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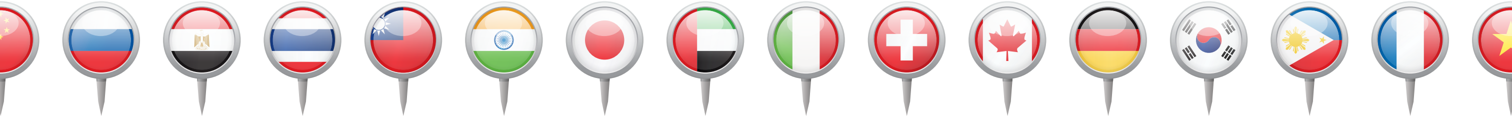

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CHECKINGIN

Felecia Stratton

by Felecia Stratton | **Editor**

Connecting Global Pieces

An elaborate dominoes cascade—in which a simple impulse unleashes a fast-moving wave of individual pieces moving in perfect unison—demonstrates the synergy of global supply chains. With proper alignment and planning, transportation and logistics functions can react when signals drop, effecting a similar flow of decision-making and execution from source to shelf.

But connectivity in today's global world is a double-edged sword. As much as companies want point-of-sale information that can clue marketing and supply chain to subtle changes in consumption patterns—so they can scale production up or down and better match inventory needs—they need to pay similar attention to the supply side. Offshore risks are infinitely greater because exceptions extend farther and reach deeper. More parts and pieces need to be picked up, replaced, or realigned. And shippers are challenged to catch and fix these glitches before they spiral out of control.

Today's supply chains need to be as responsive to a second-tier contract manufacturer in a third-world economy as they are to stocking top shelves on High Street. Being able to ramp up inventory when a hot item hits the market and sells is just as important as flipping the switch on an alternative component supply source when a natural disaster strikes. It's why companies increasingly use secondary and tertiary sourcing strategies—outsourcing global logistics operations to 3PLs, and regionalizing supply chains to protect against risk and reduce total landed logistics costs.

Global connectivity is at the center of this month's editorial line-up. Our annual global issue offers a panoramic map of transportation and logistics performance around the world:

- *As the World Turns* (pg. 68) examines how political and economic trends are shaping global supply chain decision-making.
- Our eighth-annual *Global Logistics Guide* (pg. 59) analyzes how different regions are performing as transportation and logistics hotspots; then scorecards select countries through the prism of U.S. companies.
- *Nearshoring Latin America* (pg. 42) documents why some U.S. companies are bringing manufacturing back to the Western Hemisphere, and which Latin American countries are best prepared for this spike in investment.

Current political and recessionary events, and the natural disasters of the past two years, serve as reminders that global supply chain networks are only as strong as their weakest links. When one part fails, it all falls to pieces. ■

inbound logistics

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THE MAGAZINE FOR DEMAND-DRIVEN LOGISTICS

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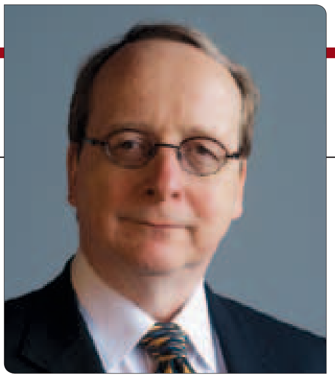


[INPERSPECTIVE]

BY PERRY A. TRUNICK
Associate Editor, *Inbound Logistics*
ptrunick@inboundlogistics.com

Blunt Talk

The Blunt Amendment on contraception has prevented one birth—the birth of a much-needed transportation bill.

The failure of the Highway Trust Fund, and the federal role in funding highway infrastructure, is the most critical crisis the transportation industry faces, according to James Burnley IV, former U.S. Secretary of Transportation.

The current authorization expires at the end of March 2012. And, if the debate over the Blunt Amendment (a controversial amendment that would have allowed any employer to refuse to cover any kind of health care service by citing "moral reasons") is any indication, the transportation bill (S.1813) will resolve into a short-term patch, not a comprehensive solution.

It's ironic that a highway infrastructure bill suffers from political potholes that will only be patched over, and will likely need repeated re-patching before any long-term solution is in place. Just look at aviation reauthorization, which has failed to result in passage of a new multi-year bill. It is in its 23rd short-term extension over four years.

After protracted discourse over the Blunt Amendment to the transportation infrastructure bill, the Senate narrowly voted to table the women's health amendment, freeing the debate to focus on actual transportation issues.

In the past four years, Congress has had to authorize a $34.5-billion transfer just to cover the Highway Trust Fund shortfall and keep highway and transit programs funded, says Burnley. The recession has had an impact, decreasing demand for goods and, thus, the need for freight transportation, which means less fuel has been consumed and less fuel tax revenue generated to replenish the fund.

For years, the Highway Trust Fund had maintained hefty balances, which the transportation industry had argued should be spent on much-needed infrastructure projects. "The problem is, when Congress authorized that spending, it went too far," says Burnley.

Adding the cumulative effect of not raising fuel taxes in 20 years, and gradual inflation during that time, the fuel-tax dollars that are collected have less impact when they are spent on infrastructure projects. A final impact on the highway fund has been increased spending on non-highway projects as a result of "earmarks" creeping into the process.

Burnley reports consensus in Washington on one thing—that there is a crisis. There is also agreement that something must be done. The ninth short-term extension of highway funding is about to expire, and it doesn't appear there is the political will to do more than throw asphalt into the hole, tamp it down, and wait.

Simple solutions—reduce infrastructure spending to match revenues, increase the fuel tax, or develop a tax scheme less reliant on fuel consumption—either don't work or amount to political suicide.

It's unfortunate that this issue is not likely to be resolved by the end of 2012, an election year. Extensions will only mask the seriousness of the underlying problem. Experts agree that nothing less than restructuring the funding mechanisms for the Highway Trust Fund will be needed. It may be time for an even more radical approach that would include replacing not only the funding infrastructure, but the entire system for maintaining and developing highway infrastructure.

When patches no longer hold, a more extensive renovation is in order. And when it comes to infrastructure funding, there don't appear to be any off-the-shelf solutions we can apply.

There's hard work ahead, and the users of the highway system—shippers, carriers, and consignees—will need to participate in order to develop an equitable and fair infrastructure funding solution. ■

10TIPS

STEP-BY-STEP SOLUTIONS

by Deborah Catalano Ruriani

Gaining More From 3PL Relationships

Whether your third-party logistics (3PL) service provider is a niche player or a global behemoth, you can take steps to draw more value from the partnership. Valerie Bonebrake, senior vice president at supply chain consulting firm Tompkins International, offers the following tips for getting your 3PL to do more for you.

1 **Become an expert at managing 3PLs.** Your 3PL managers must be strong leaders, trained in developing and managing strategic relationships with the authority to act decisively on behalf of the company.

2 **Invest time in key relationships.** Make sure you develop meaningful relationships – not just with one person, but throughout the 3PL's staff. If your partner isn't willing to invest time and talent, pick another partner.

3 **Ensure your 3PL is vested in your company's supply chain goals and initiatives.** Share your ideas. Encourage and reward your 3PLs for making suggestions and implementing solutions that improve performance.

4 **Pay for results, not just activities.** Create an environment that rewards innovation. Develop shared goals and key performance indicators (KPIs). Tie compensation and incentives to the results achieved, not just the tasks performed. This approach takes more work on your part, but well-designed compensation incentives will enable you to reap the benefits, and everyone will win.

5 **Be willing to enter into long-term agreements.** If the improvements you seek require your 3PL to make capital investments, enter into agreements that enable a return on investment. One- to three-year agreements with 30-day cancellation for convenience options do not allow for meaningful investment.

6 **Conduct annual strategy sessions.** Develop joint goals and initiatives; formalize tracking and reviews; and create a collaborative environment that inspires your 3PL to work hard for you.

7 **Invest in joint training and team building.** 3PL relationships take time to develop. There is a learning curve during the start-up process before new teams become peak performers. Working together as one team is key to long-term success. Conduct joint-sponsored training and team-building sessions. Creating a bond between the two groups will ensure your 3PL is on the same page as your company's employees—and all are working toward a common goal.

8 **Treat your 3PL as you would your employees.** Think of your 3PL as an extension of your company—its employees are your employees. The more you put into the relationship, the better the 3PL will perform. At the same time, smart 3PLs know that effective talent management is critical to long-term success. Your 3PL needs to invest in the team that services your company, and should share its employee development plans with you.

9 **Seek advice—and take it.** Many 3PL representatives say, "I could do so much more for my client, if only it would let me." Give your 3PL the field of play to drive amazing results.

10 **Measure results.** Most 3PL service level agreements and KPIs are tied to execution. But you may be overlooking areas of shared responsibility where joint performance can create a strategic advantage for your company. Think end-to-end, track performance, and recognize it. Celebrate success, and make corrections when necessary. ■

as told to Merrill Douglas

Capt. Kazimir Kostrubala, USAF, is squadron operations officer and installation deployment officer with the 19th Logistics Readiness Squadron, 19th Airlift, at Little Rock Air Force Base (AFB) in Arkansas. He received the 2011 Beyond the Call of Duty: Logistician of the Year award for his work with the Institute for Defense and Business.

RESPONSIBILITIES:

Supervising 550 military and civilian personnel engaged in aerial operations; deployment and distribution; and fuels, material, and vehicle management.

EXPERIENCE INCLUDES:

Executive officer, doctrine writer, flight commander, and installation deployment officer, Andrews AFB; Embedded Training Team Mentor, 205th Corps, Qalat, Afghanistan.

EDUCATION INCLUDES:

BS, biology, U.S. Air Force Academy, 2004; logistics readiness officer course, Lackland AFB, 2005; certificate in supply chain leadership, UNC-Chapel Hill, 2011; MBA, Indiana University via IU-UNC LogMBA, 2011.

Capt. Kazimir Kostrubala: Winging It

A LOGISTICS READINESS OFFICER IN TODAY'S MILITARY focuses on process management and achieving continuity throughout the organization. Continuity is difficult because deployments and reassignments create turnover at every level.

Imagine a firm where the CEO and COO are both replaced every two years, plant managers are replaced every four years, and each year at least one-third of the personnel go on leave—or, in our case, deployment—for four to six months.

That's what the military has been experiencing for the past decade. The disruption to the overall structure presents challenges to individuals who are trying to maintain the operation.

A lot of people talk about doing more with less. That's a serious logistics concern for Little Rock Air Force Base because we've been losing personnel.

We've already experienced a civilian hiring freeze and major cuts to our civilian positions. The loss of so many civilian staff members, who have provided continuity in the midst of deployments and reassignments, forces us to operate differently.

I'm trying to consolidate data from the six functional units, or "flights," I oversee into a single virtual platform. The goal is to create operational synergy that will help us better manage personnel, funding, and other resources. We're like a business with many independent units trying to centralize its logistics functions to achieve economies of scale.

The project that earned me the Logistician of the Year award came about when I was assigned to the aerial operations flight in Little Rock. One

The Big Questions

How do you recharge your batteries?
It is wonderful to come home at the end of the day and play with my two sons.

Scariest career decision?
Giving one of my superiors unsolicited feedback. That's not typical in the Air Force, but I respected him enough to do it.

Do you have a superstition?
Don't eat a banana on a boat before you go fishing.

Is there something you don't do especially well but love doing?
I dabble in tennis, soccer, track, snowboarding, surfing, and sailing. I recently learned bow hunting, and two years ago I tried basketball for the first time.

What's on your Bucket List?
Traveling to South Africa to surf and sail around the Cape of Good Hope; hiking the entire Appalachian Trail with my wife; and experiencing big wave surfing.

of that unit's jobs is building loads for flight crews to drop during training. A load is a structure built to simulate the weight and dimensions of a piece of cargo dropped from a plane to supply deployed troops. Customers asked us to produce more of those loads, but we didn't have the resources to increase production.

As I investigated the problem, I found that the people in charge of scheduling the loads were double-booking, so different groups of trainees were competing for the range, and for the loads, at the same time.

Members of each training unit were concerned that another unit would grab all the available loads, so they started padding their inventories and asking us to produce more.

Once I discovered that, the solution boiled down to getting the conflicting parties to work out their differences and manage their own inventories. By getting them to talk to one another, we were able to level the demand spikes.

Something I wrestle with a great deal in my work is the way military logistics strategies lag behind war-fighting capabilities. With today's technology, our ability to engage the enemy is getting better all the time, and we need fewer resources to do it effectively.

As a result, many of our logistics practices have grown obsolete—yet we continue to sustain them. We need to develop new practices to better fit the way we fight wars today, and how we'll fight in the future. ■

NOTED

THE SUPPLY CHAIN IN BRIEF

GREEN SEEDS

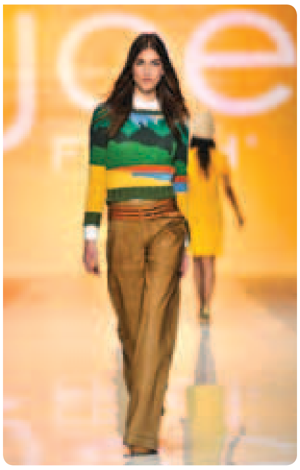
Old Dominion Freight Line has installed rooftop solar panels on its warehouse in Thomasville, N.C., the first solar panel system in the LTL carrier's nationwide facility network. The system can produce more than 2.2 million kilowatt hours of electricity a year – enough to offset more than 90 percent of the building's annual energy costs.

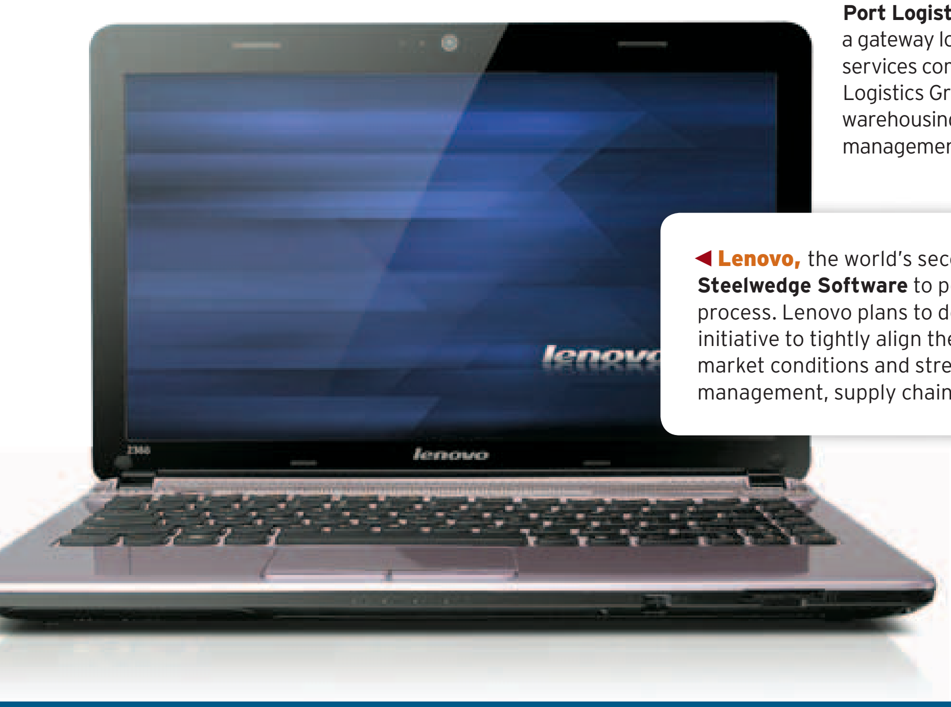
SEALED DEALS

▶ **Wiggle,** the UK's leading online cycle shop, chose **RedPrairie's** Warehouse Management System (WMS) to support its expanding business, which has grown by more than 50 percent in the past three years. This expansion has led to the company doubling its warehousing capacity, enabling it to stock in excess of 250,000 products. The RedPrairie WMS solution will help Wiggle effectively manage continued growth within its logistics operation and support its aim to deliver high customer service levels.

Wireless services provider **Cricket Communications Inc.** named **Brightstar Corp.** as its exclusive 4PL supply chain services provider. The new strategic agreement creates a platform for making more accurate and coordinated product management, supply chain planning, channel execution, and logistics decisions. The agreement also improves the intelligence required to put the right product in the right place at the right time.

▶ **Loblaw Companies Ltd.,** a Canadian retailer and parent of the Joe Fresh brand, entered a multi-year service agreement with **Port Logistics Group,** a gateway logistics services company. Port Logistics Group provides warehousing, inventory management, value-added services, and regional transportation in support of the launch of the Joe Fresh brand in New York City.





◀ **Lenovo,** the world's second-largest PC manufacturer, selected **Steelwedge Software** to power its global integrated business planning process. Lenovo plans to deploy Steelwedge as part of a strategic initiative to tightly align the company's supply chain with dynamic market conditions and strengthen collaboration across its product management, supply chain, and sales functions.

UP THE CHAIN

Coral Gables, Fla., commercial real estate company **Flagler** appointed **Manuel A. Fernandez** to head its newly launched logistics practice. As executive vice president of logistics operations, Fernandez will oversee the construction of Flagler's 400-acre intermodal logistics complex next to Miami International Airport, and focus on the design, layout, and component mix of other company developments.

Mohan Corporation, a wholly owned subsidiary of HPC POS Systems Corporation and a global manufacturer and distributor of incense and oils, promoted **William Burts** to vice president of logistics. Having been at the company since its inception in 1995, Burts is now responsible for managing the flow of Mohan products between manufacturer and consumer, with specific oversight of transportation, inventory, and warehousing.

PetFlow.com added **J. Michael Lackman** as its new vice president of operations. Lackman joins PetFlow from his most recent position as director of purchasing and transportation at UncommonGoods, LLC, and is responsible for managing the company's distribution, transportation, and customer experience operations.

Stephan Westermann was named executive vice president-order execution, production, and logistics of **Bruker Corporation's** scientific instruments segment. He now leads Bruker's operations teams in driving improvements by aligning processes in the company's global order execution chain. Westermann also focuses on streamlining Bruker's global supply chain and developing cost-efficient manufacturing.

recognition

Full-service transportation provider **Averitt Express** earned **Walmart's 2011 Regional LTL Carrier of the Year Award**. Each year, Walmart recognizes transportation suppliers that demonstrate excellence or exhibit significant improvement in meeting core business objectives. This is the second time in the past three years that Walmart recognized Averitt, which also earned the Rising Star Carrier of the Year Award in 2008.

For the second year in a row, **Inmar** has received the **Reverse Logistics Operational Excellence Award** from the Reverse Logistics Association. This honor is awarded annually to the company that demonstrates leadership in the effective execution of reverse logistics.

Ryder Mexico presented its **2011 Service Excellence Awards** to top-performing carriers at its recent Mexican Carrier Celebration and Recognition event. Thirty-three Mexican trucking companies were honored for achieving outstanding results in a variety of key performance areas, including safety and security, on-time performance, customer service, and continuous improvement.

m&a

Wheaton Van Lines Inc. will acquire Hillside, Ill.-based **Bekins Van Lines,** creating the fourth-largest household goods carrier in the United States. Wheaton World Wide Moving and Bekins Van Lines will continue to operate as separate brands with combined operational efficiencies. The new Bekins will be headquartered in Indianapolis, along with Wheaton. The acquisition will increase the van line's agency base from 240 agents to approximately 370 nationwide.

3 WAYS LOGISTICS CAN KEEP HIGH-TECH CUSTOMERS COMING BACK.

When UPS surveyed leaders in high-tech companies, we learned that a key challenge is maintaining the bottom line while improving the customer experience. This balancing act is not impossible. It just takes logistics, by UPS.

1) MOVE FASTER From international air freight to next-day air shipments, UPS can move critical parts or finished components quickly and reliably. And technology like UPS Paperless® Invoice can help reduce customs delays by up to 56%—enabling you to meet service agreements and satisfy customers.

2) RESPOND QUICKER With UPS technology like Quantum View®, you can see your supply chain and adjust to changing customer demands. With status updates for both package and freight shipments—incoming and outgoing—your supply chain is more visible, and, consequently your business is more responsive.

3) SIMPLIFY RETURNS When customers need to return, repair or replace a product, UPS has one of the largest portfolios of reverse logistics solutions to help streamline the process. And with millions of UPS access points worldwide, your customers can easily return their purchases to you.

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TRENDS

SHAPING THE FUTURE OF LOGISTICS

The *Nichioh Maru* gets the green light, with 281 solar panels fitted to the carrier's deck.

Nissan Rides Waves of Sustainability

by Joseph O'Reilly

What could be more sustainable than a slow-steaming solar-powered ocean vessel transporting electric cars?

Japanese automaker Nissan recently debuted the *Nichioh Maru*, a roll-on/roll-off coastal transporter ship that replaces traditional diesel-powered electricity generators found on most vessels with 281 photovoltaic solar panels mounted above deck.

Global automotive manufacturers have been competing in a tight race to develop, produce, and sell next-generation hybrid and electric vehicle models while demand is hot. But Nissan's new ship is sure to turn heads and idle engines in an industry that has a penchant for exploring innovative green solutions.

German manufacturer SkySails, for example, has already captured the market—and Mother Nature—with its fuel-saving wind propulsion system. Other steamship lines, notably Wallenius Wilhelmsen, are developing prototypes for zero-emission cargo ships completely powered by renewable energies such as solar, wind, and wave power, and hydrogen-powered fuel cell engines.

The *Nichioh Maru* is more akin to a LEED-certified marine vessel, if such a standard existed. Capable of meeting most of the ship's electrical power requirements, the solar panels reduce the amount of diesel fuel burned to generate electricity for each trip. The vessel is also fitted with energy-saving LED lighting throughout its holds and living quarters, and low-friction paint on the hull allows it to slip through the water more easily. And though it is still powered by a huge diesel engine, that engine is controlled electronically to ensure it burns as little fuel as possible.

The new ship will lower Nissan's fuel bill by 1,400 tons of diesel and reduce carbon emissions by 4,200 tons annually, the automaker reports. For the time being, the vessel will be used on domestic shipping routes to deliver the latest 2012 Nissan Leaf electric cars.

Risky Business

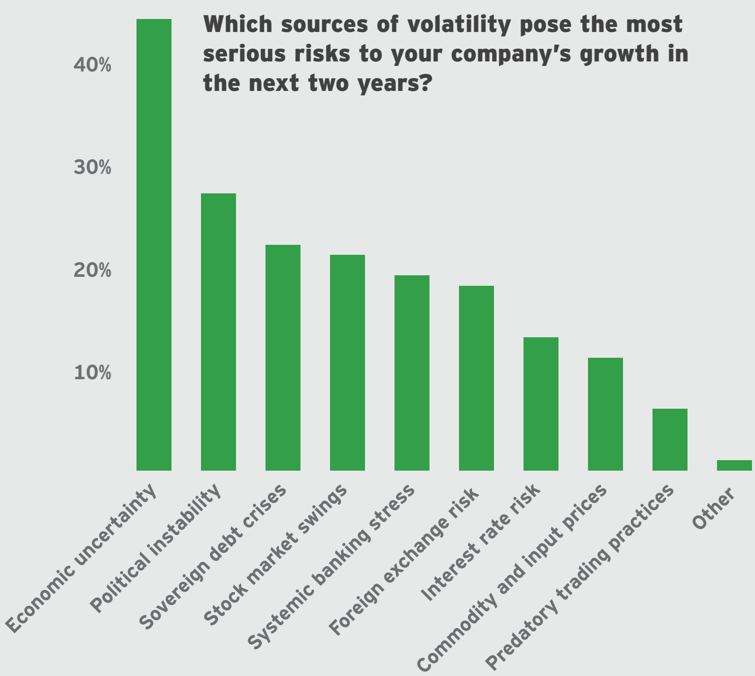
With so much volatility and change in today's market, and companies stringing together new global sourcing and selling locations – sometimes as a consequence of such volatility – retailers and manufacturers are increasingly focusing on risk in their supply chains, according to KPMG's latest global CFO Consumer Markets survey.

The auditing firm's report, *Turning Global Risk into an Opportunity*, surveys 350 senior finance executives in the retail, food, drink, and consumer goods manufacturing industries.

