

### Career Development/Education

- **American Military University (AMU)** pg. 81
  AMU offers bachelor's and master's degrees in transportation and logistics management entirely online to fit the busy schedules of logistics professionals.
  www.amuonline.com 877-777-9081

- **American Society of Transportation and Logistics Inc. (AST&L)** pg. 80
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  www.astl.org 703-524-5011

- **Bellevue University** pg. 80
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  www.bellevue.edu 800-756-7920

- **California State University, Long Beach** pg. 82
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  www.uces.csulb.edu/citt 562-296-1170

- **Cal-WEST Logistics Job-Match Portal** pg. 84
  Santa Monica College's Cal-WEST Logistics Job-Match Portal is the global destination for all your online recruiting needs.
  www.cal-westjobs.com 310-434-4000

- **Council of Supply Chain Management Professionals (CSCMP)** pg. 99
  Successful supply chain professionals invest in themselves and their careers through CSCMP membership.
  www.cscmp.org 630-574-0985

## Use our Resource Center and let the information you need find you.

- **George Mason University** pg. 84
  Earn a degree that takes a multidisciplinary approach to preparing graduates to work effectively in today's integrated intermodal transportation systems.
  www.policy.gmu.edu 703-993-8099

- **Georgia Tech, Executive Masters in International Logistics (EMIL)** pg. 75
  EMIL's 18-month master's program lets you stay on the job while you learn practical techniques for reducing logistics costs and improving global supply chain efficiencies.
  www.emil.gatech.edu 404-894-2000

- **Georgia Tech's Supply Chain & Logistics Institute** pg. 84
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  www.scl.gatech.edu 404-894-2343

- **Institute of Logistical Management** pg. 83
  Become a part of the oldest logistics distance learning school in the world that has helped more than 84,000 alumni navigate their careers in supply chain and logistics since 1923.
  www.logisticseducation.edu 609-747-1515

- **JobsinLogistics.com** pg. 82
  Find a job in logistics or transportation online at JobsinLogistics.com, the top logistics job board.
  www.jobsinlogistics.com 877-JOB-POST

- **The Judge Group** pg. 83
  The Judge Group has more than 35 years experience in placing employees of all levels in the food/beverage, manufacturing, and distribution industries.
  www.judge.com 888-819-3916

- **Maine Maritime Academy** pg. 85
  Maine Maritime Academy offers certificate and graduate diploma programs in logistics.
  http://ibl.mainemaritime.edu 800-227-8465

- **MRI Executive Solutions** pg. 82
  To hire the right logistics professionals, turn to MRI Executive Solutions.
  www.mriexecutivesolutions.com 330-666-3354

- **Pennsylvania State University, Smeal MBA** pg. 79
  Earn a master's degree from the university that knows supply chain management best, and enjoy the convenience and flexibility of online education.
  www.worldcampus.psu.edu/scm2 814-865-0585

- **Riverside Community College (RCC)** pg. 80
  Earn a certificate or associate's degree in business administration with a logistics management concentration. Classes are available online and on RCC's Norco, Calif., campus.
  http://academic.rcc.edu 951-372-7068

- **Shey-Harding Associates** pg. 83
  Visit Shey-Harding.com for the best logistics and transportation career opportunities.
  www.shey-harding.com 562-799-8854

- **Syracuse University, Whitman School of Management** pg. 83
  Whitman is supply chain – it has the oldest supply chain management program in the nation.
  www.whitman.syr.edu/scm 315-443-3751

- **University of Wisconsin-Superior** pg. 85
  UW-Superior offers the only transportation and logistics undergraduate major in Wisconsin.
  www.uwsuper.edu/acaddept/dbe/trans 715-394-8230

- **Wright State University** pg. 82
  The Institute of Defense Studies and Education at Ohio's Wright State University provides educational programs using best practices relevant to the U.S. Department of Defense.
  www.wright.edu/idse 937-775-4565

### Chemical Logistics

- **BNSF Logistics** pg. 46
  BNSF Logistics puts your logistics pieces in place so you can focus on business. Combining expansive knowledge with integrated technology systems, BNSF streamlines your organization.
  www.bnsflogistics.com 877-853-4756

- **Dupré Transport** pg. 49
  Dupré Transport designs logistics solutions for your specific needs, so you save time and money.
  www.dupretransport.com 800-356-3659

- **Jacobson Companies** pg. 57
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**Transplace** pg. 55
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### Events