Forty-four percent of respondents cite economic uncertainty as the biggest risk global consumer companies face (*see chart left*), followed by political instability (27 percent) – highlighted by recent clashes in China and the Far East over large-scale job cuts – and ongoing concerns in the Middle East and North Africa.

Consumer companies also cite supply chain issues as one of their greatest operating risks in emerging markets, especially given the circumstances of the past year: the explosion of Japan's Fukushima nuclear plant, political upheaval in Asia, floods in Thailand, and the earthquake in New Zealand.

Companies are moving toward risk reviews as finance leaders and their boards meet more frequently to discuss key concerns (*see chart right*). Weekly risk reviews more than doubled according to respondents, from slightly more than seven percent two years ago to 19 percent today, with less than six percent now conducting reviews annually.



How frequently does your company hold formal risk reviews with senior management?

	NOW	2010
Weekly or more often	19%	7%
Monthly	32%	32%
Quarterly	27%	29%
Semi-annually	15%	15%
Annually or less often	6%	12%
Never	1%	3%
Don't know	1%	1%

Source: CFO Consumer Markets survey

The Supply Chain World in 2050

Deutsche Post DHL recently released the findings of a study that projects possible future states of trade, business, society, and supply chains 40 years from now. The study, *Delivering Tomorrow: Logistics 2050,* gives supply and demand forecasting a whole new meaning.

The study examines five different scenarios of life that are based on a detailed analysis of critical factors—including trade and consumption patterns, technological and social trends, and climate change—and estimates their probable impact on people's behavior and values in 2050.

Among the five scenarios:

1 **Untamed economy, impending collapse.** Unchecked materialism and mass consumption characterize the world in 2050. The relentless exploitation of resources feeds this non-sustainable way of life, a development that stokes climate change and causes natural disasters to mount.

Demand for logistics and transport services climbs sharply. A global transportation super-grid ensures rapid exchange of goods between centers of consumption. But as climate change advances, supply chains are increasingly disrupted, a development that presents additional challenges for logistics companies.

2 **Customized lifestyles.** This scenario describes a world where individualization and personalized consumption are pervasive. Consumers are empowered to create, design, and manufacture their own products. Newly developed 3D printers play a major role. This leads to a rise in regional trade streams, with only raw materials and data still flowing internationally.

Decentralized energy systems and infrastructure complement customization and regional production. The implications for logistics include a vastly reduced need for long-distance transportation of finished and semi-finished goods due to value chain localization.

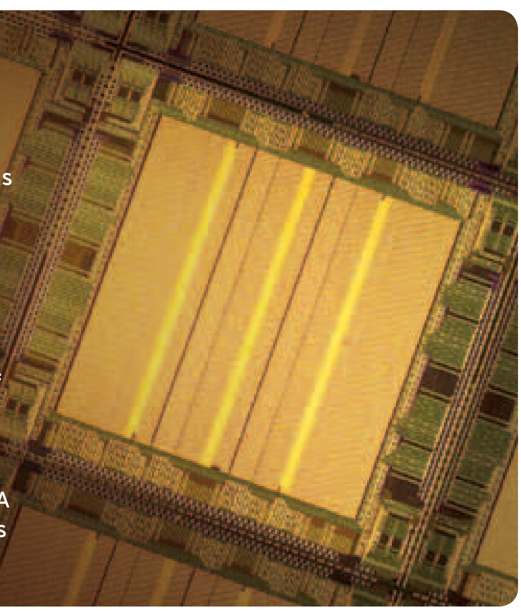
Logistics providers organize the entire physical value chain. They also handle the encrypted data streams required to transmit construction and design blueprints for 3D printers. Decentralized production turns strong regional logistics capabilities and a high-quality last-mile network into important success factors.

3 **Paralyzing protectionism.** This is a world state triggered by economic hardship, excessive nationalism, and protectionist barriers. Globalization has been reversed. Technological development is lagging. High energy prices and dramatic supply scarcity lead to international conflicts over resource deposits. Implications for the logistics sector include challenges posed by the decline in world trade and the resulting regionalization of supply chains.

Governments view logistics as a strategic industry. As relations between some blocs and countries are extremely strained, logistics providers in bloc-free countries act as intermediaries in international trade brokerage.

4 **Mega-efficiency in megacities.** In 2050, megacities emerge as the world's power centers and

Supply Chain CSI



The Defense Logistics Agency (DLA), which provides the U.S. military and other federal agencies with logistics, acquisition, and technical services, is taking a script out of the *CSI* television franchise as it looks to combat counterfeit parts in its supply chain.

Counterfeiting is a major concern for the DLA, especially within its microelectronics sourcing and distribution activities. These components are used in mission-critical systems where quality, security, and cost considerations are extreme.

The agency is currently working with Altera Corporation, a microcircuit manufacturer, and Applied DNA Sciences (APDN) to explore the feasibility of using botanical DNA to authenticate microcircuit chips.

The process embeds botanical DNA in the ink used on products, and a handheld laser reader can detect that mark. The item can be swabbed and the sample sent to an APDN facility to forensically determine the unique DNA characteristics applied to a specific product. DLA is conducting further pilots to explore the viability of using this technology throughout its supply chain.

are the drivers and beneficiaries of a paradigm shift toward green growth.

To overcome the challenges of expanding urban structures such as congestion and emissions, megacities become champions of collaboration. Robotics revolutionize the world of production and services. Consumers change their habits: they usually rent products instead of purchase them. Highly efficient traffic concepts relieve congestion.

A global super-grid with mega transporters, including trucks, ships and aircraft, as well as space transporters, opens important trade connections among the world's megacities. Logistics service providers are entrusted to run city logistics, utilities, and system services for airports, hospitals, and shopping malls.

5 **Global resilience—local adaptation.** This scenario describes a world initially characterized by a high level of consumption thanks to inexpensive, automated production. Due to accelerated climate change, however, frequent catastrophes disrupt supply chains and lean production structures, resulting in repeated supply failures.

The new economic paradigm is distinguished by a shift away from maximizing efficiency to mitigating vulnerability. This radical move toward redundant production systems and a change from global to regionalized supply chains allow the global economy to better weather troubling times.

Deutsche Post DHL's resilient world of 2050, comprised of regionalized trade, relies on a logistics sector that ensures supply security as a top priority, with backup infrastructure to guarantee reliable transport in unstable and hazardous times. Instead of complex just-in-time delivery processes, huge warehouse structures located close to the manufacturer are seen as indispensable buffers. ■

Quadropoly Takes Over Piedmont Triad

One hallmark of logistics and supply chain's mainstream progression is its growing presence in education curriculum, from post-graduate programs at leading research universities to survey courses in high schools and vocational schools. Now some institutions are going one step further by making logistics a core area of research. The latest example is the collaboration among four community colleges to manage the North Carolina Global Logistics Center in the state's Piedmont Triad region.

The 80,000-square-foot center is being built at Guilford Tech Community College's northwest campus. Forsyth Technical Community College, Davidson County Community College, and Randolph County Community College will partner to run the facility and work with local companies to help them move their global shipments. Funding will be provided through a mix of revenue generated by course offerings, and self-supporting activities such as consulting, membership dues, and grants.

The Piedmont Triad is a hot market for economic growth as industry looks to expand the surrounding region into an Aerotropolis. FedEx's decision to locate its Mid-Atlantic hub at Piedmont Triad International Airport in 2009 precipitated a great deal of investment interest from fast-moving industries—a complement to the area's well-established textile and furniture trades.

GLOBAL

THE WORLD AT A GLANCE

by Joseph O'Reilly

Strikers are trying to block the Ports of Auckland's attempts to impose a new labor model that would allow managers to change work schedules on short notice.

New Zealand Port Tries to Strike Labor Balance

As yet another reminder of how global labor strife can impact supply chains, the Ports of Auckland is trying to ease the pressure of three week-long strikes by the Maritime Union of New Zealand during the country's busy export season. With an impasse expected to run through March 2012, the Ports of Auckland has already lost $25 million in business.

The first strike began in February 2012, and impacted 11 ship calls, six of which were managed through the port's multi-cargo operations and Fergusson Terminal. The other ships were diverted to alternate ports. Authorities are strengthening on-port operational capacity and working with shippers to plan contingencies and circumvent further work stoppages.

The strikes' impact would be much more severe if the port did not employ a mix of non-union staff who have been keeping facilities operational during the standoff.

Three for Tea

Tetley, the tea subsidiary of India-based Tata Global Beverages, awarded French third-party logistics provider Norbert Dentressangle a three-year storage and distribution contract to manage a collaborative project between Kellogg's and Kimberly-Clark in England.

The 3PL will move Tetley's warehousing from Newton Aycliffe to its site in Trafford Park, which will be shared with Kellogg's. The facility will consolidate products from Kimberly-Clark's northern distribution center in Chorley before delivery to retail and wholesale customers throughout Great Britain. The transition is expected to net efficiency, cost, and environmental benefits for all parties.

"By making it possible for us to collaborate with Kellogg's and Kimberly-Clark, Norbert Dentressangle's solution increases our delivery frequency and improves service to customers," says Steve Eastham, vice president of operations, EMEA, for Tata Global Beverages.

The collaborative effort also maximizes warehouse space and transport utilization, which will reduce road miles and fuel bills, helping to minimize the effect of increased costs both in the supply chain and elsewhere in the business.

Dutch Defy Euro Crisis

Despite a lingering financial crisis in the Eurozone, the Netherlands remains a stable, competitive, and attractive location for foreign companies to establish operations. The country posted record foreign direct investment (FDI) in 2011, attracting 193 projects, representing 4,358 jobs and planned investment of $1.95 billion, according to the Netherlands Foreign Investment Agency (NFIA).

In terms of projects, the NFIA brought in the highest number in its 30-plus years of existence, registering a 25-percent increase over 2010.

While a little more than half the projects originated in Asia, North America recorded 26 percent of the total. The United States remains the largest source country with 46 projects, of which 32 were initial investments of companies in the Netherlands. Adding in three projects from Canada and one from Puerto Rico, the North American totals are: 50 projects; 1,770 jobs; and $390.6 million investment.


Erasmus Bridge, Rotterdam, the Netherlands

"Companies favor the Netherlands for its position as a stepping stone into Europe, its language and educational skills, and its fiscal climate," says NFIA Commissioner Bas Pulles.

Amazon's Indian Gambit

Following the Indian government's decision to allow more foreign direct investment (FDI) for single and multi-brand retailers, Amazon has received permission to set up a wholly owned subsidiary in-country to provide courier services to the domestic market. Observers see the multinational company's gambit as a first step toward tapping India's $10-billion e-commerce industry.

As India takes a more liberal stance on FDI, domestic retailers and e-tailers fear a siege on their consumer domains–especially online. Amazon recently launched comparison-shopping site Junglee.com, which aggregates products from domestic online and brick-and-mortar retailers while similarly plugging in Amazon's existing global e-commerce channels. The company says the new Web site will provide 10 million products from more than 14,000 Indian and global brands.

But unlike its U.S. model, Amazon cannot sell product directly to consumers. Because of India's FDI rules, shoppers are directed to unique sellers to finalize transactions, much like online travel search engines.

Still, all indications suggest Amazon's interests are focused on providing the back-end transportation and logistics backbone and expertise currently lacking within India. As further proof, rumors are circulating that the multinational is setting up a logistics facility in Mumbai to help domestic companies manage fulfillment.

Euro Rails Speed Crossings

Compared to the United States, rail freight integration has always been a challenge within Europe's economy–a consequence of unique countries, processes, protocol, and standards. Passenger transport has always held sway. But as congestion increases around urban areas and transport costs continue to rise, rail freight has become a welcome option.

Recently, the CEOs of DB Schenker Rail (Germany), TX Logistik (Germany), SBB Cargo (Switzerland), and BLS Cargo (Switzerland) presented requirements for developing European rail freight transport corridors as defined by the European Commission. Their principal goals are to simplify rules, eliminate bureaucratic bottlenecks, and increase freight throughput.

EU Regulation No. 913, concerning a European rail network for competitive freight, was enacted in November 2010 and aims to increase the competitiveness and quality of international rail freight. The measure stipulates that a network should be organized to provide fast, reliable connections among the most important economic centers, allowing for greater freight volumes. As part of this blueprint, nine international rail freight corridors that give more priority to freight trains will be established by 2015.

The growth forecast for European rail freight mainly concerns cross-border corridors. For example, on the Rotterdam-Genoa Corridor, bottlenecks exist in Oberhausen, Germany, Basel and Chiasso, Switzerland, and Milan, Italy. With new infrastructure–notably the Lötschberg Tunnel and the Gotthard Base Tunnel–coming online in the next few years, these segments need to be linked together to create a more efficient end-to-end corridor.

"Improving the corridor's efficiency involves numerous infrastructure investments," says Alexander Hedderich, CEO of DB Schenker Rail. "Construction and information about these projects must be coordinated internationally to maintain the best possible service quality."

Furthermore, the railroads argue that capacity can be increased if priority is given to freight trains, operational processes are harmonized, and routes are established based on market needs. And with the objective to improve economic efficiency, they are looking to ensure any new infrastructure is designed to accommodate mile-long trains. Interoperability is essential for rail companies to remain competitive with road transport.

Swiss railway company BLS Cargo is working to improve European rail freight transport corridors.

2011 Import Ups and Downs

2011 brought some noteworthy dips and spikes in U.S. imports from specific countries, measured in TEUs. Imports from the UAE showed an impressive increase in 2011 compared to 2010, while imports from Venezuela saw one of the largest decreases.

United Arab Emirates	**42.93%** ▲
Austria	**24.05%** ▲
Belgium	**19.26%** ▲
Czech Republic	**19.17%** ▲
Peru	**16.51%** ▲
Oman	**15.27%** ▲
Portugal	**14.50%** ▲
Spain	**14.31%** ▲
Ecuador	**12.23%** ▲
Germany	**12.18%** ▲
Finland	**–10.77%** ▼
Hong Kong	**–11.57%** ▼
Pakistan	**–12.13%** ▼
Russia	**–14.29%** ▼
Venezuela	**–62.33%** ▼

Source: Zepol Corporation, www.zepol.com

Big Blue Sees Red

Walmart is increasing its investment in the holding company of Yihaodian, an e-commerce Web site in China, to solidify its supply chain presence within the country. Launched in July 2008, the online retailer offers more than 180,000 SKUs, predominantly in grocery sales, consumer electronics, and apparel. With an existing logistics network based in Shanghai, Beijing, Guangzhou, Wuhan, and Chengdu, Yihaodian serves an expanding customer base with same- and next-day delivery–an ideal foil for the U.S. big box retailer.

With a 51-percent controlling stake in Yihaodian, Walmart now has an established presence in China–a reality foreign to most companies trying to enter the politically insulated market. But the retailer's stake may be small compared to China's ulterior motive and gain.

"More than an investment of funds, Walmart will share its knowledge, technology, and best-in-class retail practices with Yihaodian's existing organization," says Junling Liu, co-founder and CEO of Yihaodian. [ ]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Understanding INCOTERMS 2010

An *Inbound Logistics* article in October 2003, "Understanding Incoterms," does an excellent job of explaining the concept of Incoterms, why they are necessary and how they work. We'd like to bring this article up-to-date with a discussion of the changes to Incoterms that began in January 2011.

To recap, Incoterms are an internationally accepted set of standard commercial terms used between buyers and sellers. The terms determine who pays the cost of each transportation segment, who is responsible for loading and unloading of goods, and who bears the risk of loss at any given point during an international shipment.

Managed by the International Chamber of Commerce (ICC), Incoterms are amended every 10 years. Recent changes saw the deletion of four existing terms and their replacement with two new terms. This brought the total number of Incoterms from 13 to 11.

UNDERSTANDING THE CHANGES TO INCOTERMS

Formerly, categories of Incoterms reflected the stages of shipment – departure, carriage (paid and unpaid) and arrival. With the 2010 revisions, the ICC recognized that the evolution in trade, supply chain management and cross-border security warranted changes to the rules and the way they are organized.

The rules are now divided into two categories that better reflect the usage of Incoterms for multiple modes of transit – one set for any mode of transportation, the other specifically for water. The first set can certainly be used for ocean, but also applies more broadly to road, rail and air. The second set refers to ports, so is exclusively for water transport, and it eliminates the confusion around the use of FOB by making it clear that the term is only for water shipments.

Deliveries by any mode of transport (sea, road, air, rail)

- Ex Works **(EXW)**
- Free Carrier **(FCA)**
- Carriage Paid To **(CPT)**
- Carriage and Insurance Paid to **(CIP)**
- Delivered at Terminal **(DAT)**
- Delivered at Place **(DAP)**
- Delivered Duty Paid **(DDP)**

Deliveries by sea and inland waterways transport

- Free Alongside Ship **(FAS)**
- Free on Board **(FOB)**
- Cost and Freight **(CFR)**
- Cost, Insurance and Freight **(CIF)**

The 2010 Incoterms make more general use of the terms "terminal" and "place," acknowledging that these locations are relevant across modes. The rules that were added – Delivered at Terminal (DAT) and Delivered at Place (DAP) – made four of the previous rules superfluous. Those were DAF (Delivered at Frontier), DES (Delivered Ex Ship), DEQ (Delivered at Quay) and DDU (Delivered Duty Unpaid).

An objective of the ICC for Incoterms 2010 was to foster uniformity and certainty in global business transactions, thereby reducing the potential for costly disputes. The Incoterms changed to state that export and import formalities only have to be complied with where necessary, reflecting their usage in places where these formalities have been reduced by trade agreements or trading blocs. Many countries, such as the US, are also adopting Incoterms for domestic transport, and the 2010 rules flexibly support that application.

Aside from additions and deletions to the Incoterms themselves, there were other changes in their usage.

Electronic communication – Incoterms 2010 allows for "electronic record or procedure" where this is agreed or customary. This is a progression from previous Incoterms, which only allowed for the use of Electronic Data Information. The change facilitates the adoption of new electronic procedures and supports those already in use.

Security clearance – Buyer and seller must cooperate more closely, since Incoterms 2010 allocates their obligations to supply information needed to obtain export and import clearance. This increased degree of cooperation required is a result of growing concern over security and chain-of-custody for shipped goods.

Terminal handling charges – Incoterms 2010 reduces the potential for buyers to be charged twice for terminal handling charges. Pass-through of the cost of carriage of goods to an agreed destination, which previously resulted in buyers being charged twice, disappears with amendments to CIP, CPT, CFR, CIF, DAT, DAP and CCP Incoterms.

String sales – String sales, or the multiple sale of goods during transit, is clarified in Incoterms 2010. Specifically, FCA, CPT, CIP, FAS, FOB, CFR and CIF Incoterms are amended to provide that the seller in the middle of a string sale has an obligation to "procure goods shipped" and not to "ship" the goods. The seller's obligation to contract for the carriage of goods has been amended to allow the seller to procure a contract of carriage.

Remember that Incoterms are not implied in the buying and selling of goods. They must be specified, along with designation of location. If you wish to still use the 2000 version, you must explicitly state that, otherwise the 2010 rules apply by default.

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VIEWPOINT

by Dan Lockwood

3PLs: Going Beyond Savings to True Value

Although shipping is an integral and expensive part of daily operations, other considerations often take priority. This may result in unhappy customers, increased shipping costs, and time wasted resolving issues.

Companies looking to increase efficiency and maximize shipping dollars often turn to third-party logistics (3PL) providers, one-stop resources that facilitate shipping and logistics needs. 3PLs integrate time- and money-saving shipping services into one cost-effective bundle.

Using a full-service 3PL to handle your shipping needs can offer the following benefits.

1. A range of choices. When you ship directly through a freight or express carrier, you are limited by its products and pricing, which may or may not fit your timeline and budget requirements. 3PLs typically establish strategic partnerships with a select group of carriers, which enables them to provide many choices without the shipper having to make multiple calls to different carriers.

A carefully vetted portfolio of carrier partners enables 3PLs to provide shippers a wide variety of routes and speed options.

In addition, a 3PL can use its aggregated customer base to negotiate discounts with carriers that small to mid-sized businesses may be unable to obtain on their own.

2. One invoice, few hassles. Processing invoices is sometimes a nightmare. Companies that ship regularly may be inundated with dozens or even hundreds of monthly invoices. Shipping with a 3PL can distill the often complex invoicing process that results from using multiple carriers to one simple, customized invoice that allows shippers to see all shipping expenditures in one place.

3. Stellar service. To truly be an asset to your bottom line, it's not enough for a shipping provider to know your transportation needs—it must also know your business. Often, a 3PL will have an office in or near the city where your business is located. The advantages of dealing with a local customer service representative who knows you and your business' unique needs cannot be overstated. They can quickly resolve claims, lost shipments, delays, and other shipping issues.

4. Time-saving TMS. Sometimes you don't need to talk to a customer service representative to get a quote, arrange a pickup, or follow up on a shipment. For shipping management convenience, many 3PLs offer transportation management systems (TMS), often directly on their Web sites.

TMS solutions give shippers the opportunity to take control of their own shipments any time. Some popular and powerful TMS features include:

- At-a-glance cost and transit time comparisons.
- One-step conversion of quotes to bills of lading. Pricing can be automatically updated and recalculated to reflect the latest pricing, fees, and class.
- A list of frequently shipped items so you can quickly select shipment information.
- Tracking tools that provide instant shipment status updates.
- Invoicing visibility and online bill payment.

All the benefits of having a successful relationship with a 3PL can be summarized in one word that appeals to every business: value. Delegating your shipping operations to a 3PL may allow you to leverage its relationships, expertise, and technology, which saves you time and money. ■

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3PLLINE

by Angela Yang

5 Ways to Excel in China

China and the wider Asia-Pacific market present an incredible opportunity for businesses seeking to manufacture products, source suppliers, or tap into end markets and sell products to consumers. But a strategic business shift into China takes careful consideration, especially when it comes to supply chain, warehousing, and distribution decisions.

Here are five strategies for successfully managing your supply chain, warehousing, and distribution operations in one of the world's fastest-growing economies.

1. Adapt to local regulations. Many companies significantly underestimate the complexity of China's government regulations, and often lack much-needed local guidance.

Enlisting the help of a supply chain solutions provider familiar with operating in China allows shippers to focus on their core competencies, customer service, and top-line growth. While they may still encounter challenges, cultivating the right service provider relationships can help shippers adapt to changing laws and regulations.

2. Navigate customs rules. Ensuring compliance with Chinese customs regulations demands good planning and data management practices. Proper documentation is critical, as is complying with China's Harmonized System Code.

For example, quantity count errors on shipping documents can cause significant problems. List the incorrect number of items too often, and customs officials will not hesitate to inspect and detain your shipments for an extended period. They may also flag and needlessly detain future shipments due to poor reputation. As a result, your company and customers may miss out on valuable sales and opportunities.

3. Understand just-in-time and data integrity. China is a rapidly developing marketplace, with new cities, roads, and infrastructure under constant construction. So, running a just-in-time operation takes on a slightly different meaning than in the United States.

When transporting goods via Chinese trucks, which are typically much smaller than U.S. trucks, transit time may increase because capacity is limited and roads are not well-developed or maintained. A traffic delay caused by an accident in the United States can divert drivers for a few hours; in China, a major road disruption can translate to delays lasting several days.

GPS capabilities are also not as robust, and obtaining updates on shipment progress is still largely a manual process. Thankfully, cell phone signals are very strong throughout the country, as mobile devices greatly exceed landline phones.

4. Embrace cultural differences. The Chinese work culture is more personal and younger than in the United States. Many companies organize team-building exercises that bring workers together to learn about each other and explore ways to serve customers more effectively.

This personal approach also applies to doing business with carriers, customers, and vendors. Sometimes, it takes longer to do business in China because of the getting-to-know-you phase. Not understanding and respecting this cultural difference can be perceived as insulting or overly aggressive, and may result in lost business and relationships.

5. Know logistics costs. Logistics costs represent an estimated 20 percent of China's gross domestic product—double the percentage of the U.S. GDP they make up.

Thanks to continually developing professional services, a maturing workforce, and a business-friendly environment, logistics and distribution operations in China are rapidly becoming more manageable. ■


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ITMATTERS

by Henry Hicks

Managing Supply Chain Disruptions

These are challenging times for supply chain managers. During the past few years, a range of events and natural disasters has severely disrupted global supply chains, causing far-reaching effects across diverse geographies and markets.

Yet today's logistics landscape also holds huge potential for supply chain technology developments that help organizations better manage catastrophic events, as well as cope with everyday supply chain disruptions.

Logistics managers can face today's challenges and opportunities by addressing the following three evolving supply chain elements.

1. Unforeseen events. Natural disasters, industrial accidents, international conflicts, geo-political situations, and mundane disruptions all pose a constant threat to lean supply chains. Many organizations are attempting to avert risk by on-boarding new suppliers closer to their end market. This shift, however, makes the supply chain even more complex and difficult to manage.

2. Reduced sense-and-respond time. Shippers also have to face shorter predictive time horizons. As competition increases, organizations have to deliver goods faster, which means a shorter working timeframe.

Many organizations are adding real-time visibility and event processing systems, along with automated decision-making, to manage the supply chain, rather than using historical or predictive methods.

Evolving responsive supply chain solutions promise the ability to gather and analyze data to understand correlations and effects within the business, but the speed and form in which this data is delivered to managers will be the crucial differentiating factor.

3. Total visibility. Having a seamless view of the entire supply chain network drives success, and supply chain managers continue to seek a centralized system of command and control. While the challenge of disparate parts and siloed systems remains, supply chain technology is constantly evolving to make a single view of the network more feasible.

GAINING SUPPLY CHAIN INSIGHT

Shipping company Royal Dirkzwager is a prime example of how end-to-end supply chain visibility can improve overall management. The company faced the challenge of incomplete network visibility as it tried to meet growing client demand for faster, more reliable data about its global shipping network.

Royal Dirkzwager deployed supply chain technology that provided total visibility throughout the system, allowing managers to gather full shipping movement details worldwide and relate them in real time to information such as planned routes and weather.

The insight this technology provided allowed for more effective client decision-making, easier processing of increased data traffic, and a highly developed business model that allowed the company to expand its customer base with new maritime logistics products. Enhanced visibility also improved overall event processing by giving customers all the information needed to make educated shipping management decisions, which, in turn, helped improve route planning and reduce fuel costs.

While the nature of supply chain management often involves dealing with unforeseen issues, the technology available to logistics managers today can help ease that process. ■

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ECODEV

ISSUES AFFECTING | **ECONOMIC DEVELOPMENT**

by Daniel Griswold

Getting in the Zone: FTZs Fuel Improved Logistics

For decades, America's foreign trade zones (FTZs) have provided a valuable platform for U.S. companies competing in global export markets. The FTZ program was established in 1934 to expedite and encourage foreign commerce. The nation's 500 zones and subzones are secured areas, often near or adjacent to U.S. ports of entry, and are considered outside U.S. Customs territory.

Benefits of the FTZ program include:

■ **Reducing or eliminating duties on imported goods.** The program applies to imported goods used by U.S.-based companies to produce final goods for export. It also offsets inverted tariffs, which force U.S. producers to pay duties on imported parts and materials while final products made abroad with those same components can enter the United States duty-free, creating an unintended incentive to locate production offshore. The FTZ program helps put U.S.-based producers on more equal footing with foreign competitors who do not bear the cost of U.S. duties.

■ **Streamlining customs procedures.** Zone and subzone users can file weekly entry permits that allow them to consolidate multiple shipments into one weekly filing. The permits allow advanced approval of weekly shipments through an FTZ or subzone up to an estimated amount. The system also allows admitting critical goods on weekends and after hours, with admission notification filed the next working day. This helps eliminate bottlenecks that could disrupt tightly scripted just-in-time supply chain operations.

■ **Expediting electronic customs form filing.** The weekly, electronic filing systems not only speed shipment handling, but also cut costs both for U.S. producers and U.S. Customs and Border Protection (CBP). Producers save because they make one payment for a weekly permit, rather than paying separate fees on each shipment during the week. U.S. CBP saves money because it can process fewer transactions.

■ **Supporting retail distribution.** FTZs allow footwear, apparel, electronics, and high-end consumer goods importers to realize savings from consolidated weekly admissions, as well as the delay in paying duties on goods until they actually enter U.S. commerce for consumption. Major retailers such as IKEA, Under Armour, and Walmart use the FTZ program.

■ **Addressing security concerns.** FTZs operate in physically segregated and fenced areas, making it easier to account for inventory.

Zone operators establish trusted relationships with customs officials stationed at nearby ports of entry. Customs officials usually receive advance notification of foreign-sourced goods admitted to FTZs.

■ **Promoting economic growth.** An estimated 2,400 U.S. firms operated within foreign trade zones and subzones in 2010, employing 320,000 American workers. More than $500 billion in merchandise was admitted to general purpose zones and subzones in 2010—58 percent from the domestic economy, and 42 percent from abroad.

FTZs will play a key role in promoting the economic recovery and meeting the National Export Initiative goal of doubling U.S. exports between 2009 and 2014. Exports from zones and subzones jumped 23 percent from 2009 to 2010, a rate of growth well ahead of total U.S. export growth for the year.

With Washington focusing attention on reducing incentives for offshoring, the enhanced logistics facilitated by the FTZ program creates a more welcoming environment for investment and value-added economic activity in the United States. ■


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NEARSHORING LATIN AMERICA

A CLOSER LOOK

Do the advantages of locating production near the point of consumption outweigh the region's drawbacks?

By Lisa H. Harrington

THE RISING PRICE OF OIL, DRIVEN BY DWINDLING SUPPLY AND MOUNTING DEMAND FROM CHINA AND INDIA, WILL KILL GLOBALIZATION AS WE KNOW IT, writes Canadian economist Jeff Rubin in his 2009 book *Why Your World Is About to Get a Whole Lot Smaller: Oil and the End of Globalization*.

If oil is cheap, it doesn't matter how far factories are from showrooms, Rubin observes. Other expenses, such as labor and taxes, determine where companies manufacture products.

If oil is expensive and scarce, however, the equation changes. Rubin believes the world has now reached this inflection point. Reports from the trenches confirm his observation.

Once far-flung supply chains are contracting. U.S. manufacturers are bringing production back—not necessarily all the way back to the United States, but to the Americas. Trade flows that were long distance, East-West oriented for nearly two decades are shifting. They're being replaced, at least in part, by shorter, region-based trade flows—between the United States and Latin America, for example.

The price of oil isn't the only factor driving global supply chain network design, but a major shift in supply chain network strategy is underway. A new model is emerging: a regionalized global supply chain in which goods are produced, sold, and consumed in the same geographic region.

To grasp the significance of this new trend, it helps to take a look back. In 2000, U.S. manufacturers started to move production from maquiladora plants in Mexico to Asia. First, they shifted operations to Japan, then Taiwan, China, Vietnam, Malaysia, and elsewhere. They also relocated manufacturing to Eastern European countries such as Poland and Estonia.

"Most companies decided to move production using one-dimensional reasoning, based on labor costs, which represented 70 to 80 percent of the criteria considered," says Tom Page, director of customer solutions, international regions, UPS.

Even today, many firms still focus on transportation, labor, and currency exchange rates as key network design drivers. "They make decisions based on an arbitrage play on those three elements," says John Ferreira of supply chain consulting firm Accenture.

"But what happens when their customers want more unique products with short cycle times and multiple reorder points?" he continues. "They need intermediate warehouses. That drives up inventory, labor, and procurement costs because they have to manage goods coming from multiple facilities."

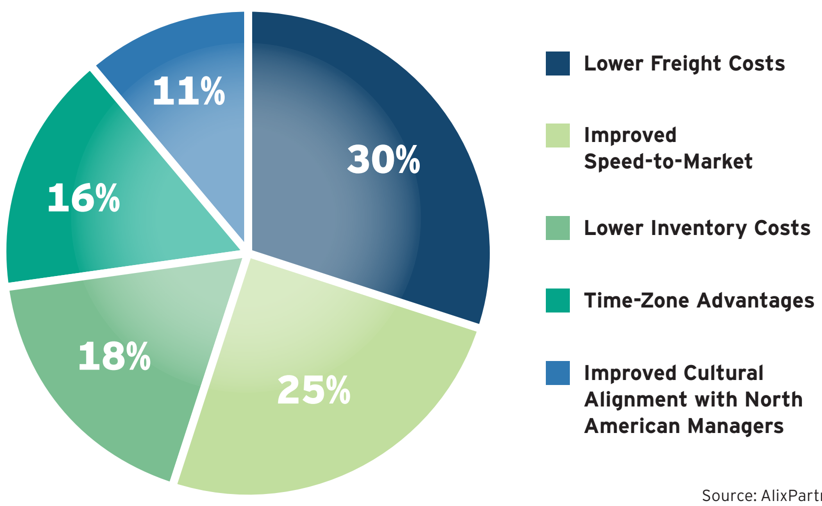
Companies find it difficult and expensive to address these customer requirements with global networks that have long supply lines.

"The North American market, for example, still represents a significant share of global demand for consumer and industrial products," says Ferreira. "Many organizations serving North America from Asia have discovered that exchange rates and increased transportation and labor costs negatively impact what they once thought were good sourcing decisions.

"As they saw these costs increase and the so-called savings evaporate, they realized other unanticipated costs were associated with far-sourcing," he adds.

Expected Advantages of Nearshoring

Respondents to a survey by consulting firm AlixPartners cite lower freight costs as the primary advantage they expect to gain through nearshoring decisions.



Source: AlixPartners

Many businesses neglected to factor flexibility and agility into their outsourcing decisions. "They didn't consider what flexibility and agility are worth, or how to quantify their value," observes Page. "You have to ask whether being able to respond to market demand faster allows you to increase sales or improve margins. If you have ready access to product, can you sell more?"

As a result of these realizations, companies are rebalancing their physical networks to match regionalized demand. Forty-two percent of survey respondents to a 2011 study by consulting firm AlixPartners indicate they are either nearshoring currently or plan to within the next three years.

More companies are reconfiguring their existing supply footprint and, as part of this process, bolstering capacity in Latin America, according to a 2011 Accenture study.

"A shift to onshore or nearshore manufacturing operations for producing local demand in nearby low-cost countries, such as Mexico for the United States, appears to be here to stay as manufacturers look for the next level of competitive advantage," says Ferreira. "In the case of Mexico and Latin America, these moves serve a dual purpose: the ability to accommodate growing markets near customers there, as well as being nearshore to the large U.S.-based demand."

HP's Nearshoring Story

Leading companies began embracing this dual-purpose supply chain strategy some time ago. Computer manufacturer HP has a significant presence in Latin America, especially Mexico. The company runs its supply chain activities for personal computers, printers, and servers for all of Latin America out of a facility in Guadalajara.

"We also provide IT support and development from Mexico," says Julio Acevedo, head of HP Guadalajara. "We started offering those services 10 years ago with 10 people. Today, more than 500 people work in support and development."

(continues on page 46)

HOW SAFE ARE LATIN AMERICA'S MARKET LEADERS?

To gauge business leaders' perceptions of Latin America's risk and safety issues, research organization Nearshore Americas surveyed 266 outsourcing decision-makers and influencers in North, Central, and Latin America. Here are its findings on four of the largest Latin American markets.

ARGENTINA

"Known for its bureaucratic red tape, nepotism, and an administration that seems uninterested in the professional services and sourcing industry as a whole, there is no doubt – based on the survey results – that Argentina still has an image problem," the Nearshore Americas study states. Thirty-eight percent of respondents strongly disagree or disagree when asked if the national government is actively involved in creating a safer climate for businesses and business investment.

Argentina did score well on personal safety, with 71 percent of survey respondents rating personal safety as high or very high.

BRAZIL

Despite ongoing violence in Rio de Janeiro, 54 percent of respondents with outsourcing interests in Brazil continue to rate personal safety at a high or very high level. "Brazil has other advantages, such as its large and scalable workforce and talented labor pool, that count for much more," comments one industry analyst.

In terms of the role government plays in creating a safer climate, 85 percent of respondents feel that political stability and democracy in Brazil are at a high to very high level. The strong trade links and political cooperation between the United States and Brazil, particularly under the current Brazilian government, will likely make North American companies more comfortable doing business there.

CHILE

Chile was ranked the safest country in Latin America by a majority of survey respondents. Civil unrest or violence was rated of very low to low concern by 80 percent of respondents, while street crime/petty theft was rated very low to low by 74 percent.

Chile's strong economy, high literacy rates, and sizeable copper wealth contribute to its positive safety ranking. Other reasons given by outsourcing buyers surveyed include the efficient courts and judicial system, uncorrupt law enforcement, and the high level of education and technological development. Respondents also have a favorable view of Chile's government, with 73 percent rating the level of political stability as high.

Notably, Chile's outsourcing action is largely concentrated in two cities, Santiago and Valparaiso; these rankings reflect only the situation there. Other parts of the country continue to struggle with poverty and income inequality.

MEXICO

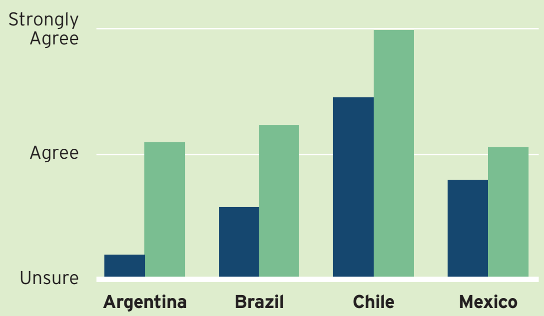
The United States' closest southern neighbor offers numerous outsourcing benefits, including time zone alignment, U.S. cultural familiarity, and a well-educated, bilingual workforce. More than 64,000 students graduate annually from Mexico's 121 technology-focused universities – more than any other Latin American nation.

The country suffers from an image problem because of drug cartel-related violence, however, and the U.S. Department of State has advised Americans to defer non-essential travel to vast stretches of Mexico.

Yet while cities close to the border, such as Juárez, are experiencing violent disruptions, other locations, including Guadalajara and Mexico City, continue to provide some of the best sourcing alternatives to U.S. companies. Currently, Mexico has not seen a drop in investment or companies pulling out, but if the drug war continues, new business may suffer.

Business Climate Perceptions: The Government's Role

Survey respondents express confidence in the Chilean government's stability, but lack faith in Argentina's leaders.



The national government is actively involved in creating a safer climate for businesses and business investment.

The country's government is stable and democratic.

Source: Nearshore Americas

(continued from page 44)

The Guadalajara operation handles centralized procurement for HP, buying more than $3 billion in materials and product annually, and manages payroll, human resources, finance, and marketing support for the United States, Latin America, and other parts of the world.

HP's Guadalajara location is part of a high-tech industry cluster of original equipment manufacturers, suppliers, contract manufacturers, and service providers. By clustering suppliers, manufacturers, and services, HP reaps the benefits of a highly qualified business ecosystem. The company leverages the strengths of the cluster—even competitors such as IBM—"to improve our service and reduce costs so we can compete against Asia," says Acevedo.

Avnet, a $17-billion global electronics distributor based in Phoenix, Ariz., recently opened a value-added supply chain operation in Nogales, Mexico, to serve both the United States and Latin America. "We wanted proximity to our U.S. customer base, and the ability to leverage the cost model in Mexico while retaining direct control," says Robert Brenner, Avnet's senior vice president of logistics, warehousing, and distribution for the Americas. "We try to keep our supply chain interregional. Our philosophy is to build and ship within one region."

A Model Concept

The decision to nearshore manufacturing is highly complex. "A modeling tool can help evaluate the variables," says Tom Page, director of customer solutions, international regions, UPS. "Modeling must include some understanding of currency fluctuation probability, low and high threshold, and how currency fluctuations contribute to overall sourcing decisions. It has to incorporate sensitivity to all decision factors."

While many models are effective at quantifying the hard costs of positioning product in a market, they may not excel at calculating the value of supply chain flexibility, which could generate additional revenue and profit.

"The model should be able to assess the opportunity an investment or decision can create, and how much that opportunity is worth," notes Page. "If you take on more cost, but can generate more revenue as a result, for example, you increase profit. But does that profit boost offset the cost of the decision?"

Even with sophisticated modeling tools, production-sourcing decisions for many products are not perfectly clear. "The fundamental concerns are reliability and consistency – how your decisions affect your ability to serve customers," says Page. "You can have the lowest costs but fail to understand your risk exposure adequately. If an event shuts down your supply chain, all savings are destroyed by a failure to understand those risks and model their sensitivity."

Decision Points

Nearshoring manufacturing makes sense for a variety of reasons. Here are some factors currently influencing corporate leaders' decisions.

RISING LABOR COSTS ABROAD "Rising U.S. labor costs and access to the Chinese labor market were primary drivers for companies' initial movement to China," says Wendy Tate, assistant professor of logistics at the University of Tennessee. "Chinese wages are now climbing at 15 to 20 percent per year, however, thanks to a supply-and-demand imbalance of skilled laborers in manufacturing regions, global pressure to upgrade Chinese labor practices and wages, and increased employee demands for better pay and conditions."

Meanwhile, flexible work rules and new government incentives in both the United States and Latin America are making these regions increasingly competitive as manufacturing source points.

VOLATILE, ESCALATING ENERGY COSTS Rising energy costs may be the biggest factor pushing nearshoring. "Transportation costs are becoming prohibitive," says Stephen Paruola, vice president, distribution and transportation, for Rainbow USA, a New York-based value retailer of women's and children's clothing and shoes. "Nearshoring through Mexico and Latin America will increase because of lower transport costs. There will also be more mode shifting from truck to rail intermodal in the United States."

As transportation becomes a larger percentage of the cost of goods, companies such as Rainbow will take steps to reduce those costs. "We are a budget chain," Paruola says. "We can't raise our prices 20 to 30 percent to cover higher transport costs, so we have to change how we manage our supply chain to reduce those costs. That means buying more product domestically, or at least closer to home."

CURRENCY EXCHANGE The value of the U.S. dollar has fallen sharply against many currencies over the past five years. With continuing signs of sluggishness, the weak dollar diminishes the cost advantages of manufacturing in low-cost countries.

TRANSIT TIME Sourcing closer to home reduces transit times, and enables manufacturers to respond more rapidly to fluctuating customer demand. Shorter transit times also reduce systemwide inventory.

FLEXIBILITY Nearshoring gives manufacturers the ability to postpone final configuration and differentiation in the sales cycle to a point closer to consumption. Postponement carries a number of benefits.

We've got 44% of your consumers in our corner.

When you're squaring off against the competition, we've got you covered.

The Port of Savannah is the Southeast anchor for U.S. retailers' four-corner logistics strategy. As the region's premier port, we have the services, access and location to give you the edge.

The Port of Savannah. **We're in your corner.**

OPTIONS
41 weekly vessel calls, 3 services every day to and from Asia

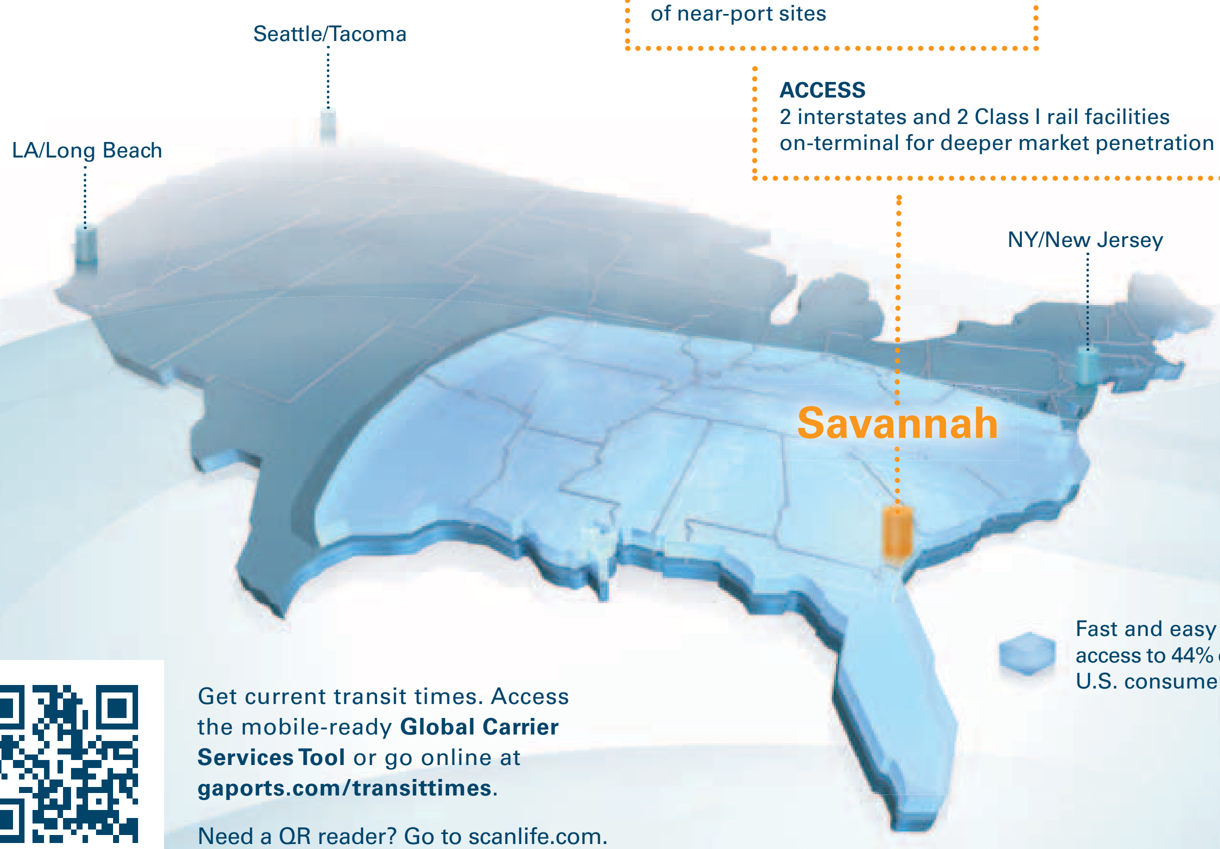
PEOPLE
The populations of Georgia and Florida combined exceed that of New York and New Jersey

ECONOMICS
8,500-TEU vessels weekly

WAREHOUSING
6 million square feet of near-port options available

LAND
5 interstate-connected corridors of near-port sites

ACCESS
2 interstates and 2 Class I rail facilities on-terminal for deeper market penetration



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Georgia Ports Authority

"A product sold in clamshell packaging can ship unpackaged in bulk from Asia to Mexico, then be packaged there, close to the U.S. market," Page notes. "This approach brings tremendous logistics value, including transportation cost savings and reduced carbon footprint."

IP PROTECTION Intellectual property (IP) rights protection is a significant and growing concern for companies manufacturing in Asia, where IP theft and counterfeiting, together with a lack of regulatory protection and enforcement, are widespread. The need for better IP protection and enforcement drives many nearshoring discussions.

While Latin America's IP laws and enforcement vary by country, many nations have signed Free Trade Agreements (FTAs) with the United States, which should guarantee IP rights to foreign companies. But the FTAs are often ambiguous or incomplete on key enforcement issues that then have to be interpreted by each country's government, leading to very different IP environments.

QUALITY Manufacturing quality and vendor qualification are major issues in sourcing from other countries. "Companies have to assess the total supply base to determine whether it can support their manufacturing effectively," says Page. "They can't just send specs to vendors and tell them to produce the part. They must ensure vendors and all their suppliers have good quality systems in place, or risk a costly product or supply quality problem. In a complex supply chain, product or quality failures can be a nightmare."

AVAILABLE TALENT "A stable work environment plays a significant role in sourcing decisions," says Mary Anne Young, senior vice president, Caribbean and Latin America West Coast, Hamburg Süd.

Questions to ask include: How big is the current qualified labor pool? Will the operation be able to scale up over the next five to 10 years? Who is competing for the same talent? What are the strengths and weaknesses? How strong is the work ethic? Do labor laws favor workers or employers?

The labor force's skillset is critical in supporting flexible production operations.

"The workforce and infrastructure must be flexible enough to change a production line on demand and still put out quality product," advises Page. Cultural affinity between the United States and Latin America is an advantage in this regard.