**Supply Chain Operations Private Exposition (SCOPE) WEST** pg. 27
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### Logistics IT

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### Rail

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### Reverse Logistics

**Pelican Products** pg. 89
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www.pelican.com 800-473-5422

### Site Selection

**Greensboro, North Carolina** pg. 31
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www.greensboroeda.com 888-693-6939

**Hampton Roads Economic Development Alliance** pg. 11
Virginia's Hampton Roads delivers a mid-Atlantic location, the second-busiest port on the East Coast, and many ground and airfreight options.
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**North Carolina Global TransPark** pg. 33
Located close to major East Coast markets, North Carolina Global TransPark offers an on-site airport with airfreight facilities and the state's longest runway.
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**Netherlands Foreign Investment Agency (NFIA)** insert, pg. 24–25
The NFIA facilitates North American companies' direct investments in the Netherlands. Companies can obtain information, strategic perspective and practical assistance from NFIA's business consultants.
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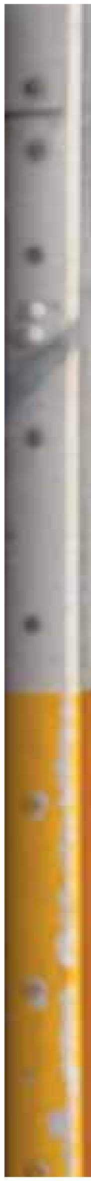
# THE LAST MILE



## Where the Wild Things Are

Sometimes air freight requires a place to unwind, grab a bite to eat, or chew the cud, as the case may be. That's why at Germany's Frankfurt Airport creature comfort is all the rage.

The Frankfurt Animal Lounge, which debuted in February 2008, features 12,300 square feet of space for handling and accommodating living cargo in compliance with EU hygienic and veterinary medicine requirements.

Export, import, and transit areas are clearly separated by built-in partitions, thus eliminating contact between animals upon arrival and departure. Individual holding areas can be further sub-divided into different sections to ensure that fish and fauna are shielded from the sight and sound of others.

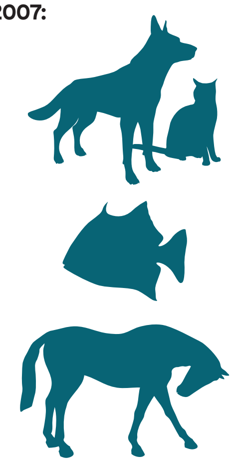
Lufthansa Cargo, which was involved with the project from the beginning, is among the world's leading providers of animal transport solutions. The airline transports thousands of animals on board its MD-11 freighters and in the bellies of Lufthansa passenger aircraft.

**ANIMAL HOUSE. Lufthansa Cargo transported its share of animals in 2007:**

**14,000** dogs & cats (combined)

**15,000** tons of ornamental fish

**1,500** horses



**CREATURE COMFORTS: INSIDE FRANKFURT'S ANIMAL LOUNGE**

- 42 large animal stalls with a floor space of up to 92 sq. ft.
- 39 small animal boxes
- Special aviaries
- 12 individual, temperature-adjustable climatic chambers
- A separate bathroom and lounge for animal attendants
- Facilities for veterinarians to conduct examinations of ornamental fish under black light—to avoid any shock reactions
- Additional oxygen supply for ornamental fish in the event of unforeseen delays
- Space for a variety of species

# TAKE YOUR BEST SHOT

## What do you see when you look at your supply chain? What captures the experience from your perspective? Could you capture that in a photo?

If so, *Inbound Logistics* invites you to submit your photos for an upcoming Photo Essay called "Your Supply Chain in Action."

We're looking for photos that capture what you find fascinating about logistics/transportation/supply chain management. Maybe it's your unique warehouse setup; your logistics team in action; the hyperactivity on your dock; your truck fleet, people, facilities or vehicles going above and beyond what's expected; or unique shipments you are warehousing/transporting for your customers. We want the photos that capture the pride you take in your logistics operation; the pictures that best tell your and your company's story.

**REQUIREMENTS:**

1. Set your digital camera to the highest resolution possible. The bigger the better when it comes to file size.
2. Please send a caption describing the action, and include the name of the photographer and all relevant information about your company.
3. Feel free to send as many photos as you'd like. Email them to editor@inboundlogistics.com. If they are too large to be emailed, let us know and we will send FTP instructions.

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**CLICK AWAY!** WE LOOK FORWARD TO SEEING YOUR PHOTOS.

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