INFRASTRUCTURE "Just because a country was known for having solid infrastructure in the past does not mean it will in the future," says Patrick Haller of Nearshore Americas, a research organization focused on Latin America outsourcing.

Colombia's Port of Cartagena has become a major transshipment point for containerized cargo from Australia, New Zealand, and Asia.

For instance, Chile has traditionally been regarded as having stable infrastructure, but President Sebastián Piñera recently warned that Chile would face an energy crisis during his administration because of an estimated annual demand increase of up to seven percent.

Considering the full supply chain, including suppliers' product sources, is vital to accurately assess risk. "Manufacturers need to understand where suppliers are getting their products," says Page. "Most companies only assess risk of disruption to first-tier suppliers. But today, they need to be able to see every supplier level's risk to determine how it changes their overall risk equation."

"To meet demand in the Americas, it makes sense to manufacture in the Americas." –**John Ferreira,** Accenture

Hamburg Süd, UPS, and other carriers and service providers track infrastructure and security improvement efforts. "If a country doesn't maintain good roads to inland locations, its ability to grow suffers," Young says. "Mexico and Brazil are making advances in infrastructure development."

NATURAL DISASTERS No country is safe from nature's wrath, but some are more susceptible to disasters than others. Chile is more prone to earthquakes than flooding, Colombia suffers from flooding and earthquakes, and drought threatens Brazil, according to disaster reduction resource Prevention Web.

How well a country is able to address risk drivers indicates its risk-governance capacities. "In general, countries with weak governance and great difficulty addressing these drivers are low- and lower-middle-income countries," states the *United Nations 2011 Global Assessment Report on Disaster Risk Reduction*.

"Countries with the lowest risk-governance capacities are also experiencing conflict or political instability, and their development trajectories diverge not only from high-income countries but from successful low- and middle-income countries," according to the report. "Some middle-income countries, such as Costa Rica and Chile, have comparatively high-risk governance capacities, so they are better equipped to respond to a natural disaster."

POLITICAL RISK AND SECURITY "With revolution after revolution in North Africa, police crackdowns in China, and uprisings in the Middle East, the global political climate does not seem welcoming for business investment," notes Tarun George of Nearshore Americas.

Geopolitical risk must be factored into the supply chain network design decision-making process. Political risk and security issues take several forms in trade and supply chain operations.

The first is government policies and attitudes toward foreign businesses. Are foreign companies welcome to operate freely within the selected country? Does the country have a history of nationalizing private enterprises? Can the government close down an operation that is deemed contrary to its philosophy?

These are very real concerns, especially in Latin America, where some nations' political dynamics change rapidly.

"Countries such as Venezuela and Argentina, which have a history of volatile political climates, may pose higher risk," advises George. "Chile and Colombia, on the other hand, stand as recent examples of political stability."

Physical security is another risk consideration. "Security problems are increasing from the Central America nations to Costa Rica because gangs and drugs are moving into these countries," says Young. "Mexico's problems are well-publicized, but other Latin American countries have security issues, too. Understanding how governments will address these concerns helps companies plan additional security measures."

TRADE REGULATIONS AND COMPLIANCE The ease of doing business in a country is a significant factor that can quickly drive up costs. "In-country trade regulations can be vague, leaving implementation open to interpretation," cautions Page.

"If UPS prepares a shipment using the harmonized trade schedule, makes entry, and files it, the port authority representative can reject it based on how they interpret the trade regulations," he continues. "But a different customs agent could interpret the rule another way, and let the shipment through.

"When interpretation of laws is left up to individuals, doing business is tough," he says.

Getting Close to Customers

The regionalization of supply chain networks makes good business sense for many reasons. "To meet demand in the Americas, it makes sense to manufacture in the Americas," Ferreira insists. "The same goes for demand in Asia."

But changing your supply network is a long journey.

"Building new networks, a talent pool, and an integrated supplier base takes time," notes Mike Heilala, a senior manager with Accenture. "These are long-term decisions. In five to 10 years, where will your demand be, and how much will it grow and change?

"Bringing production back to the Americas so we can then export it halfway across the world is not what nearshoring is about," Heilala concludes. "It's really about getting close to customers."

With that goal in mind, and a firm grasp on sourcing decision factors, today's businesses can locate in the regions that best suit their needs. ■

OPENING THE DOOR TO TRANSPORTATION SAVINGS

Overhead Door Corporation enhances customer service while reducing fuel and distribution costs.

Just as Henry Ford's horseless carriage "put the world on wheels," C.G. Johnson transformed arrivals and departures when he invented the upward-acting garage door. Ninety years later, the Overhead Door Corporation has grown organically and through acquisition. Today, the company has a network of 450 distributors and more than 2,000 authorized dealers. It serves three major markets – commercial, residential, and rolling steel – and manufactures hundreds of thousands of garage door systems each year. What makes its supply chain work? Some of the answers might surprise you.

After introducing the upward-acting garage door in 1921, C.G. Johnson traveled across the United States with a small prototype of the door mounted on the back of his Model T. He promoted his innovation at county fairs and in small towns, established a network of distributors and the "overhead door" steadily gained popularity. In 1926, Johnson invented the first electric door opener. These two inventions formed the foundation of an enterprise that would become The Overhead Door Corporation. Today, Johnson's company is the largest single-source manufacturer of integrated garage door and opener systems and one of the most recognized brands in the industry.

Based just outside Dallas, Texas, the company has four corporate divisions. Horton Automatics® is a manufacturer of sliding, swing and revolving doors and entrance systems. TODCO® produces cargo doors for trucks and trailers. The Access Systems Division (ASD) manufactures Overhead Door® and Wayne Dalton® brand residential, commercial and rolling-steel doors. Genie® produces garage door operators and openers for residential and commercial applications.

"Our residential business took off in the 1950s and 60s when people started moving to the suburbs and rural areas," says Overhead Door Vice President of Manufacturing Operations, Brad Knable. "In 1994, we acquired Genie, maker of the first mass-produced remote garage door opener. Then, in 2009, we purchased the Wayne Dalton Company. Today, we're the only company that provides both garage doors and openers from a single-source supplier."

Driving success takes a serious distribution network

Not surprisingly, it takes a serious distribution network, skilled drivers, and a state-of-the-art fleet to keep Overhead Door's supply chain moving smoothly. "Garage door products are difficult to transport – there's just no easy way around it," Knable points out. "Our product is cube-intensive and easily damaged. When you load three or four-section garage doors into the back of a truck, it's like a puzzle. You've got track, springs, different models of garage doors and door sections. No two trucks are ever loaded the same way."

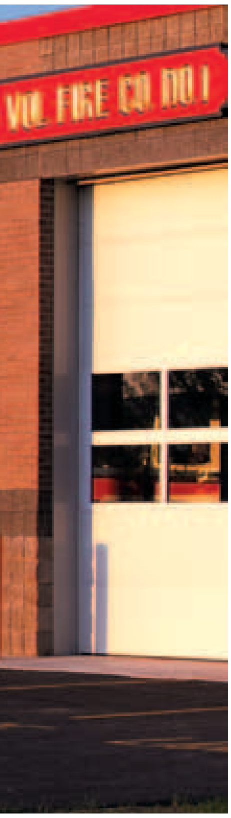
A significant issue that Overhead Door faces in transporting

AT A GLANCE

Challenge
Improve distribution and transportation efficiencies while minimizing product damage and enhancing the customer experience.

Solutions
Dedicated fleet with state-of-the-art, covered, aluminum trailers operated by skilled drivers. Progressive fuel program to reduce consumption and increase backhauls to offset costs.

Benefits
- Increased trailer utilization by 20 precent
- Reduced fuel costs by 3 percent since 2009
- Cut distribution and transportation costs by 4 percent
- Improved customer satisfaction by 10 percent
- Generated $1.5 million in third-party back-haul revenues



Brad Knable
Vice President of Manufacturing Operations, Overhead Door

products is damage. If a driver unloads a four-section garage door and hits a section, the whole door may have to be replaced. That can be costly. "Managing your own fleet and drivers can be a challenge," states Overhead Door Vice President of Demand Planning and Logistics, Bobby Gentile. "You can use common carriers, but the risk of damage increases. Up to 90 percent of our shipments are multi-stop loads, so drivers have to know how to handle, load and brace products without damage."

Until the late 1980s, Overhead Door relied on a combination of a private fleet and common carriers. However, they wrestled with excessive product damage and drivers who weren't invested in maintaining a high level of customer service. "We ship to the same dealers and distributors every week," says Overhead Door's Director of Domestic Transportation, George Aljoe. "Our drivers have to build relationships with customers. Many of our customers are small businesses and the people meeting our drivers are often decision-makers, so it's important that the delivery experience be a smooth one."

In order to improve its supply chain performance, Overhead Door began evaluating potential transportation partners in 1999 and decided to outsource much of its fleet to Ryder under a dedicated contract carriage arrangement. The decision yielded almost immediate benefits - less in-transit product damage, stronger customer relationships, improved equipment utilization and lower distribution costs. By outsourcing its fleet to a reliable supply chain partner, Overhead Door could now shift its full attention to its core business.

The solution: dedicated contract carriage with specialized driver handling

Transportation, delivery and logistics are critical to Overhead Door's success, especially from a customer perspective. Dealers and distributors want the right door delivered at the right time - intact. Overhead Door sees its drivers as an extension of its customer service group. "They interface with the distributors and help them unload trucks – something you don't get with a common carrier," notes Ryder Senior Logistics Manager, Steven Dippery.

The majority of the fleet is used to haul outbound loads to dealers and distributors. However, on the inbound side, the trucks are also used to pick up steel and other raw materials from suppliers and transport them to the plants. "Ryder handles all of the scheduling, notifies the customers when they're coming and helps unload the trucks," says Dippery. "Our new contract

> “Our products are floor-and hand-unloaded, so it’s tough to gauge when a truck will arrive. Ryder’s on-board computers collect data on the weight and square footage of a truck and how long it’s at a location to predict how long it will take to unload and when it will reach its next stop.”

Brad Knable, *Vice President of Manufacturing Operations, Overhead Door Corporation*

includes driver-assisted unloading. The driver actually gets up in the trailer and helps unload the materials.”

Today, the Ryder solution comprises a mix of inbound and outbound supply chain management and dedicated contract carriage services. Across 3 states and 4 specialized plant locations, Ryder operates a fleet of 80 trailers and 40 tractors for Overhead Door.

Keeping the wheels of business turning at Overhead Door

Overhead Door’s trucks deliver from manufacturing facilities to dealers and distributors every week. Customers submit orders by a designated cut off date and, depending on the mix of products, the order is scheduled for the next available load and sent to manufacturing. The manufacturing department then determines the most efficient way to produce the products. The transportation department bundles the order with other shipments going to the same region or builds a custom route for the shipment. “Building shipments is equal parts art and science,” says Knable. “Two shipments can take up the same cube on a truck, but you have to load them differently based on the size of the doors. We automate the process as much as possible, but someone still has to load-plan the orders.”

Once Overhead Door builds the load, information about the load goes back to manufacturing and to Ryder. Meanwhile, Ryder matches up drivers with the load. On the designated ship date, the driver arrives at the loading dock, picks up the load and paperwork and heads out.

More stops, smarter loading, happier customers

In 2005, Ryder replaced tarped, steel flatbed trailers with Conestoga covered aluminum trailers to support the rolling steel business. These trailers are more efficient and easier to offload from the side. “You can cube out the Conestoga better than a regular flatbed trailer,” adds Gentile, “so you can get more product on the truck. Any time you increase the volume of product you can load, you can reduce your fleet size, make better use of equipment, use fewer drivers and cut overall costs.”

As for the actual loading methodology, Ryder helped there, too. A team of Ryder logistics experts traveled to the Lewistown plant and worked with the transportation team to make process improvements. “They developed a loading system to maximize the amount of cargo we could get on the trailers and reduce the number of outbound loads. They also participated in a Kaizen event to

(From left to right) Bob Vollmer, Group Logistics Manager, Ryder; Steve Dippery, Senior Logistics Manager, Ryder; Brad Knable, Vice President of Manufacturing Operations, Overhead Door and Brien Bell, Group Director of Operations, Ryder review transportation strategies.

help us improve utilization of our trailers in our Dalton, Ohio rolling steel facility," says Gentile.

Driver training: less damage, less risk and more peace of mind

Given the complexities of delivering different models of garage doors and an array of parts and accessories, the Overhead drivers are a pivotal piece of the puzzle, and have to be well trained and willing to maintain strong relationships with customers. When Overhead Door renewed its contract with Ryder, driver-assist service was a key requirement. "With the economy the way it is, many of our customers have scaled back on labor. Now, Ryder drivers also help customers unload products from their trucks, which saves on labor costs," says Gentile. "So far, the feedback is favorable. It's a value-added service customers receive at no extra cost."

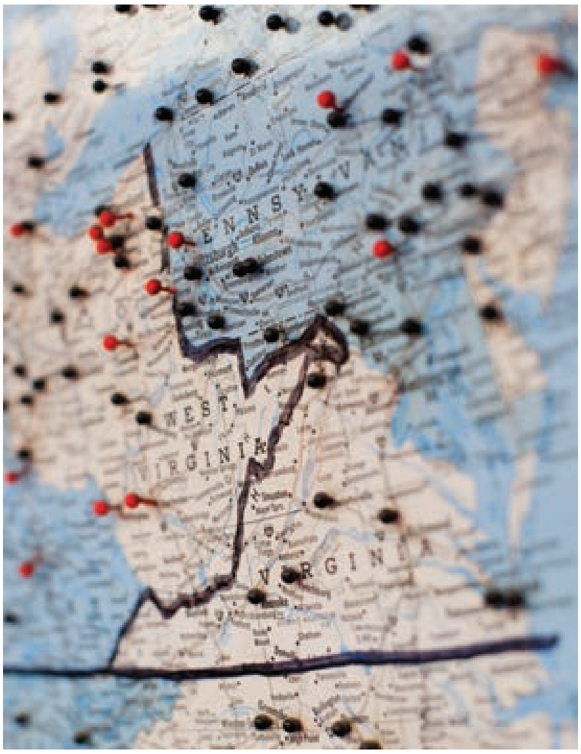
Ryder puts its drivers through a rigorous training program to familiarize them with Overhead Door products, parts and loading/unloading. "This isn't your typical line-haul operation," says Dippery. "With six to 18 stops per trailer, we use fewer drivers, but they have to know what they're doing."

"By outsourcing much of the transportation process to Ryder, we can focus on our core business instead of worrying about whether our drivers meet CSA safety regulations," says Gentile. "With changing government regulations, lots of transportation companies have gone out of business and even more drivers are leaving the industry. As the economy rebounds, finding qualified drivers will be a challenge. With the Ryder dedicated solution, it's something we don't have to worry about."

Improving network visibility to leverage synergies

Ryder is also helping Overhead Door optimize its supply chain by improving efficiencies across the network. "We've started looking at our operation as a network rather than a series of discrete sites. We have multiple plants and hundreds of suppliers, authorized dealers and distributors," says Gentile. "Our vision is to transform our plants, suppliers and distributors into a planned, visible network. With the integration of the recently acquired Wayne Dalton products, we've doubled our trucks and routes. And we now have a centralized transportation operation, so we can focus on improving efficiencies," he adds.

In the past, Overhead Door struggled with capturing performance data, predicting arrival times, calculating distribution costs and identifying opportunities for improvement. Ryder developed a scheduling tool to help plan routes and estimate when drivers will arrive at customer sites. "Our products are floor- and hand-



unloaded, so it's tough to gauge when a truck will arrive," Knable says. "Ryder's on-board computers collect data on the weight and square footage of a truck and how long it's at a location to predict how long it will take to unload and when it will reach its next stop."

Then there's the issue of network synergies. In the past, the drivers would leave the plants, drop their loads and return with empty trucks. Together Ryder and Overhead Door are exploring ways to backhaul products between plants, pick up inbound shipments from suppliers and synchronize routes. To ensure continuous improvement, Overhead Door gets information on its supply chain every month and meets with Ryder quarterly to review business performance. "We go over metrics, they answer questions, make suggestions and generally partner with us," says Aljoe. "Together we use the KPIs to help us identify specific areas of our operation that can be improved."

On-time delivery boosts customer service

Since outsourcing fleet operations to Ryder, Overhead Door has continued to improve customer service by focusing on improving on-time delivery performance. "Ryder contributes by making sure equipment and drivers are available. That way, when we plot a route, they can hit the delivery windows," Knable notes. On-time delivery, coupled with product handling improvements, has yielded a marked improvement in customer service.

inbound logistics

FACING LOGISTICS CHALLENGES? USE IL'S 3PL EXPERTS AND

2012 Global Logistics Guide

The "currency events" of the past year expose how interconnected the global supply chain has become. While North America has been beset by various stages of economic recession during the past three years, the more recent debt crisis in Europe threatens to shake the resilience of Asian markets—which in the past have weathered economic storms favorably. When one domino falls, its quake has far-reaching effects.

As a backdrop to this financial drama, social upheaval and political instability in the Middle East and North Africa, recurring natural disasters, terrorism and piracy, and the approaching completion of the Panama Canal's expansion project twist U.S. supply chains in countless directions. Companies are forced to confront latent risks and opportunities as they scope out sourcing, manufacturing, distribution, administrative, and selling locations. Secondary and tertiary sourcing strategies, nearshoring, and business expansion – especially with total logistics costs and demand responsiveness in mind – are bringing peripheral targets into focus and casting rutted routes in new light.

Inbound Logistics' eighth-annual Global Logistics Guide presents a transportation and logistics world atlas to help you map and ordinate locations for further exploration.

IL identifies global hotspots as excelling in three key areas:

1. TRANSPORTATION INFRASTRUCTURE. The density and breadth of airport, port, and road infrastructure.

2. IT COMPETENCY. The progressiveness of information and communication technology investment and development as measured by The World Economic Forum's Networked Readiness Index.

3. BUSINESS CULTURE. The strength and expertise of homegrown logistics talent, cultural and language similarities, government leadership, historical U.S. foreign direct investment outflows, and economic freedom. This index takes into account variables that might appeal to U.S. businesses, as well as pro-business sensibilities ranging from investment trends to future economic potential.

There are intangibles at play, as well. Our X-Factor provision considers other factors such as political stability, labor availability, and foreign investment policy that may give businesses greater pause, or greater purpose, as they evaluate a country's logistics capabilities.

Our Global Logistics Guide offers a macro-perspective of global regions to help you quantify and qualify expansion opportunities. We then break each area down with country-specific snapshots that identify strengths and weaknesses to help you align logistics and supply chain needs. If you have questions or suggestions about our methodology and selections, please email: editor@inboundlogistics.com

METHODOLOGY:

Countries are ranked on three criteria: transportation infrastructure (1 to 4 points), IT competency (1 to 3 points), and business culture (1 to 3 points). Points are totaled for all categories – taking into consideration X-Factor +/- points – to determine final ranking: 10 is highest, 3 is lowest.

Sources: U.S. Department of State; World Port Rankings, American Association of Port Authorities (AAPA); Airports Council International; World Economic Forum's Growth Competitiveness Index; World Economic Forum's Global Information Technology Report; Central Intelligence Agency's World Fact Book; Bureau of Economic Analysis, U.S. Direct Investment Abroad; 2012 Index of Economic Freedom, The Wall Street Journal & The Heritage Foundation.

The Americas

Canada is the primary export destination for U.S. goods. The country's abundance of natural resources is a growing target for Asia, creating more balance between inbound and outbound flows.

Central and South America are manufacturing and sourcing focal points for U.S. companies as transport costs and risk aversion favor nearshoring strategies. South America, and Brazil specifically, is primed to become the next logistics hotspot by virtue of its raw materials, labor, and proximity to the U.S. market. But inland infrastructure limitations and political apathy are barriers to entry. Progressive economies such as Chile, Peru, and Colombia provide a foil for Venezuela, Bolivia, and Ecuador, where anti-capitalist governments thaw interest and investment.

Canada

SCORE **9**

GDP:	$1,759
EXPORTS:	$451
IMPORTS:	$460
FDI 2010:	$297

T	I	B	X
3	3	3	0

An abundance of natural resources, and growing export demand from Asia, have kept the economy relatively stable.

Colombia

SCORE **5**

GDP:	$322
EXPORTS:	$55
IMPORTS:	$50
FDI 2010:	$7

T	I	B	X
2	1	1	1

X-FACTOR Chinese sourcing interests and a free trade agreement with the United States are cause for international intrigue. Bogota is also a new entrant among the world's Top 50 cargo airports.

Mexico

SCORE **6**

GDP:	$1,185
EXPORTS:	$336
IMPORTS:	$342
FDI 2010:	$90

T	I	B	X
1	1	2	2

X-FACTOR Location. Location. Location. With total landed logistics costs at a premium, U.S. companies continue to favor the country's proximity to U.S. markets—in spite of rampant drug violence and limited technology infrastructure.

FDI: U.S. Foreign Direct Investment, 2010

T: Transportation Infrastructure

I: IT Competency

B: Business Culture

X: X-Factor

All amounts in $US billions.

Chile

SCORE **5**

GDP:	$243
EXPORTS:	$86
IMPORTS:	$72
FDI 2010:	$26

T	I	B	X
1	2	2	0

Chile is the continental leader in technology infrastructure, ranking 39th globally in network readiness and second among middle-income economies, according to the World Economic Forum.

Brazil

SCORE **5**

GDP:	$2,518
EXPORTS:	$251
IMPORTS:	$220
FDI 2010:	$66

T	I	B	X
2	1	1	1

X-FACTOR Despite political bureaucracy and nebulous inland transportation networks, Brazil teems with potential. As host to the 2014 World Cup and 2016 Summer Olympics, infrastructure development will be a matter of necessity rather than choice.

Europe

The financial crisis has had a marked impact on the region's prospects as bailouts, currency speculation, and ongoing economic integration present their share of obstacles. While the European Union has created a platform for countries to collaborate, compete, and trade on, it has also created considerable imbalances between member states. Perennial logistics hotspots such as Germany and France expect marginal GDP growth in 2012.

The financial failures of Greece, Portugal, and Ireland cast a pall across the continent. Political and economic stability are now at a premium for foreign investors. Countries such as Switzerland and the Netherlands have benefited the most. Apart from the United Kingdom, both countries rank among the highest destinations for U.S. FDI and have become popular locations for American companies locating financial services, research and development, information technology, and administrative operations.

On the transportation side, Europe is still struggling to fully integrate rail freight into the supply chain. Recent moves by European carriers to harmonize standards across countries mirror similar efforts to create intermodal landbridges linking Europe and Asia, as well as the Mediterranean.

FDI:	U.S. Foreign Direct Investment, 2010
T:	Transportation Infrastructure
I:	IT Competency
B:	Business Culture
X:	X-Factor

All amounts in $US billions.

Belgium

SCORE **8**

T	I	B	X
4	2	2	0

GDP:	$529
EXPORTS:	$332
IMPORTS:	$332
FDI 2010:	$74

The country's transport infrastructure ranks among the best and most diversified in Europe with two ports and two airports among the world's Top 50 in cargo throughput.

Netherlands

SCORE **10**

T	I	B	X
4	3	3	0

GDP:	$858
EXPORTS:	$577
IMPORTS:	$514
FDI 2010:	$521

In the midst of the Eurozone debt crisis, the Netherlands set a record for foreign direct investment. Many U.S. companies have made the country their primary European distribution hub.

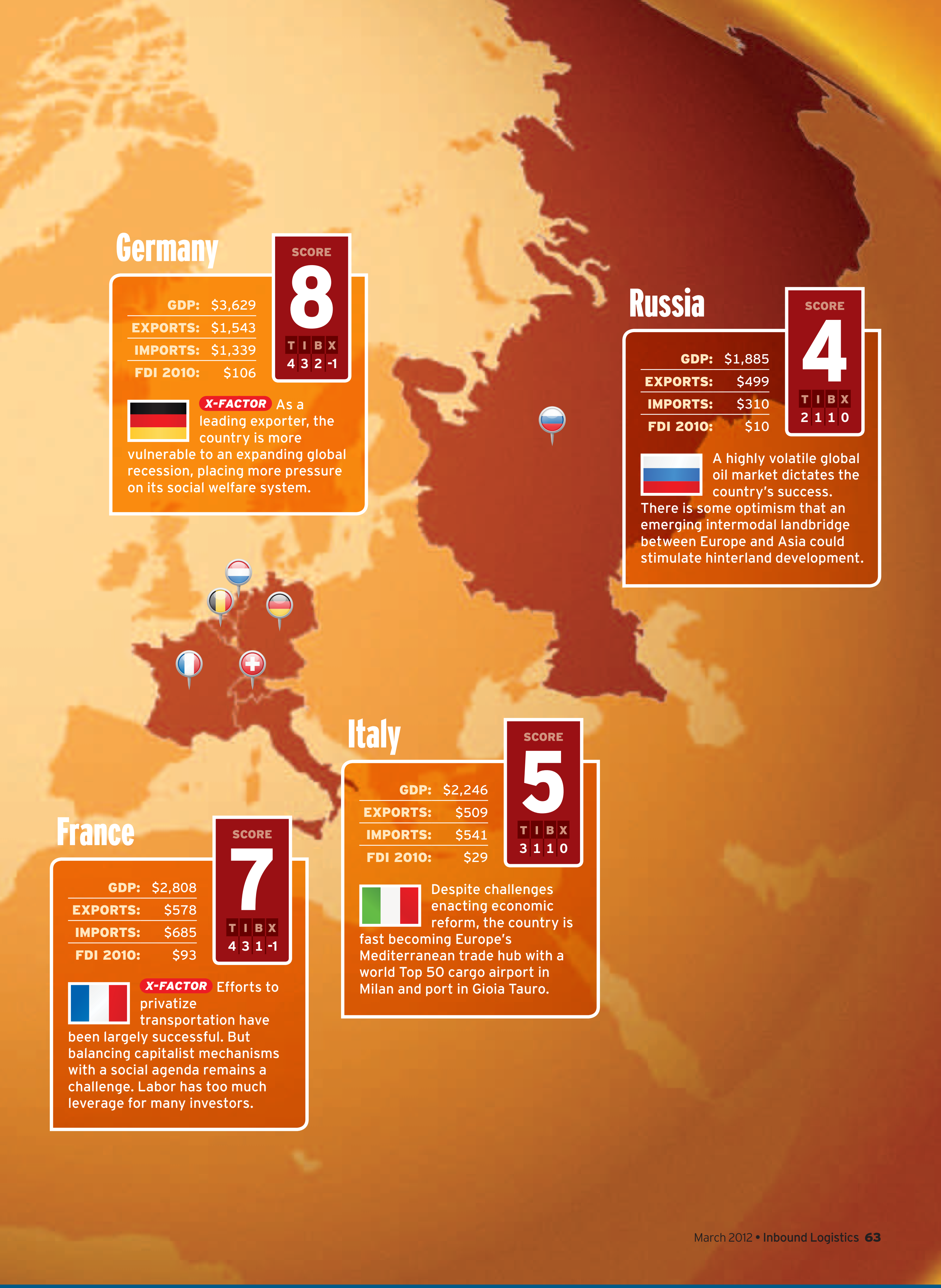
Switzerland

SCORE **8**

T	I	B	X
1	3	3	1

GDP:	$666
EXPORTS:	$308
IMPORTS:	$300
FDI 2010:	$144

X-FACTOR The island of stability is easily one of Europe's bright spots. A proactive business climate combines with cultural and geographic centrism to make the country a top target for U.S. investment.



Germany

SCORE **8**

T	I	B	X
4	3	2	-1

GDP:	$3,629
EXPORTS:	$1,543
IMPORTS:	$1,339
FDI 2010:	$106

X-FACTOR As a leading exporter, the country is more vulnerable to an expanding global recession, placing more pressure on its social welfare system.

Russia

SCORE **4**

T	I	B	X
2	1	1	0

GDP:	$1,885
EXPORTS:	$499
IMPORTS:	$310
FDI 2010:	$10

A highly volatile global oil market dictates the country's success. There is some optimism that an emerging intermodal landbridge between Europe and Asia could stimulate hinterland development.

Italy

SCORE **5**

T	I	B	X
3	1	1	0

GDP:	$2,246
EXPORTS:	$509
IMPORTS:	$541
FDI 2010:	$29

Despite challenges enacting economic reform, the country is fast becoming Europe's Mediterranean trade hub with a world Top 50 cargo airport in Milan and port in Gioia Tauro.

France

SCORE **7**

T	I	B	X
4	3	1	-1

GDP:	$2,808
EXPORTS:	$578
IMPORTS:	$685
FDI 2010:	$93

X-FACTOR Efforts to privatize transportation have been largely successful. But balancing capitalist mechanisms with a social agenda remains a challenge. Labor has too much leverage for many investors.

Middle East/Africa

The Arabian Peninsula has been party to considerable development and growth in the past decade, with the United Arab Emirates, Qatar, Oman, Kuwait, Bahrain, and Saudi Arabia benefiting from more liberal economies. But the absence of major domestic export industries created a risky imbalance that threatens future growth. And the U.S. military's drawdown in Iraq and Afghanistan will similarly impact freight volumes and revenue moving through the region.

The 2011 Arab Spring uprisings in North Africa and the Middle East cast the region in a new light as social and political reform continue to shape economic transformation. Despite current volatility, Europe recently reached out to Egypt, Tunisia, Morocco, and Jordan in an effort to grow trade alliances and likely inroads into a new continent—Africa.

The last frontier for economic development remains mired in political instability, war, and poverty. Africa's wealth of natural resources has lured China to prospect new sourcing locations, which will only stimulate further interest from around the world. African nations now confront the task of working together to coordinate transportation networks so they can begin to compete as a continent.

FDI: U.S. Foreign Direct Investment, 2010
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I: IT Competency
B: Business Culture
X: X-Factor

All amounts in $US billions.

United Arab Emirates

SCORE **6**

T	I	B	X
3	2	1	0

GDP:	$358
EXPORTS:	$265
IMPORTS:	$186
FDI 2010:	$4

The Emirates is the Middle East's shining star in terms of transport, with two ports and an airport among the world's Top 50. Questions remain how the economy will fare in the long term given its lack of diversified industries.

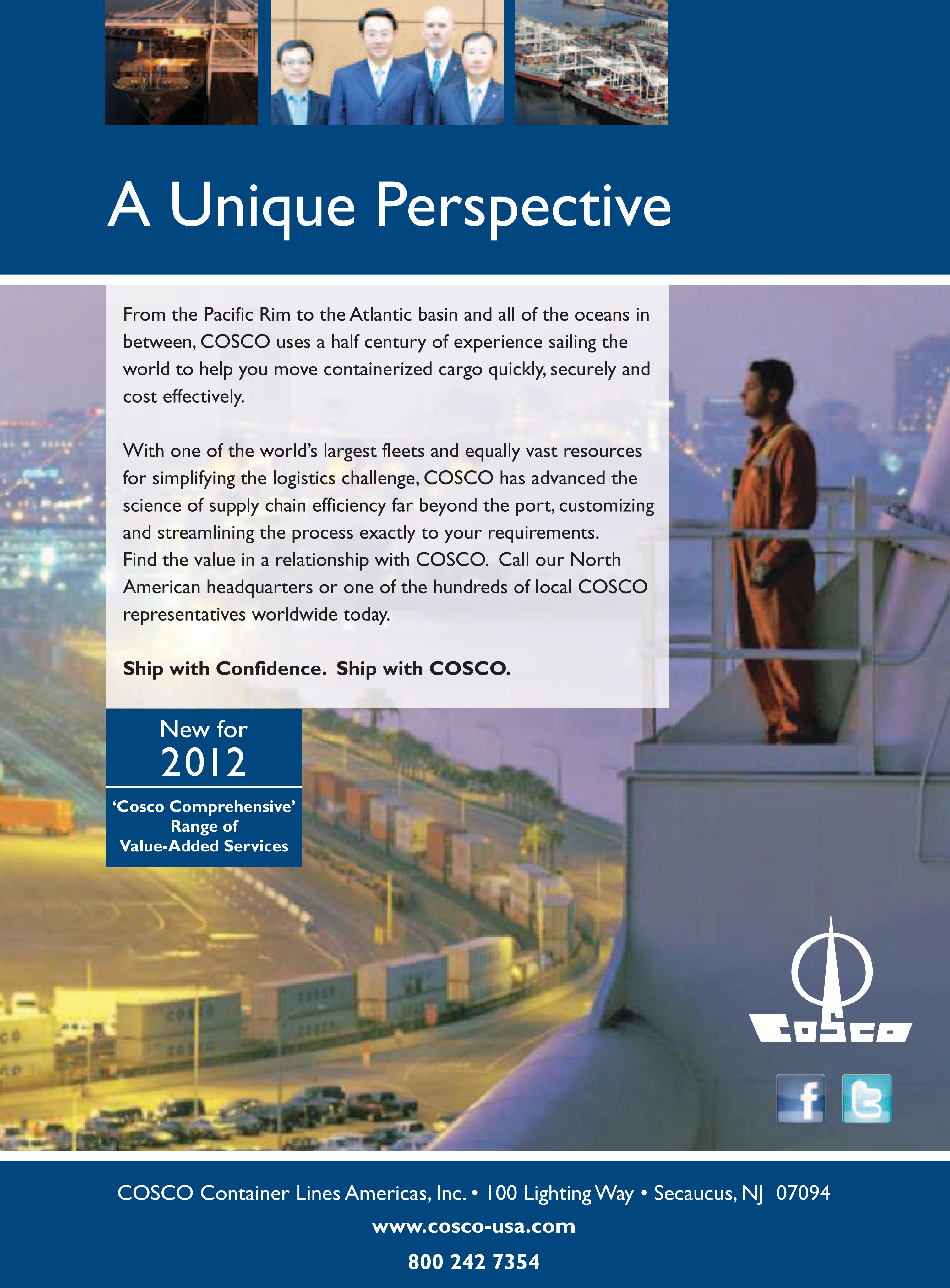
Egypt

SCORE **3**

T	I	B	X
2	1	1	-1

GDP:	$232
EXPORTS:	$28
IMPORTS:	$57.00
FDI 2010:	$12

X-FACTOR Despite recent development around the Suez–a critical valve in the Eurasian trade–recent political upheaval has only exposed the country's social inequalities.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Asia

China's role in shaping the Asian market continues to evolve. A new regime in North Korea is looking to its northern neighbor as an example of "Communist capitalism." Japan, facing uncertainties in the aftermath of the 2011 earthquake and tsunami, called for greater communication and integration with China to expand trade interests. South Korea, meanwhile, sees its recent free trade agreement with the United States as a means to draw more investment from both Japan and China as it stimulates business and job growth.

While China remains a top target for offshore manufacturing, it is adapting to global shifts in demand. Declining exports to North America and Europe stirred domestic consumption, more aggressive infrastructure projects, and further development of domestic industries such as aerospace. These progressions paved the way for the U.S. and other foreign companies to make tentative overtures selling products and services into an otherwise isolationist market. As China's manufacturing costs increase and production moves farther inland—thereby raising transportation spend—Southeast Asia is becoming an alternative location for cheaper labor.

China

SCORE **7**

T	I	B	X
3	2	2	0

GDP:	$6,989
EXPORTS:	$1,897
IMPORTS:	$1,664
FDI 2010:	$115

The government continues to pull strings as dropping export demand is channeled into domestic development and growth. The country continues an aggressive path building its own industries.

Thailand

SCORE **5**

T	I	B	X
3	1	1	0

GDP:	$339
EXPORTS:	$244
IMPORTS:	$215
FDI 2010:	$13

Severe flooding capped growth in 2011, and had a great impact on high-tech manufacturers sourcing components. But the country is expected to fully rebound with the help of a Top 50 airport and port.

India

SCORE **6**

T	I	B	X
2	1	2	1

GDP:	$1,843
EXPORTS:	$298
IMPORTS:	$451
FDI 2010:	$27

X-FACTOR The country is counting on more liberal FDI rules to help grow logistics expertise and spur market growth. On the transportation side, railroad development between ports and hinterland industrial pockets is critical.

Malaysia

SCORE **6**

T	I	B	X
3	2	1	0

GDP:	$248
EXPORTS:	$213
IMPORTS:	$168
FDI 2010:	$16

Outside of Singapore, Malaysia commands the most U.S. FDI in the region. But the country's reliance on commodity exports makes it highly vulnerable to global price fluctuations.

Singapore

SCORE **9**

T	I	B	X
4	3	3	-1

GDP:	$267
EXPORTS:	$432
IMPORTS:	$387
FDI 2010:	$106

X-FACTOR Heavily reliant on global trade flows, and home to the top container port in the world, it has felt the full impact of the global recession. Political stability has kept FDI fluid.

Vietnam

SCORE **4**

T	I	B	X
2	1	1	0

GDP:	$122
EXPORTS:	$97
IMPORTS:	$104
FDI 2010:	0.623

China's inflationary trajectory has created a void for new low-cost labor countries in Southeast Asia, and Vietnam is capitalizing. Ho Chi Minh is a new entrant among the world's Top 50 cargo ports.

Southeast Asia

India's recent decision to ease FDI rules is expected to unleash a flood of pent-up demand from foreign companies seeking an inside track into one of the world's largest consuming populations. The government's strategy is aimed at triggering more domestic competition while raising the standard of transportation and logistics performance. India's transportation capabilities, especially from coastal ports to inland manufacturing and consumer pockets, are still largely antiquated.

Elsewhere, Southeast Asian countries find themselves in a purple patch courting foreign demand for low-cost manufacturing. Chinese inflation has only raised the profile of countries such as Thailand, Malaysia, Vietnam, and the Philippines. While recent tsunamis and floods have devastated supply chains concentrated there, ports and airports are well-developed, even if inland transportation remains lacking.

On the downside, as the European debt crisis continues to unfold, less-developed markets reliant on exports will feel the pinch.

South Korea

SCORE **8**

T	I	B	X
3	3	1	1

GDP:	$1,164
EXPORTS:	$559
IMPORTS:	$525
FDI 2010:	$30

X-FACTOR The free trade agreement with the United States will likely have a positive effect on FDI growth in South Korea – which at $30 billion, lags behind Japan, Hong Kong, China, and Singapore.

Japan

SCORE **7**

T	I	B	X
4	3	2	-2

GDP:	$5,855
EXPORTS:	$801
IMPORTS:	$795
FDI 2010:	$113

X-FACTOR New construction and companies making up for lost manufacturing output are helping to stimulate the economy in the near term. Growth is driven by domestic demand, which begs to question long-term stability.

Philippines

SCORE **5**

T	I	B	X
3	1	1	0

GDP:	$216
EXPORTS:	$54
IMPORTS:	$69
FDI 2010:	$6

An emerging offshore logistics hotspot with a Top 50 cargo port and airport in Manila, the Philippines has thus far weathered the global recession favorably.

Taiwan

SCORE **8**

T	I	B	X
3	3	2	0

GDP:	$505
EXPORTS:	$325
IMPORTS:	$299
FDI 2010:	$21

Taiwan's high-tech manufacturing niche is expected to keep the economy on solid footing. China's overtures and the country's muddled political status are backdrop concerns.

FDI: U.S. Foreign Direct Investment, 2010
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All amounts in $US billions.

AS THE WO

by Joseph O'Reilly

Mobile phone manufacturer Nokia recently announced plans to shift smartphone assembly from Finland, Hungary, and Mexico to Asia, offering a telling example of how global companies are adapting their supply chains to variable trade winds. The Finnish company aims to refocus lower-value activities closer to component sources, thereby increasing supply chain responsiveness and reducing total landed logistics costs. Value-added assembly and logistics functions will remain largely in Europe.

Continental instability, national volatility, and economic vulnerability force shippers to put their own spin on global challenges.

RLD TURNS

"We are aligning our manufacturing strategy to increase competitiveness," says Nokia spokesperson Mona Kokkonen. "We need to optimize our manufacturing operations so we can collaborate more closely with suppliers and be more responsive to customers' needs."

Pulling jobs out of Finland couldn't have been an easy decision for the world's largest mobile phone maker, whose lineage in the country dates back to the 19th century. And while Nokia has stuck to the company line justifying its realignment, other factors were likely considered.

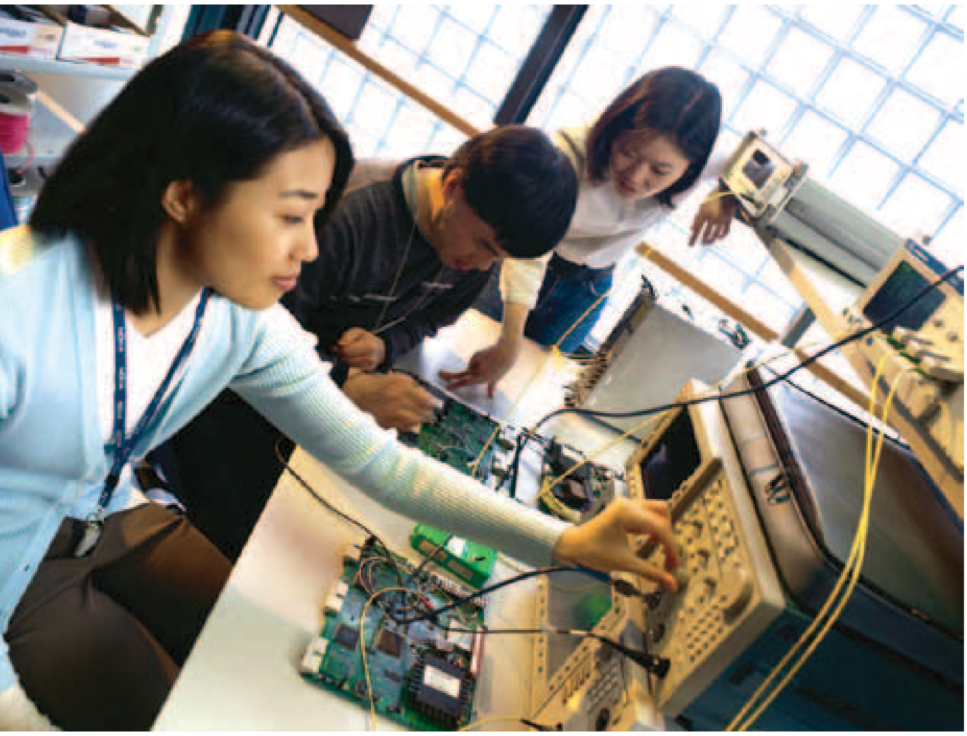
The company, ranked third in global smartphone production behind Samsung and Apple, has had its eye on Asia for some time. In 2011, it announced plans to open a new Vietnam factory, which will join existing operations in China, India, and Korea. Increasing demand among Asia's growing middle class for smartphone products may also be driving Nokia's decision.

The corporation's predicament is by no means unique. Other multinational companies in the United States and around the world have been equally influenced by changes in the global economy—contraction and isolationism in Asia, the Eurozone debt crisis, the South American enigma, and recurring political and social volatility in the Middle East and North Africa.

The importance of supply chain alignment—matching supply to demand signals, contingency planning and redundancy, and balancing go-to-market growth opportunities with supply-side sourcing needs—has only grown in scope. Global distribution networks must be fluid to accommodate unpredictability. Considering current world events, it's not difficult to understand why.

From a global perspective, China remains the red elephant in the corporate boardroom. The country's explosive economic growth from a primary offshore manufacturing destination to an emerging second-world export market has turned supply chains on end.

China managed to isolate itself, to a great degree, from the prolonged recession that gripped the United States.



As part of its strategy to align lower-value activities closer to component sources, Nokia is shifting smartphone operations from Finland, Hungary, and Mexico to Asia.

Government mandates to steer production output inward, and stimulate domestic consumption, infrastructure development, and industrial growth helped the country adjust when U.S. imports began to run dry, bringing greater balance to imports and exports.

Europe's more recent financial crisis, however, has had a greater sting. It became China's foremost trading partner, responsible for 25 percent of all exports. Now there is concern that Chinese economic contraction – natural or orchestrated – will have a major impact on smaller Asian countries that rely heavily on exports, especially to the mainland.

While U.S. companies are still heavily invested in China, machinations in play are slowly drawing interest to other boutique sourcing options.

"Higher wage rates along China's east coast, escalating fuel costs, and an ongoing shift in favor of fast, agile supply chains that avoid inventory carrying costs and enable quick responses to market conditions will yield two important results," says George Brown, CEO and co-founder of Blue Canyon Partners, a Chicago consultancy.

"First, more of China's manufacturing will move to the western part of the country, a remote region where labor costs remain relatively low and logistics infrastructure is less developed.

"Second, production will shift to other countries," Brown continues. "In some cases, it will move back to North America, which creates an opportunity for Mexico to capture business. In other cases, the shift will be to alternate low-cost Asian locations, such as Vietnam and Thailand."

EVOLVING ECONOMIES

This manufacturing migration has been occurring in China and elsewhere in Asia over the past few years, as countries slowly evolve their economies.

"China has a 50-year runway to get from third- to second-world, then another 50 years from second- to first-world—much like Hong Kong's transition from low-tech apparel to high-tech products, and now financial services," says David Morgan, CEO of Pleasanton, Calif.-based third-party logistics provider D.W. Morgan.

"Vietnam's low-cost labor is now highly regarded, and coastal Chinese cities such as Shenzhen and Shanghai have become second-world," he adds. "They want to consume want they are making."

Asia's transformation is also changing the way global companies look at export growth opportunities. It used to be a continent of 3.5 billion workers; now it has 3.5 billion consumers.

Some American supply chains that were previously weighted for import volumes are rebalancing as Asia's appetite for U.S.-sourced agriculture and consumer goods grows. And for the minority of wholesale and retail companies that have been allowed the privilege to sell into these markets, the potential is enormous.

Walmart has increased its stake in China with a controlling interest in e-commerce Web site Yihaodian. Amazon is making a similar play in India, thanks to the government's recent decision to liberalize its foreign investment policies. Nokia is also well aware of this reality, especially as it looks to be more competitive in the smartphone market.

But cultural and regulatory barriers to entry still exist. Only multinationals with clout—and intellectual collateral—can even fathom the notion of penetrating the Chinese market.

"India is most receptive to bringing in products to build its infrastructure, whereas China will bring products in to copy them," says Morgan.

Then there are transportation and logistics concerns. Amazon's entry into India is largely predicated on fulfilling back-end support for the country's fledgling e-commerce industry—which, in the long run, may pay huge dividends.

3PLs and forwarders are less inclined to broker services to local trucking companies and warehouses for obvious security, cost, and customer service concerns. Instead, many are investing in worker training and putting their own assets on the ground as an added measure of assurance and insurance. When the retail rush eventually peaks, the clever proprietors selling their transportation assets and logistics tools will ultimately strike gold.

EUROPE CONFRONTS CHANGE

Developments in Asia resulting from North America's lingering recession and the Eurozone debt crisis are circling back to Western economies such as Germany. From an air cargo perspective, China has become a challenge for Frankfurt-based airline Lufthansa Cargo. The country's increasing isolationism and economic contraction has precipitated a noticeable change in freight flows.

"China is our biggest headache at the moment," says Nils Haupt, director of communications, Lufthansa Cargo. "This market has declined sharply for Europe and Germany. We saw significant freight decreases during the last four months of 2011. A lot more capacity is going to China, so demand and yields have dropped."

Unlike other European countries, Germany has managed to deflect recessionary effects by stimulating private investment, cutting taxes, growing jobs while reducing labor hours—its unemployment rate is at a record low—and expanding non-EU exports. The rest of the story on the continent is far less favorable.

"Europe's economic environment is forcing people to look outside," says Morgan. "As Asia rises, Europe is falling because of economic policies. Governments either enable or discourage the right environment, and many in Europe aren't allowing for potential growth."

For Eastern Europe and Russia, this characterization is an understatement. Russia remains a monolith in terms of economic policy. Countries in the Eastern Bloc have long been touted as the next hot region for offshore investment. That has yet to become reality.

"If Eastern European governments would loosen up regulations, they'd unlock the ability for people to engage in the economic mainstream," Morgan says. "Eastern Europe's residents will ultimately become consumers because there are so many people. It's on the same path as Southeast Asia."

Elsewhere in the Eurozone, there is far more uncertainty, which places pressure on U.S. businesses operating there to either act or stay the course. In terms of competition for manufacturing and distribution, decision-making is ultimately contingent on the type of activity and the requisite skill set and value attached to certain verticals and products. Nokia, for example, pushed low-value, labor-intensive jobs to Asia while keeping value-added aspects of its smartphone assembly operations in Europe.

"It makes sense for a phone maker such as Nokia to locate assembly closer to manufacturing or component supply," says Grant Opperman, president and chief strategy officer, D.W. Morgan. "On the other hand, companies making high-end goods are concerned with where their engineering talent is, regardless of economic conditions.

"For biotechnology, that base may be in the United Kingdom or France, so companies will be reluctant to chase dollars around the globe," he says. "It's a decision you can't make with a broad brush stroke."

Political, social, and economic stability have now become premiums in terms of site selection due diligence, raising new questions that were previously unthinkable. For example, within Europe's various economic microclimates, France is the most natural distribution point. But cultural

More China manufacturing is expected to migrate to the western part of the country, a remote region with low labor costs and less-developed logistics infrastructure.

and labor restrictions make it a difficult place to do business. The same considerations hold true for countries that have progressive economic policies.

"We operate in Switzerland, but not because of its factories," says Morgan. "In Asia, Singapore and Hong Kong are comparable examples. Objectively, it doesn't make sense to manufacture in those countries. But when you factor in stability, tax structure, accounting standards, and management talent, you can accept less optimal manufacturing costs for certain products and verticals."

SOUTH AMERICAN SPECULATION

While Asia is still the primary concern for globe-trotting U.S. companies and European countries separating themselves from the Eurozone crisis, South America remains the unanswered question, eliciting optimism and doubt, depending on perspective.

"South America, and Brazil in particular, is a very big focus for Lufthansa Cargo," says Haupt. "We have begun two weekly flights to Manaus in the Amazon jungle, which has a free trade zone, in addition to existing service to São Paulo and Curitiba."

Haupt views Brazil as a strong market for both imports and exports, specifically for the high-tech and automotive industries. With the country poised to host both the 2014 World Cup and 2016 Summer Olympics, infrastructure development will be a necessity. Lufthansa will experience increasing competition from cargo carriers such as Emirates, which has direct flights from Frankfurt to São Paulo.

"At the moment, it's a good market for air cargo," says Haupt.

Others are less convinced. Morgan acknowledges that Brazil is the powerhouse of the South American market, with an abundant workforce and energy resources. But its biggest impediments are bureaucracy and a prohibitive regulatory environment. These concerns are magnified throughout the continent.

"South America is not ready to play in the global economy," says Morgan. "It's insular, with hidden economies, and you can't easily ship across single borders. Countries don't want to play together to advance their own self-interests."

Opperman offers a telling example of the difficulties companies encounter when trying to ship freight across geographical and political barriers in South America. "To ship products from Brazil to countries such as Chile, Uruguay, or Argentina, it's easier to send it to Miami, then transport it back south," he says.

Whether or not this sentiment holds true, it's clear that South America's predicament mirrors that of Europe's financial crisis, where individual countries are competing against the failures of the bloc to raise their own self-interests.

Brazil is the obvious leader. Chile and Colombia—with its recent U.S. Free Trade Agreement and connections to China—have similarly separated from the field.

But in the short-term, most attention will migrate north to the Panama Canal Zone—where U.S. East and Gulf Coast interests have been busy developing infrastructure to accommodate New Panamax vessels—and, ultimately, Mexico.

U.S. companies considering nearshoring opportunities can't ignore Mexico's proximity to major domestic markets. And in spite of recurring border violence in Monterrey and Juárez, businesses are simply moving farther south, where transportation connections, technology infrastructure, and cultural assimilation continue to slowly improve.

CONTINENTAL RIFTS, SUPPLY CHAIN SHIFTS

The same can't be said for stability in the Middle East and North Africa. The region holds little manufacturing and sourcing appeal for global companies. Distribution capabilities have quickly evolved in the Arabian Peninsula, largely to serve consumption demand in its many tourist oases.

Current tension in the area, however, has raised fears among oil shippers that important trade corridors such as the Suez Canal could be shut down. While freight moving between Asia and Europe would be similarly disrupted, the greater concern is how re-routing tankers around the Cape of Good Hope might influence global fuel prices.

"Fuel prices have increased over the past year, and the current political issues in Iran and the Strait of Hormuz have created uncertainty," says Haupt. "Fuel represents approximately 25 percent of our total costs, and it's difficult to cover that with fuel surcharges. Shippers and freight forwarders are looking closely at these increases."

Along with fuel consumption and costs, lack of consistency in security and environmental standards pose an obstacle for shippers. "We still don't have harmonized legislation on a global scale," Haupt notes.

This variability provides a backdrop for even more global economic change as China's middle class—and India's and Brazil's, to lesser degrees—continues to expand over the next decade.

"More manufacturing capacity will be oriented toward meeting such demand," says George Brown. "Significant changes in logistics patterns will emerge to connect to these new demand centers, and as existing factories shift their attention and new sources emerge to serve demand in the West."

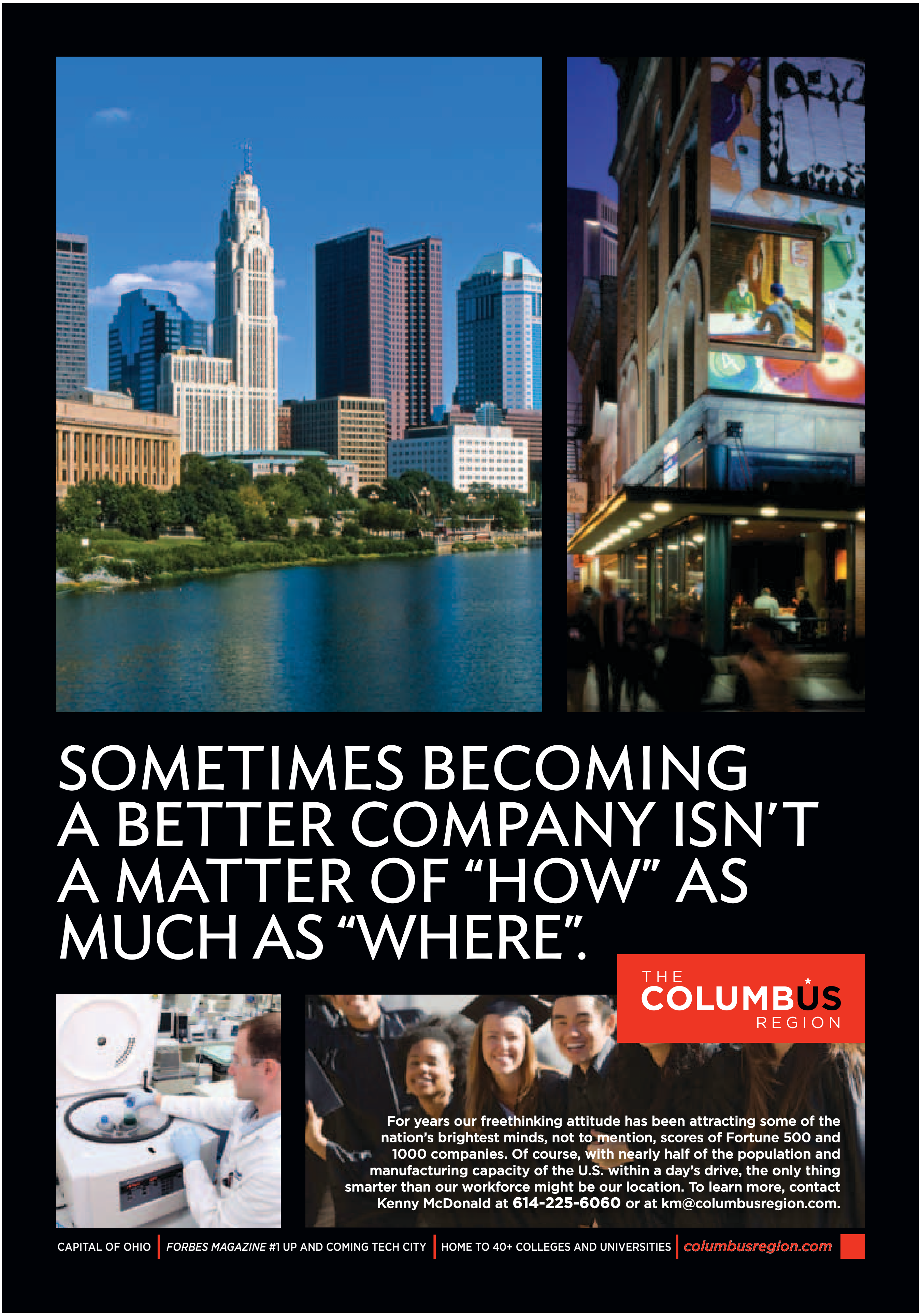
This means sourcing, manufacturing, contract manufacturing, and selling locations will continue to be moving targets—and so will distribution networks that flex to new supply and demand patterns.

Nokia closed down a smartphone factory in Bochum, Germany, in 2008 because it was building a new facility in Jucu, Romania. Its reason was that production would be moved to more competitive plants in Europe. Yet before the company's most recent European closures in Finland and Hungary, the Jucu factory was downsized as well—after three years of operation.

A statement former General Electric CEO Jack Welch made during a television interview in 1998 puts this all in perspective. When asked for his outlook on the coming year, Welch replied: "Ideally, you'd have every plant you own on a barge to move with currencies and changes in the economy. You can't do that, but the job of a company is to be agile and to capitalize on these opportunities."

As global economic trends continue to shift, shippers will have to adapt their supply chains accordingly. ■

Asia's transformation is changing the way global companies look at export growth opportunities. It used to be a continent of 3.5 billion workers; now it has 3.5 billion consumers.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OCEAN CARRIERS & NVOCCs

WEATHERING MA

Capacity gains in ocean container shipping continue to outpace demand. Here's how shippers, carriers, and intermediaries ride out market volatility and uncertainty.

by Perry A. Trunick

Marketplace volatility caught ocean carriers, non-vessel-operating common carriers (NVOCCs), and other intermediaries in its torrent, and could rain down fundamental changes in how shippers perform global freight movements. What the future looks like is still an open question.

Like many other transportation sectors, ocean shipping has seen its share of consolidation. The barriers to entry have never been small, but the current economy's ebbs and flows have raised the ante.

Bill Woodaur, senior vice president for container shipping company Maersk Line, acknowledges the heightened role ocean shipping plays in the global economy. "Ocean shipping has become the standard for connecting trading partners from different geographies," he notes.

RKET VOLATILITY

From the 1950s through the 1990s, the marine industry experienced rapid growth. That has changed. "Carriers are no longer able to buy a $100-million ship on a speculative basis, which they could do when growth was 10 percent per year," says Woodaur. "Today, with annual growth between two and four percent, ocean carriers have to come up with the money first, then be very sure they can utilize that asset."

Despite its heavy commitment to long-term assets such as vessels, the ocean freight industry is also driven by short-term market changes. "Events in the short-term markets have a great impact on the bottom line relative to those long-term assets," Woodaur says.

Growth patterns are changing, not only because of the economic downturn but because the market is starting to mature in the East-West trades. "The average carrier's asset deployment is 55 percent in the Asia-Europe and Trans-Pacific lanes; some are as high as 70 percent," says Woodaur. "Service offerings are becoming blurred and commoditized."

Rick Wenn, vice president of business development for Hong Kong-based container shipping carrier OOCL, agrees. "2009 was the worst year on record for container shipping; the industry lost

$20 billion," he says. "During 2010, demand picked up as retailers restocked. But vessel capacity did not keep up with customer demand, resulting in equipment and space shortages, prolonged delays, and pricing volatility."

Even with some marginal improvements, "container volumes today are still less than they were in 2006," Wenn adds. "Capacity gains in 2012 vs. 2011 outweigh capacity withdrawals."

It sounds like the capacity pendulum is swinging back in the shipper's favor, but the key will be in how ocean carriers deploy their assets. "As mega ships leverage economies of scale in the uncertain Asia-Europe trade, smaller vessels will cascade into the Trans-Pacific, North Atlantic, and north-south routes," says Wenn. "The potential conflict between capacity and demand brings volatility and uncertainty."

Container revenues have dropped, while carrier costs rose dramatically, explains Wenn. The average revenue per twenty-foot-equivalent unit (TEU) declined seven percent, while transportation and fuel costs spiked.

"The U.S. import market averaged $1,600 per TEU, and that number hasn't noticeably changed in the past 12 years," says Greg Tuthill, senior vice president, sales and marketing, for shipping company NYK Line. "Recently, however, we've seen rate vacillation. Ocean carriers need to look at that and identify ways to structurally change the way we enter contracts and conduct business."

"In 2011, carrier costs increased about $250 per TEU," adds Wenn. "Fuel and transportation expenses rose, and we dealt with the currency factor. While slow-steaming (reducing the speed at which ships move in order to cut fuel consumption) cut fuel costs, those savings were largely offset by adding more strings to maintain weekly schedules."

IMPROVED EFFICIENCY

As an industry, ocean carriers cite significant efficiency improvements. "Carriers have done an excellent job of managing costs," says Tuthill. "We have reduced slot costs and become more efficient. We also offer broader service coverage and frequency."

Alliances among carriers are also part of the improvement. "Over the past 10 years, we have achieved efficiency gains through alliances," Tuthill adds. "These partnerships bring down costs, improve efficiencies, and broaden port coverage, while eliminating the investment constraints of trying to operate independently."

The larger containerships offer some efficiencies for operators, but they also introduce more volatility to the market. "Because 13,000-TEU ships have a 30-percent lower cost per TEU than 8,000-TEU ships, smaller ship operators are leveraged out of the market by competitive ships with larger scales of economy," explains Wenn. "Smaller ship owners are unable to make margin at lower costs."

So, if ship technology has improved and new processes have enhanced operations, why can't ocean carriers earn a decent profit?

"Ocean carriers haven't focused enough on value," Tuthill suggests. "We should be improving speed to market, adding IT services, and delivering products to shippers more efficiently.

"The 'create value' proposition is an opportunity for carriers," he adds. "We have a lot to gain by focusing on value."

"Poor customer forecasting is another issue," says Wenn. "Shipper forecasts help carriers achieve better asset utilization. We need to communicate better with shippers and openly share information so we can meet their demands."

Aligning vessel capacity to meet demand outlook, with quicker decision-making to synchronize carrier activities, makes Wenn's improvement wish list. Accomplishing this requires the ability to share information with shippers and trading partners "openly, transparently, and responsibly," he says.

Stuart Ratray, senior vice president, Southeast, for container shipping line Hapag-Lloyd, would also like to see carriers forge better and closer relations with shippers. "We should work together to determine how to weather market instability—for example, negotiating long-term contracts to reduce volatility and increase stability based on transparency and reciprocity, good faith, and a proven record of relationships and partnerships."

IN IT FOR THE LONG TERM

How will the industry reach a convergence of long-term contracts and fair pricing? "We need to add stability to the contract arrangement between the shipper and carrier," suggests NYK's Tuthill. These contracts will require provisions for consequences and adjustments along the way.

"Four things drive our business—supply and demand externally, and economy of scale and asset utilization internally," notes OOCL's Wenn. "Carriers with big, full ships can make money.

"As far as forecasting is concerned, every time we don't profile a vessel in a buoyant market, we miss an opportunity," Wenn adds. "Customers might hoard capacity that they won't use, while four other customers waiting in line would love to have that space.

"One initiative is to penalize customers who do not provide forecasting or who don't perform when

> **"Carriers haven't focused enough on value. We should be improving speed to market, adding IT services, and delivering products to shippers more efficiently."**
>
> —**Greg Tuthill,** NYK Line

they book shipments," he says. "But we'd like to be more proactive than that, and strive for closer cooperation and communication."

THE FORECAST FOR FORECASTING

Forecasting is also a hot button for Matthew Sarfity, director of procurement Americas, for global third-party logistics provider (3PL) Geodis Wilson. "Shippers are challenged in their ability to acquire accurate forecast data and communicate it to carriers," he says. "On the carrier side, demand for space helps keep rates up. But when, for example, shippers have multiple facilities booking volumes based on what they think they need, then making changes, it affects carrier capacity and pricing. After it happens a few times, the carrier will release that space."

Sarfity offers the example of a company with five facilities. Each facility negotiates 20 containerloads with five different carriers. When the time comes to ship those goods, the volumes aren't there and the shipments get consolidated onto one carrier, leaving four carriers without expected volumes.

"That's tough to manage, whether it is in a single organization or through five different companies," says Sarfity. An intermediary such as an NVOCC or freight forwarder can play a role in helping to monitor and adjust those bookings, he suggests.

Carriers have continued to cooperate with each other to reduce cost. "But, this has led to service commoditization," Sarfity says. "Services that used to be differentiated now look very much alike. Carriers are going back to their roots and concentrating on ocean services. Many services have stopped or deteriorated, and one role of intermediaries is to close that gap for shippers."

Intermediaries will continue to focus on rates. "Pricing is the main value intermediaries bring to their small and medium-sized shipper customers," says Sarfity. "Pricing is less a factor for larger shippers who have the volumes to negotiate."

The same pricing clout accrues to intermediaries. Fragmentation of the intermediary segment led to some large players with dominant roles commanding freight volumes that get the attention of carrier pricing departments.

One global 3PL that fits this model is CEVA Logistics. When it acquired Eagle Global Logistics (EGL) in 2007, CEVA handled very little ocean freight, admits John Pattullo, CEO.

EGL had lower profitability than the best forwarders because those forwarders had well-defined processes in place. But, CEVA intends to become a top-five freight forwarder, Pattulo says, and has made investments in people and systems to accomplish that goal.

With the ambition of becoming a major force in the forwarding arena, CEVA already serves a stable of 50,000 customers. But, the 3PL plans to concentrate on bigger customers and increase CEVA's share of their logistics spend. CEVA's top 100 customers represent 55 percent of the company's business, but CEVA represents only five percent of their logistics spend, Pattullo explains. Enhancing forwarder operations is one way to boost that business.

PHOTO: Port of Hong Kong

Capacity gains outpace demand in container shipping, causing volatility and uncertainty in the market. Average carrier asset deployment is 55 percent in the Asia-Europe and Trans-Pacific trades.

One of the key ocean carriers on the North-South trade route, Hamburg Süd has made efficiency improvements to enhance service in a volatile market.

"Our relationships with ocean lines used to be tactical and transactional," says Pattullo. "But we have started to build proper partnerships, and they're now talking seriously about our target lanes. We introduced a trade lane structure where we focus on building business on particular lanes. We can't claim to be a forwarding company and not have a strong ocean business."

COPING WITH VOLATILITY

"From my perspective, ocean capacity seems to be controlled in concert," notes one mid-sized forwarder. "At one point, most carriers were reducing capacity in an effort to raise rates. This happened to such an extent that it appeared to be an overt exercise in collusion. Then, in the fourth quarter of 2011, again in concert, the bottom fell out of export rates, particularly to the Pacific Rim.

"Effective March 1, 2012, numerous carriers implemented general rate increases," he says. "Carrier rates and capacity will be determined by a 'pull' scenario, thus eliminating rate stability."

With the entire ocean freight industry calling for more discipline and stability, some segments won't settle down any time soon. But intermediaries are also undergoing transformation.

"Global logistics suppliers are melding," says Andrew Spector, a transportation attorney with Arnall Golden Gregory LLP, a law firm in Atlanta, Miami, and Washington, DC. "They promise they can do it all: 3PL, 4PL, domestic transportation, import/export compliance—whatever shippers want them to do."

That type of intermediary never existed before, says Spector. "When companies offered just domestic trucking, for example, shippers could understand what they did," he says. "The maritime sector was always that way; service providers and shippers knew that world." Today, however, the modern players are "a new animal," blending all services into one entity, he adds.

In a recent presentation to a maritime group, Spector asked, "How many of you have an NVOCC operation in your company?" Every hand shot up. Then he asked, "Do you have a company employee who goes to work for the NVO?" They all laughed, because, he says, "of course, none of them did." Now, it's the NVO that is offering these services.

"Pure NVO services mirror ocean carrier offerings," explains Spector. "But when an NVO combines operations with other services, their role gets murky." And murky is what keeps Spector in business.

When a service provider wants to "do it all," there are gaps in knowledge, says Spector, because it didn't handle those services in the past. Like people, a business repeats its habits—for example, a domestic company starts offering international services, but tries to conduct business the domestic way. "They return to their comfort zone," explains Spector.

It's important for shippers to know what service they are engaging, and that the lines may blur when using a multi-service intermediary.

The stakes can be high. Spector argued a case where the distinction between NVOCC and freight forwarder came into play. In *Prima US Inc. v. Panalpina*, Panalpina was contracted as a freight forwarder to handle an international project move of an oversized load. The cargo was improperly secured and caused damages to other property on the vessel during the ocean voyage.

Panalpina's customary arrangement with the cargo's beneficial owner was to act as a freight forwarder. But, Panalpina had made a statement that the shipment "will receive, door-to-door, our close care and supervision."

A lower court interpreted this statement to mean that Panalpina was acting as a carrier or NVOCC, and ruled the company liable for the damages. On appeal, the U.S. Court of Appeals for the Second Circuit ruled that Panalpina acted as a forwarder and had no liability for damages.

Panalpina had not issued a house bill of lading or performed other steps that would have been consistent with acting as an NVOCC. And the reassuring language about close care and supervision did not change that fact, Spector argued.

Yet, it shouldn't come as a surprise when an intermediary becomes a carrier, he points out. Companies grow by transitioning from facilitator to service provider. It's logical that on transportation moves, an intermediary could be performing a carrier function, whether it thinks it is or not.

Lawyers would advise intermediaries to maintain those distinctions, and list arranging fees and document fees as separate line items, says Spector. "But the bill for a $500 freight move just went up by $300. And that's where it becomes a contradiction," says Spector.

Is he exaggerating? Maersk's Woodaur equates it to the dilemma of slow steaming. If a carrier is delayed en-route and won't hit its schedule, should it speed up and burn more fuel to make the schedule or continue at the prescribed speed and arrive late?

"Fuel comprises the majority of a vessel's operating costs and variable expenses," Woodaur says. "Slow steaming could end tomorrow, but then rates would have to rise significantly. Bunker fuel costs about $750 per ton. Back when schedules were faster, prices fell between $175 and $225 a ton. When customers ask about not slow steaming, we tell them what it would cost. That's part of the transparency needed between shippers and carriers."

The ocean freight landscape is changing, but slowly. The demands of volatile markets and the structural changes taking place in the industry suggest a much clearer dialog between shippers and carriers is needed, as Woodaur and others insist.

Both carriers and intermediaries face a challenge. "There is an opportunity to take what could be a cluster of sameness and break it down into differentiated service," Woodaur explains. "All partners play a critical role in capitalizing on this oppportunity. We need to make sure that we create value." ■


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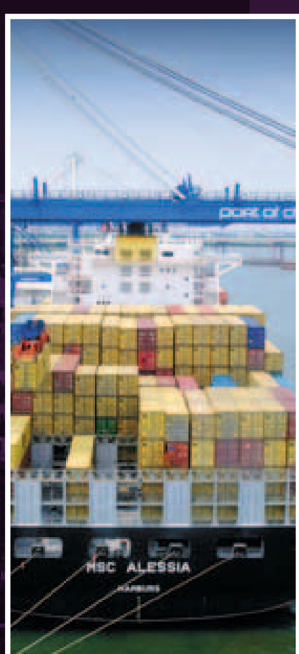
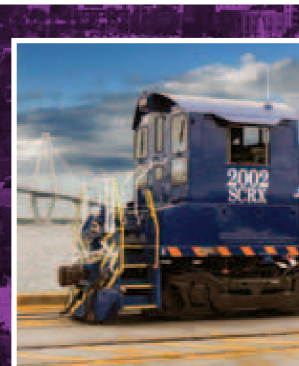


Businesses reap big benefits when they locate manufacturing facilities in South Carolina, an established leader in logistics, supply chain, and distribution.



A network of five major interstates and state-maintained highways supports truck traffic throughout South Carolina.

South Carolina's economy is thriving like the palmetto palm trees that line the state's coast. In 2011, more than 20,000 new jobs were created in the Palmetto State, representing a $5.2-billion investment.

The state's logistics sector helps fuel this powerful economic engine. In the past year, South Carolina has seen $229 million in capital investment and thousands of jobs created by distribution and logistics companies alone.

"Transportation, distribution, and logistics are vital to South Carolina's economy," says South Carolina Secretary of Commerce Robert M. Hitt III. "The state recognizes the need for constant investment to maintain the sector's vibrancy and help businesses grow and compete."

To support that effort, South Carolina's Department of Commerce has joined the newly formed TDL Council, a partnership program led by New Carolina, South Carolina's Council on Competitiveness. Other champions of the program are South Carolina Department of Transportation Secretary Robert St. Onge, South Carolina State Ports Authority CEO Jim Newsome, and Alliance Consulting Engineers President Deepal Eliatamby.

"The Department of Commerce is focused on creating jobs and having an impact through a team approach," says Hitt. "Building strong relationships helps us make that impact."

The TDL Council brings together public and private sector leaders to compete for jobs, investment, and industry leadership. The Council identifies and eliminates major industry obstacles to competitiveness, drives solutions to address these issues, and helps direct focused investment of public sector funds. The TDL Council will develop its growth plan in phases over the next several years.

Hitt cites progress on a new port terminal in North Charleston and a boom in distribution center construction as key factors positioning the state for a wealth of potential new port business. This growth will ignite the TDL cluster when widening of the Panama Canal is completed in 2014.

The building blocks for South Carolina's logistics leadership have long been in place. They begin with geography. But the state's

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RECEIVE FREE NO OBLIGATION GUIDANCE AND ADVICE www.inboundlogistics.com/3pl ideal location midway between New York City and Miami would count for little if not for the transportation assets that take full advantage of South Carolina's spot on the map:

- Interstate highways I-85, I-26, I-77, I-95, and I-20, along with another 41,000 miles of state-maintained highways, put trucks on the road in every direction.
- Five primary airports give shippers access to a commercial airport within one hour of anywhere in the state.
- Rail service in every metropolitan area enables movement of some 50 million tons of freight across the state annually.
- The Port of Charleston already features the deepest water in the Southeast region, and will serve as an even more important gateway to the world as it deepens its channels to accommodate increased Panama Canal traffic (*see sidebar, page 88*).

But South Carolina doesn't rely on its geography alone to remain at the head of the pack. The state's government does all it can to capitalize on its geographic advantages.

"South Carolina is an easy state to work with," says Bruce Mantz, executive vice president, ADS Logistic Services, an Edison, N.J.-based third-party logistics (3PL) provider that operates a facility in Gaffney, S.C. "Government representatives are accessible and willing to help. The bureaucratic red tape businesses often encounter in other states isn't a problem in South Carolina."

On the Road in South Carolina

Thanks to South Carolina's extensive highway system, shippers can quickly get products on the road to just about anywhere. Five major interstates traverse the state, providing easy access to its many warehousing and distribution hubs.

ON TRACK WITH RAIL SERVICES

The state's railway assets – CSX Transportation, Norfolk Southern, and seven affiliated and combined rail lines – are enhanced by an example of outstanding public-private cooperation in the form of South Carolina Public Railways, a division of the Department of Commerce. Like the state's port authority, South Carolina Public Railways is an enterprise agency and does not receive appropriations from state government.

Established in 1969, the agency's mission is to provide safe, efficient, and cost-effective rail solutions to facilitate freight movement and contribute to the state's economic viability.

"South Carolina Public Railways is typically involved in rail-focused economic development projects with the Department of Commerce, the state port authority, and local economic development agencies," explains Jeff McWhorter, South Carolina Public Railways' president and CEO. "We invest in these projects if it makes economic sense for us to do so.

"The agency also provides technical assistance and consulting services in railroad matters to state, local, and municipal governments," he adds.

South Carolina Public Railways operates three common carrier railroads. The Port Utility Commission of Charleston and the Port Terminal Railroad provide switching services to the South Carolina Ports Authority's terminals, interchanging with Class I railroads CSX and Norfolk Southern. The East Cooper and Berkeley Railroad, a shortline railroad located in southern Berkeley County, serves BP Chemicals and Nucor Steel.

In addition, the agency owns a railyard in North Charleston that is leased to the North Charleston Terminal Company, a CSX/Norfolk Southern jointly owned company. This yard serves MeadWestvaco, a global packaging solutions company with facilities in Summerville and North Charleston, S.C., and Summerville-based KapStone Paper and Packaging. The agency also owns a rail spur at the Eastport Industrial Park in Summerville, a spur line to the Michelin Tire facility in Anderson,


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and the underlying real estate for a rail line to the BMW plant near Spartanburg.

South Carolina Public Railways is currently developing the $126-million Intermodal Container Transfer Facility (ICTF) on its North Charleston site. "The ICTF will ensure competition among the Class I railroads, benefiting all shippers using the state's port facilities," McWhorter says. More efficient freight rail transportation will also reduce truck traffic and highway congestion.

The Port of Charleston ranks as the nation's fourth-busiest container port, handling more than $150 million worth of cargo daily.

RIDING THE RAILS

Among those taking full advantage of South Carolina's rail access capabilities is Eastern Distribution, a full-service warehouse management and distribution company. Eastern Distribution owns and operates six warehouses totaling more than 500,000 square feet of space in Greenville, S.C., where the company is based.

With rail service provided by both CSX and Norfolk Southern, the company benefits from access to major national and less-than-truckload carriers. Eastern Distribution receives, loads, and unloads containers from the ports of Charleston and Savannah, Ga.

"As an established company with more than 40 years experience, Eastern Distribution is well-situated to take advantage of shippers' growing interest in rail transportation as a way to cope with rising fuel prices," says Terrence Smith, president and CEO, Eastern Distribution.

"We have many long-standing customers because we tailor our services to meet their unique needs," says Smith. "We are small enough to adapt and large enough to provide any service customers need."

One Eastern Distribution facility, the 163,000-square-foot Warehouse K, is designed to accommodate trains inside the terminal, shielding high-value goods from inclement weather. The warehouse's Greenville location is far enough inland that the area is largely protected from shutdowns due to hurricanes or other adverse weather.

All Eastern Distribution's warehouses are maintained to food grade and, in addition to being rail accessible, are convenient to I-85 and I-26.

Yet another advantage for customers

Deepening the Waters

Charleston Harbor has been a key economic driver in South Carolina for more than 300 years. With the deepest water in the region today, Charleston offers a maintained harbor -45 feet deep at mean low tide throughout the main shipping channel and -47 feet deep in the entrance channel. A five- to six-foot tidal lift provides even deeper access for several hours during the day.

In addition to having deep water now, the Port of Charleston is advancing a next-generation harbor deepening project. The U.S. Army Corps of Engineers completed the project's reconnaissance study in summer 2010 and determined that there is not only a federal interest in the further deepening of Charleston Harbor, but also that it was most likely the best value for scarce public dollars. The project is currently in the feasibility phase, with a commitment from the Corps to an accelerated time frame.

The post-45-foot feasibility study examines the economic benefits and environmental impacts of the deepening project and determines what depth would be recommended for construction. The South Carolina Ports Authority has signed the cost-sharing agreement with the Corps and agreed to accelerate its half of the study cost to the Corps to initiate the work. The Ports Authority will provide around $2 million to the Corps for ongoing work in fiscal 2012.

–South Carolina Ports Authority

is that South Carolina levies no taxes on inventory.

"Both South Carolina's business environment and its climate offer great benefits to warehousing," Smith says.

CORPORATE INVESTMENT

With such logistics advantages, it is little wonder that some of the country's most impressive companies are investing heavily in South Carolina. Recent examples include:

- Continental Tire the Americas, a $500-million investment and 1,620 new jobs in Sumter County.
- BMW, a $900-million investment and 300 new jobs in Spartanburg County.
- GKN Aerospace, a $38-million investment and 250 jobs in Orangeburg County.
- ZF Group, a $430-million investment and 1,200 new jobs in Laurens County.

"These developments are game-changers for South Carolina," says Amy Love, director of marketing and communications, South Carolina Department of Commerce. "The state is a great, exciting place to do business."

ADS Logistic Services illustrates that excitement. Located on a 77-acre site, the company's Gaffney facility features more than 500,000 square feet of logistics processing area, offering quick throughput with 44 dock doors and a large-capacity containeryard for 350 trailers.

The company has expanded considerably in recent years. In addition to its South Carolina location and two in New Jersey, ADS now operates two facilities in California.

This expansion has allowed ADS to diversify its 3PL offerings. The Gaffney facility, for example, has become a national depot and repair center for Peco Pallet, a leader in the North American pallet industry. ADS handles more than 100,000 pallets per month at the location.

BUILDING BIG BUSINESS

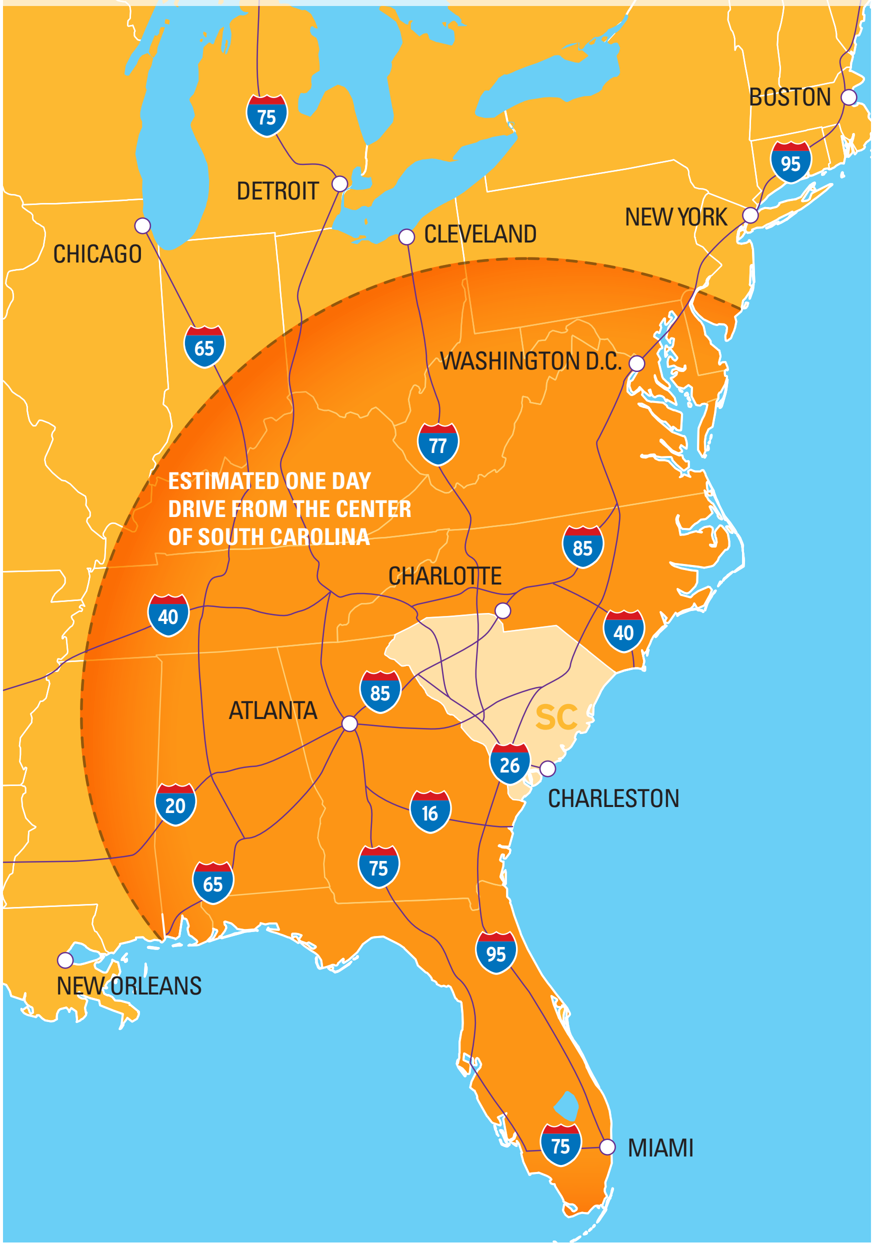
"The fact that BMW and Boeing have located plants in South Carolina reflects the state's appeal to global corporations," says Arch Thomason, CEO of Greenville-based 3PL Sunland Distribution. Thomason and other logistics sector leaders cite several reasons for South Carolina's attractiveness to some of the world's biggest and best manufacturers.

In addition to its transportation infrastructure and location, the state offers an outstanding workforce and superior educational opportunities, with particular emphasis on technical skills.

South Carolina generates sufficient business to sustain local companies. Sunland Distribution, for example, is a quintessential South Carolina company that focuses

Southeastern Gateway

South Carolina's location in the middle of the Eastern Seaboard makes it an ideal site for supply chain planners and distribution networks. The state boasts accessibility to major East Coast cities and the South's growing population.



South Carolina's Pro-Business Environment

With one of the lowest corporate tax rates in the nation, highly competitive wages for workers, and low unionization, it's no wonder South Carolina is consistently ranked among the country's most business-friendly states.

In addition, South Carolina offers a wealth of opportunities to help businesses maintain low operating costs, including:

- A five-percent corporate income tax rate
- No state property tax
- No local income tax
- No inventory tax
- No sales tax on manufacturing equipment, industrial power, or materials for finished products
- No wholesale tax
- No unitary tax on worldwide profits

South Carolina also provides a variety of customized incentive programs to meet the needs of any company, including:

Corporate income tax credits. Job tax, corporate headquarters, research and development, investment, biomass resources, and ethanol or biodiesel.

Discretionary income, license, or withholding tax incentives. Job development, job retraining, corporate income tax moratorium international trade incentive, and port volume increase.

Discretionary property tax incentives. Negotiated fee in lieu of property tax.

Other discretionary incentives. Apprenticeship Carolina, readySC, and foreign trade zones.

- S.C. Department of Commerce

exclusively on the South Carolina region. "We think there's plenty of business right here," explains Thomason. "We want to be able to drive to all our facilities. Our strategy is to own South Carolina."

The company offers specialized services for its South Carolina customers. "We provide warehousing, but we also handle hazardous materials," Thomason says.

"Our goal is to supply solutions," he adds. "We find the customer's pain, and we find their solution."

Sunland Distribution operates more than two million square feet of warehousing and distribution space in Greenville and Charleston. With more than 200 employees, Sunland serves about 85 clients representing a wide variety of business sectors.

As the largest locally owned 3PL in South Carolina, Sunland embraces four verticals: automotive, chemical, retail, and import-export. "We have become a plant-support company," says Thomason. "We're continuing to invest in our infrastructure and – with the addition of our staffing company, Sunstaff, and our transportation services group, Landstar – we can provide beginning-to-end supply chain solutions. This allows Sunland to dive deeper into our customers' supply chains, providing more services to the same customer base. We want to be a single-source provider."

BMW plans to invest nearly $900 million and add 300 new jobs at its Spartanburg manufacturing plant in 2012. The facility has rolled out two million vehicles since beginning production in 1994.

GATEWAY TO EVERYWHERE

Access to the rest of the country – and the world – is quick and easy, with airports in every South Carolina region complementing its highway, rail, and port assets. A good example is the Greenville-Spartanburg International Airport, located midway between Charlotte, N.C., and Atlanta on the Interstate 85 corridor.

"Greenville-Spartanburg International Airport is well-positioned within the southeastern United States, and connects it to the rest of the country," says Nathan Garner, the airport's cargo program manager.

"This is the commercial service airport for upstate South Carolina," Garner says. "The airport has one of the longest runways in the Southeast, and expansive and robust infrastructure. It can meet the air cargo needs of companies doing business internationally."

Among its international cargo benefits, the Greenville-Spartanburg airport offers two federal inspection stations on its property, as well as U.S. Customs and Border Protection in close proximity. The airport also recently opened a Customs Container Freight Station. The net result is speed and efficiency for international shippers.

For domestic freight mover Eleets Transportation, South Carolina represents a land of opportunity.

"Eleets is well-positioned for growth in the South Carolina market," says Al Steele, the company's president and CEO. He cites container drayage and domestic truckload opportunities made possible by the upcoming Panama Canal expansion. "We operate facilities at the Port of Charleston, as well as in the middle of the state, with easy access to all major interstates and rail."

Established as a Florida corporation in 2007, Eleets Transportation has quickly evolved. Revenues reached $120 million in 2010, and the company employs 120 people with sales offices and trucking terminals in nearly one dozen states. The company operates full-service branch offices and truck terminals in both Charleston and Orangeburg, S.C., where it also maintains a warehouse.

In 2011, BMW exported passenger vehicles worth $7.4 billion through the Port of Charleston, making its Spartanburg facility the leading U.S. automotive exporter.

Eleets plans to continue its expansion across North America, and has set its sights on international markets through partnerships with non-vessel-operating common carriers and other global transportation services providers.

The potential for growth likewise appeals to Performance Team, a Santa Fe Springs, Calif.-based 3PL with warehouse facilities in Charleston. "Our goal is to double our size, and Southeast hubs are a key component of our plan," says Cliff Katab, president of Performance Team. "The region represents one of our biggest growth areas."

Performance Team operates a 350-truck fleet and two million square feet of warehouse space in eight states. The company's South Carolina site is essential to its goal.

"Our Charleston hub is strategically located on the Eastern Seaboard to serve the north-to-southeast coast region," says Katab. "And 250,000 square feet of warehousing space extends our distribution and consolidation services."

THE RIGHT ENVIRONMENT

Yet another vital ingredient in South Carolina's recipe for success is the state's extraordinary lifestyle. Each region offers something special.

"Upstate South Carolina is a wonderful part of the state to live in," says Rosylin Weston, vice president for communications, Greenville-Spartanburg International Airport. "It's the fastest-growing part of the state, with lots of diversity and work opportunities."

Driving Automotive Industry Expertise

For automakers seeking new production facility locations, a workforce equipped with industry knowledge often tops the requirements list. South Carolina offers a unique educational resource to fill that need. The Clemson University Center for International Automotive Research (CU-ICAR) is an advanced-technology research campus where university, industry, and government organizations engage in synergistic collaboration.

The 250-acre CU-ICAR campus in Greenville is composed of five technology neighborhoods, each uniquely designed to optimize an innovative and collaborative environment for automotive and motorsports research.

Clemson offers the nation's only Ph.D. in automotive engineering. Its master's and doctoral automotive engineering programs are supported by direct engagement with industry-leading original equipment manufacturers and suppliers on curriculum development, research capabilities, and defining industry needs. These rigorous programs, designed with input from world-class companies such as BMW and Michelin, require foreign language training in addition to a lengthy course of study and a six-month international assignment within the industry.

Clemson University supports the state's automotive industry through its Center for International Automotive Research.

With more than $200 million in commitments, CU-ICAR represents the ultimate public/private partnership, directly fueling a knowledge base critical to the automotive industry.

"It's a charming metropolitan area," adds Garner. "And those two words don't normally go together."

Most important to manufacturers are the state's economic and workforce advantages.

"South Carolina is a right-to-work state," notes Garner. "It's not surprising that many manufacturers are moving to this area. We have a comparatively low cost of living, numerous high-tech industries – including automotive, aerospace, and advance materials – and great educational opportunities."

Among the region's educational opportunities is the Clemson University International Center for Automotive Research (CU-ICAR), a partnership program of Clemson University and several automotive companies, including BMW. "It's a great example of a public-private partnership," Weston says. (*See sidebar, page 94.*)

Such educational opportunities help make a strong labor pool even stronger. "There's a tremendous workforce in South Carolina," says Bruce Mantz of ADS Logistic Services. "They are fine, ethical, hard-working people."

Eleets Transportation operates truck terminals in both Charleston and Orangeburg, as well as a facility at the Port of Charleston.

Whether working in logistics, education, manufacturing, government, or some other role, South Carolina's residents are driving the state's economic growth.

"Companies like to locate in communities where people are working together for the good of the state," says Love.

It is no surprise, then, that business loves to come to South Carolina. ■

For information on featuring your region in an Economic Development Supplement, contact James O. Armstrong at 314-984-9007 or jim@inboundlogistics.com.

Arriving at Port: An On-Terminal Transload Operation

A new container transloading facility at the Port of Charleston will soon speed shippers' supply chains. Performance Team, a Santa Fe Springs, Calif.-based third-party logistics provider, is leasing space at the Wando Welch Terminal's container freight station, where it will transload cargo from ocean-going shipping containers to trucks for distribution to its network of customers throughout the Southeast.

"Performance Team is excited to offer shippers on-port transload and distribution services," says Cliff Katab, president, Performance Team.

The Wando site is expected to handle both import and export cargo as Performance Team continues to expand in the Southeast. Transloading goods on-site allows for greater efficiencies, reduced costs, and faster speed to market for retail imports.

"We welcome Performance Team's expansion in the Charleston region," says Jim Newsome, president and CEO, South Carolina Ports Authority. "This on-terminal transloading service offers added value to shippers who rely on Charleston's high productivity, proximity to population centers, and extensive service network to get their products to market."

The Port of Charleston's Wando Welch Terminal processes shipments bound for points throughout the southeastern United States.

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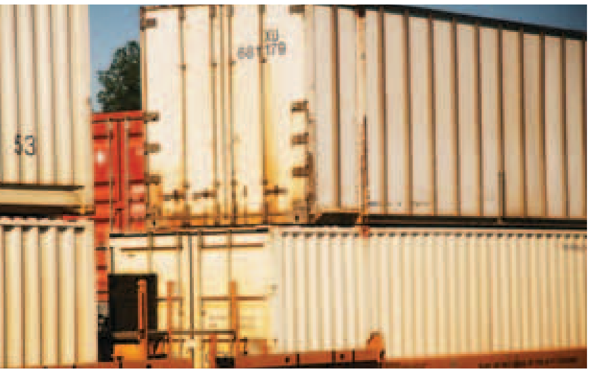

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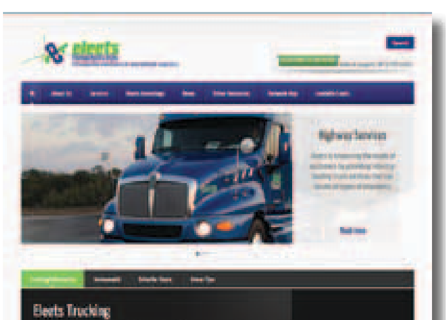

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Performance Team is the only thing that should come between your products and your customers. For nearly 25 years, Performance Team has been offering its expertise to the retail and manufacturing industries with a broad range of supply chain services including: trucking, distribution, logistics, and fulfillment. The company's Charleston hub is strategically located on the eastern seaboard to service the north-to-south East Coast region. This 250,000-square-foot warehouse extends Performance Team's distribution and consolidation services portfolio.

South Carolina Department of Commerce • www.sccommerce.com

The South Carolina Department of Commerce (SCDOC) is the state's leading economic development agency, working to promote economic opportunities for individuals and businesses. SCDOC works to recruit new businesses as well as provide a wide range of support to existing businesses across the state. SCDOC supports the international presence of South Carolina through export development and international recruitment, among other activities. SCDOC assists companies in locating buildings and sites in which to operate, offers grants for community development and infrastructure improvements, provides tools to enhance workforce skills, and is committed to helping businesses prosper in South Carolina.

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Since 1965, the South Carolina Economic Developers' Association (SCEDA) has served as the voice of economic development in the Palmetto State. This professional trade association has more than 550 members, with representation from all 46 counties. Members include local and regional economic developers, as well as officials from municipal, county, and state government agencies; construction and engineering firms; utility companies; attorneys; consultants; financial institutions; and higher education. SCEDA's mission is to enhance the professional development of its membership and to advocate economic development to benefit the citizens of South Carolina.

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JUMPING THROUGH HOOPS:

THE IMPORTANCE OF VENDOR COMPLIANCE

Companies execute acrobatic leaps to ensure they satisfy customer shipping specifications. For small businesses, meeting supplier requirements calls for extra agility.

By Merrill Douglas

If your company sells to manufacturers, retailers, or distributors, you're probably all too familiar with vendor requirements manuals and routing guides. Companies publish those documents to make sure the goods they order from suppliers arrive when, where, and exactly the way they expect.

The contents of requirements manuals varies, but most cover topics such as how to pack shipping cartons, how to lay out and place shipping labels, what information must appear on a packing slip, acceptable pallet dimensions, must-arrive-by date, and how to communicate status updates.

It's hard enough for businesses to meet a different, detailed set of demands for each customer, but it is especially difficult for small companies. Without sophisticated software or a large staff, a vendor might be hard-pressed, for example, to pack its products 12 to a case for one customer, 10 to a case for another, and 24 to a case in eight multipacks for a third—then place all the bar codes and labels precisely where they belong.

And unlike companies that sell in vast volumes, small suppliers lack the negotiating clout to get customers to bend the rules. "Small suppliers have to jump through hoops a bit more," admits Scott Morgan, vice president of transportation strategies at DSC Logistics, a third-party logistics provider based in Des Plaines, Ill.

Tough though the challenge might be, meeting customer requirements is essential. "If they don't comply with customer requests, they don't stay vendors for long," says Jim Muir, president of consulting firm Logistics SSI in Farmington Hills, Mich.

Vendors who get the details wrong also risk chargebacks—financial penalties that customers impose to compensate for the extra work they have to do when goods don't arrive the way they expect.

Whether they perform the work themselves, outsource to service providers, or combine those strategies, small suppliers must satisfy all their customers' demands, no matter how varied and complex.

Although a vendor serving any kind of company must meet customer requirements, the retail industry is especially noted for its detailed lists of demands. Retailers publish requirements manuals in order to achieve consistent performance.

WHY SO MANY RULES?

"Vendor requirements help ensure that the entire community is operating not only the same way, but at the same high standards," says Casey Chroust, executive vice president, retail operations at the Retail Industry Leaders Association in Arlington, Va.

According to Chroust, retailer requirements fall into four categories:

1. **Performance**—including accurate orders, undamaged product, and on-time arrivals.
2. **Process**—how the vendor engages and communicates with the retailer.
3. **Social**—including environmental sustainability and social responsibility in manufacturing.
4. **Legal**—adherence to government regulations.

For vendors distributing product to multiple retailers, one vexing mandate category concerns packaging. The rules involve both the number of items in a carton and how they're packaged within the case. Even when two retailers ask for 48 pieces to a case, one might specify eight boxes of six and the other six boxes of eight.

Shippers may need to customize label formatting and placement to match customer specifications. For small businesses, managing multiple sets of requirements can create challenges.

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Retailers make these rules to accommodate stores that don't need full-case quantities. "They can open the case and pick those multipacks for smaller-volume requirements at the store level," Chroust says.

Vendors often work with third-party logistics (3PL) providers that shoulder the burden of matching case counts to customer needs. "One vendor might ship a product to us in a case pack of six, but Target wants it in case packs of three. So we do a lot of reworks," says Clark Koch, director of operations at Regal Logistics, a 3PL in Fife, Wash.

READY, WILLING, AND LABEL

Retailers' label specifications can also be diverse and complex. "Some want the label on the upper left corner, for example, and some specify that it be on the widest side of the box, two inches from the bottom of the carton and two inches from the farthest right point," says Jeffrey Schmidt, director of operations at The Wheat Group, a small San Diego firm that makes accessories under licensed brand names such as Puma, Hurley, and Skull Candy.

Those specs aren't arbitrary; they're designed to match processes in the retailer's distribution center (DC). A process change—for instance, if the retailer installs a new conveyor system—can trigger a change in labeling requirements.

Package labeling rules often serve to match processes in the customer's distribution center.

> **"Vendors have to meet not only the delivery date, but also the time Walmart specifies."**
>
> –**Darrell Graham,** President & CEO, FSD Inc.

"Instead of being three inches from the bottom right, a retailer's new scanner may need the label to be three inches from the top left," says Kevin Wicks, vice president of business development at Daryl Flood Logistics in Coppell, Texas.

Some retailers set strict rules for when shipments must show up at their docks. Walmart is a prime example. "Vendors have to meet not only the delivery date, but also the time Walmart specifies," says Darrell Graham, president and chief executive officer of FSD Inc., a Palmyra, Ind., company that holds a license to produce the Steak 'n' Shake restaurant chain's chili recipe for sale in stores.

Meeting Walmart's delivery date requirements is also a big concern for Regal Logistics and some of its customers. "We work closely with Walmart's transportation group in Bentonville, Ark.," Koch says.

Carriers pool their equipment at Regal's DC so the 3PL can preload the trailers as soon as vendors relay their orders from Walmart. "That process ensures that we hit Walmart's must-arrive-by dates," Koch adds.

Requirements for electronic communications—such as electronic data interchange (EDI) message 856, the advance shipping notice—can place a particular burden on small firms, especially those that manage such messaging in-house.

"Most of our major customers require EDI processing capability," says Matt Hopkins, operations manager at King Par, a Flushing, Mich., company that sells golf equipment and accessories under the brand names Intech, Knight, Affinity, and Orlimar. King Par's 65 employees include information technology specialists who currently handle EDI in-house. But when the company upgrades to a new computer system, it will start using an EDI vendor.

"I would use a third party if I were starting from scratch," Hopkins says. Those service providers already have the infrastructure in place to create electronic messages that match the needs of many retailers. "All you do is tell them you're working with Walmart, and they supply its requirements," he says.

Small companies that rely on 3PLs for distribution can skip the worry about EDI entirely because those


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partners take care of the electronic messaging. And, fortunately for small do-it-yourselfers who lack the resources to conduct full EDI transactions, many retailers provide online "smart forms" to capture the data they need.

"Vendors go to certain Web sites and key in the information, which gets translated into EDI through the retailers' system," says Chroust.

Here's a closer look at how five small vendors jump through hoops to meet the requirements in their customers' vendor guides.

ERGODIG: DIGGING IN WITH A 3PL

When William Rogers launched ErgoDig in 2011, he thought retailers would pick up his products at the point of manufacture in China. He soon learned that those customers are unlikely to extend such Freight on Board (FOB) terms to a small, new supplier. "They all want suppliers to have a domestic program in place," Rogers says.

Not only did prospective customers expect ErgoDig to deliver product all the way to their DCs, but they wanted proof that the fledgling company could do the job right.

That meant Rogers had to outsource. "One of the first questions a customer asks a newly launched company is which 3PL it uses," he says.

With offices in College Station, Texas, and Qingdao, China, ErgoDig designs and markets ergonomic garden tools for residential and commercial use. To meet retailer requirements for a U.S. logistics operation, ErgoDig contracted with Daryl Flood Logistics.

As ErgoDig brings its products to market in 2012, its contract manufacturer in China will arrange transportation to the United States. Then Daryl Flood will take over, managing shipments from its DC to ErgoDig's customers.

The 3PL will be responsible for compliance issues such as how each retailer wants ErgoDig's rakes, shovels, and other products boxed for shipment.

"Retailers might want our products packed in bundles of three or six, or they might want them in a crate," Rogers says.

It's not practical to build those custom-packed shipments in China because the boxes take up too much room in a shipping container. "We ship as many products as we can fit in the U.S.-bound container, then the 3PL neatly repackages them to retailer specifications," Rogers says.

To help small companies meet the broad spectrum of retailer requirements they encounter, Daryl Flood has invested more than $2 million in information technology, including a warehouse management system from HighJump Software, Eden Prairie, Minn.

"The software allows customers to add different types of labels and accommodate varied requirements for picking, packing, full case loads, and shipping," says Chad Pack, director of business solutions at the 3PL. "Because Daryl Flood has made this technology investment, our customers don't need to."

JTD ENTERPRISE: DON'T BE AFRAID

Variety represents a major challenge for small suppliers trying to satisfy the requirements of multiple customers. "Suppliers have to set up a separate system for every retailer they deal with," says Tom Nihra, vice president of JTD Enterprise in Warren, Mich.

A second-generation family business with $2 million

ErgoDig manufactures its ergonomic lawn and garden products in China, then entrusts transportation and vendor compliance to logistics services provider Daryl Flood.

in annual sales, JTD sells golf ball retrievers and portable flagpoles to large retail customers such as Target, Sam's Club, Amazon, and Academy Sports, as well as to small outlets such as college bookstores.

Shipping labels pose a particular challenge for JTD, because some retailers are very particular about how to lay out the information. Fortunately, those customers offer help in the design stage. To test the process, JTD sends a proof of the new label, and the retailer provides approval or requests for changes.

Not all retailers are that finicky. "Other customers just dictate 10 fields that need to appear on the label," says Nihra. "They don't care how it's laid out, as long as all the fields are present."

Like other vendors, JTD must adhere to a variety of packaging rules. "Retailers have requirements about how a shipment has to be marked if it contains mixed stockkeeping units," Nihra says. "We need to mark the box differently if the contents are all the same product."

JTD Enterprise sells its golf ball retrievers to large retail customers, many of which provide detailed packaging rules.

JTD's general manager and packaging supervisor work out the packaging strategies order by order.

Although JTD's in-house staff grapples with most vendor requirements on its own, it uses a third party to manage EDI communications with Academy Sports and Target. For other retailers, JTD's employees enter the necessary data into online forms linked to the retailer's information system.

One key to getting vendor compliance right is communicating with customers. "A company shouldn't be afraid to ask for help just because it's small," says Nihra. Because small vendors often offer unique products, large retailers want them to succeed. "They genuinely try to help small businesses comply with their requirements," he adds.

KING PAR: CHANGE IS PAR FOR THE COURSE

Along with managing its own EDI, King Par also relies on its staff to stay current on packaging requirements. One big challenge is that those mandates can change at any time. For instance, Academy Sports decided in early 2012 that it wanted a certain golf club in two-packs instead of three-packs.

With some customers, King Par sells enough product to make it feasible to pack and label orders to their specifications overseas, where labor is cheaper, then ship it directly to the customer. But when the company sells the same item in smaller quantities to multiple customers, the strategy is different. "We import it in a standard six-pack, then re-box and re-label it ourselves," Hopkins says.

Occasionally, King Par's compliance team encounters a requirement it simply can't meet, mainly because its platform dates back to 1998 and doesn't offer the flexibility of newer systems. This became a problem, for example, when Walmart.com asked King Par to start providing not just a few items but its entire line to the e-commerce channel.

"One requirement was an EDI feature that our system couldn't provide," Hopkins says. "We had to say we weren't capable of meeting that requirement, which was a no-go for Walmart.com." Eventually, the IT staff developed a workaround, allowing King Par to expand its relationship with the online vendor.

THE WHEAT GROUP: YOU CAN NEVER BE TOO REDUNDANT

Like King Par, The Wheat Group conducts some compliance activities before its products reach U.S. soil. "A retailer such as Macy's may want a hang tag in a certain style, with pricing in a particular font," says Schmidt. "We do that upstream at the factories when possible."

But most work-related packaging and shipping requirements take place at The Wheat Group's DC in Otay, Calif. For each of the company's top 20 customers, it assigns specific staff to be responsible for compliance. "You can never be too redundant when it comes to compliance," says Kelly Grismer, The Wheat Group's president. "Use every tool you can to enhance the process and eliminate potential errors."

The Wheat Group also relies on help from UPS, its exclusive carrier for shipments into the United States, and preferred carrier for shipments to customers. UPS's shipping application, WorldShip, allows vendors to configure a profile for each customer, which helps automate compliance activities.

"If The Wheat Group ships directly to Target, for example, it can set up a profile that specifies the required fields for every purchase order associated with Target," says Kiel Harkness, retail segment strategist at UPS. "Vendors can set up those profiles for many different retailers."

FSD: A MOST LOGICAL CHOICE

A change in Walmart's shipping requirements once almost knocked FSD out of the chili business. In 2004, the company's contract manufacturer, Pinnacle Foods, was delivering the product to FSD's warehouse in French Lick, Ind. From there, the wholesaler shipped it in 12-pack cases to its customers.

Then Walmart declared that instead of sending pallets loaded with cases to a large warehouse, FSD had to direct smaller shipments to numerous facilities called remix centers—delivering five cartons here, 15 cartons there.

"Complying would have required 14 different less-than-truckload (LTL) deliveries going in, which would have been almost impossible logistically," says Graham. Walmart needed each shipment to arrive on a specific date, at a particular time, and LTL carriers can't meet such precise windows.

Graham decided to work with a 3PL. Today, Pinnacle ships cases of Steak 'n' Shake chili to three warehouses operated by DSC Logistics. As part of its Multivendor Optimization Strategy service, DSC consolidates FSD's shipments with product from other small and medium-sized vendors, transporting them in full truckloads to the correct Walmart facilities.

> "Outsourcing to a 3PL is key to many small vendors trying to comply with complex retailer requirements."

Consolidation helps small vendors in two ways. "First, it makes them more attractive to Walmart, which doesn't want to handle a lot of small LTL shipments," says Morgan at DSC. "Second, it saves money by getting shipments onto full truckloads."

"Shipping a pallet of chili to Harrisonville, Ill., costs about $420," says Graham. "Shipping to the same area from DSC costs around $105."

Outsourcing is the key for many small companies trying to keep up with complex vendor requirements. For the do-it-yourselfers, teamwork, attention to detail, and a willingness to seek help from customers go a long way.

In the long run, compliance with vendor requirements becomes standard operating procedure and part of the cost of doing business. "Companies themselves, or their 3PLs, seem to be able to handle it quite well," Muir notes. ■

Working Together to Achieve Compliance

Some suppliers that sell to retailers believe vendor requirements manuals set up adversarial relationships. "They think the retailer is trying to squeeze them by imposing chargebacks, justly or not, with no opportunity to challenge those penalties," says Kiel Harkness, retail segment strategist, UPS.

Other suppliers, however, work closely with their customers' vendor compliance teams to ensure the relationship works for both parties. "They view a routing guide or compliance metrics as an opportunity to enhance their value and differentiate themselves from other suppliers," Harkness says.

Some large companies offer suppliers plenty of assistance. "Big box retailers provide feedback to let suppliers know how well they are complying," says Jim Muir, president of consulting firm Logistics SSI in Farmington Hills, Mich. That feedback provides opportunities to improve.

"Retailers are committed to working with their suppliers," says Casey Chroust, executive vice president, retail operations, at the Retail Industry Leaders Association in Arlington, Va. Retailers want stable supply chains, so they're committing to longer partnerships with suppliers. That gives retailers a stake in their suppliers' success.

When vendors violate safety regulations or other legal mandates, retailers show zero tolerance. But if a violation concerns a less crucial element, such as a software configuration, most retailers will cut the supplier some slack and help with improvement.

Most large retailers operate vendor compliance programs, which provide vendors with valuable opportunities. For example, vendors gain a leg up by attending annual supplier meetings where, among other things, retailers share their plans for the future.

"Retailers are willing to share a wealth of information—both tactical and strategic—about where their corporate supply chains are headed," Chroust says. "Suppliers need that knowledge to be successful."

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WIND POWER: GENERATING LOGISTICS OPPORTUNITIES

The wind power industry continues to grow, expand, and excel domestically—and equipment manufacturers and specialty transportation providers are growing with it.

While the U.S. economy continues its slow climb toward recovery, a few industries are leading the way with strong, steady, and consistent growth. The wind power industry is among them.

More than 100 separate wind projects are currently under construction in 31 states, according to the American Wind Energy Association, a wind development trade association. The U.S. wind industry has added more than 35 percent of all new generating capacity over the past four years—second only to natural gas, and more than nuclear power and coal combined.

Several factors are contributing to this growth. Thanks to a federal push, many states have adopted clean energy goals and are striving to make progress toward them.

In addition, policies in most states offer producers and consumers incentives and tax credits to make wind energy more affordable.

Federal tax credits are also helping wind projects come to fruition. The federal renewable energy production tax credit (PTC), originally included in the Energy Policy Act of 1992, provides an income tax credit of 2.2 cents/kilowatt-hour for electricity produced by utility-scale wind turbines.

Also contributing to the wind industry's growth is the development of new technology that allows wind farms to locate outside the traditional wind corridor—generally defined as Nebraska, Kansas, Oklahoma, Missouri, Arkansas, Louisiana, Texas, and New Mexico.

"Some of the best wind sites have already been fully developed," says Kenneth M. Lemke, Ph.D., economist for the Nebraska Public Power District electric utility, based in Columbus, Neb. "But new wind power technology allows wind to be captured in areas that might not have been considered good sites five years ago. This combination of technology and a big country means running out of wind farm sites is not a near-term concern."

A Growing Industry

In addition to new development, many of the first wind farms ever built may need to be replaced over the next several years as new technology continues to evolve. All of this means good news for the growing industry.

And good news for the wind industry means good news for other industries as well.

"There has been significant growth in domestic wind component manufacturing over the past several years," says Doug Graham, senior director for Union Pacific Distribution Services (UPDS), an Omaha, Neb.-based subsidiary of Union Pacific Railroad (UP) specializing in designing and executing rail-based logistics programs. "Initially, many large wind components were imported to the United States."

Today, more than 400 manufacturing facilities across the United States produce wind turbine components

Increased wind farm development led specialized logistics provider Landstar to invest in the modified equipment required to transport the components.

Bumps in the Road

Although the wind power industry shows solid signs of growth, it also remains somewhat volatile.

One reason is that the federal renewable energy production tax credit (PTC)—the primary financial policy for the wind industry since its inception in 1992—has been extended mostly in one- and two-year intervals, and even allowed to expire on occasion.

"The market has been volatile over the past five to 10 years, due partly to the PTC tax subsidies' inconsistency," says Ken Adams, director of international marketing and sales for industrial products at Union Pacific Railroad. "Every time the PTC expires, the industry tends to have a bad year until it is renewed. The tax credit is set to expire again at the end of 2012, so there is a huge push to get projects going before then."

Industry advocates are making progress toward longer-term tax policies, which would help provide consistency and market certainty. On Nov. 2, 2011, Washington Representative Dave Reichert and Oregon Representative Earl Blumenauer introduced a bi-partisan four-year PTC extension bill in the U.S. House of Representatives. The American Wind Energy Association, a wind development trade association, is working with congressional supporters to introduce a similar bill in the Senate.

Transporting wind power components by rail allows shippers to circumvent some of the complications involved in moving the large equipment over the road.

such as towers, blades, and the assembled engine housings known as nacelles.

Domestic wind power manufacturing facility development has driven improved efficiencies in transporting the equipment. "We used to move components 500 to 1,000 miles by truck to reach the wind farms," says Jay Folladori, vice president of heavy/specialized services for Landstar, a Jacksonville, Fla.-based third-party logistics (3PL) provider. "The rise in domestic wind power equipment manufacturing reduces mileage to the farms. We are now using a hub-and-spoke distribution approach, which also reduces costs."

Investing in the Future

Wind farms are more financially attractive to developers today than they have been in the past. "Turbines continue to grow larger and cost less, and the combination of higher megawatts and lower price is pushing growth," says Ken Adams, director of international marketing and sales for industrial products at Omaha, Neb.-based Union Pacific Railroad.

The push to place wind farms in non-traditional locations has created challenges along with opportunity.

"Many new developments are on top of mountains and in other

hard-to-reach areas," notes Folladori. "The trucks and trailers that transport wind farm components are meant for use on highways, not mountaintops. Delivering to the new locations increases transportation costs and adds complexity."

Carriers taking on wind power logistics projects have to invest capital in specialized trailers and equipment. Heavy haul has always been part of Landstar's business, so when the wind power sector started to take off, the 3PL acquired the modified equipment necessary to transport wind power components.

Equipped for Success

Landstar now provides road transportation for a variety of wind energy manufacturing companies.

"We haul hundreds of blades, towers, and other components," says Folladori. Landstar also participates in wind farm construction project management to coordinate site preparation and delivery.

"Landstar's investment in wind power logistics has grown along with the wind power industry," says Folladori.

One challenge facing wind power logistics providers is the increasing size of the components. Advancing technology does not mean smaller components; in fact, the more powerful turbines become, the bigger they get.

"Wind power component dimensions dictate the equipment required to move them, and the ability to travel specific routes through each state," says Folladori. "Each state has different heavy and oversized load permit requirements, and arranging them demands impeccable coordination and timing.

"The increasing size of wind tower components is making it harder to transport them," he continues. "Height and weight are being pushed to the maximum. Many states are working to simplify the permitting process, but it's a challenge for them to find the resources when they are struggling financially."

Wind farms such as Nebraska Public Power District's Ainsworth Wind Energy Facility serve as a clean, inexhaustible, domestic source of electric generation.

Along the Railway

For some shippers, transporting wind components via rail makes more sense than over the road. Although there may be fewer restrictions and planning concerns involved with rail moves, they still demand extensive preparation.

Experience helps facilitate the planning process. UP and UPDS have been providing rail transportation and logistics services to the wind power industry since 2007.

"Oversized loads require developing dimensional transportation solutions," says UP's Adams. "We consider where the components have adequate bridge and tunnel clearance, and whether distribution centers can handle the trains and the volume. A multitude of considerations go into making a wind power component project successful."

The rise in domestic manufacturing sites has been key to making wind farm logistics work more efficiently. "Union Pacific transports wind power components via rail to distribution centers close to wind farms," says Adams. "This approach allows shippers to minimize truck usage, as well as turn trucks faster."

"Transporting components 50 to 200 miles by truck instead of thousands of miles simplifies wind farm development," says Graham. "It helps project planners ensure the right components arrive at the right time."

Pursuing Alternative Resources

As the wind power industry grows, electric utilities across the country are increasingly adding wind energy to their power supply portfolios as a clean, inexhaustible, and domestic source of electric generation.

One of those forward-thinking utilities is Nebraska Public Power District (NPPD), the state's largest electric utility, which delivers power to about one million Nebraskans. Headquartered in

Columbus, NPPD was founded in 1970 when two power companies merged.

"More than 50 percent of our energy was produced by non-carbon resources in 2010," says Lemke. "It's important to draw from a diverse mix of resources. Wind and renewable energy help maintain that diversity and reduce risk going forward."

Nebraska is the only 100-percent public power state, which means NPPD had some legislative issues to resolve before it could begin developing power facilities.

"Public power has the right of eminent domain for generation facilities," says Lemke. "Because the legislature has removed that barrier in the past few years, 50 more projects are developing today."

The Ainsworth Wind Energy Facility is the state's largest publicly owned wind farm. Located six miles south of Ainsworth, Neb., the facility has been in operation since 2005, generating more than one billion kilowatt hours of wind-powered electricity for NPPD customers. The facility, the second-largest publicly owned wind farm in the country, operates 36 1.6-megawatt turbines.

A Bright Future

Among the states, Nebraska ranks third in terms of wind potential. "A new transmission line planned for Nebraska will improve energy flow in and out of the state," says Lemke. "That development will further improve the potential for new projects."

Both NPPD and Omaha PPD, the two largest electric utilities in the state, have established goals to improve renewable energy resources 10 percent by 2020, and wind power will likely play a large role in pursuing those results.

The incentives and opportunities that exist today have huge potential to make wind power generation in the United States more prominent. This push for renewable energy sources can help the country in its effort to reduce its dependence on foreign oil, protect the environment, and stabilize energy costs. But it's a combination of many factors, including safe, reliable and affordable wind power component transportation options, that will make it all work.

"The wind energy industry holds promise for thousands of jobs and for increased clean energy production," says Folladori. "And both of those goals are extremely important."

I.T. Toolkit

by Lisa Terry

Trying on a Tailor-made TMS

Ralph Lauren dresses up supply chain operations with a custom-fitted international airfreight transportation management system.

Fashion devotees often endure discomfort for the sake of beauty. So did New York City-based luxury apparel manufacturer and retailer Ralph Lauren each season when its Transport Operations team re-bid airfreight contracts to align with the latest market conditions.

After the work was done, the real pain set in: split lanes that resulted in misaligned volume, confusion among vendors about the most current compliance terms, and capacity constraints. The team had no way to dynamically route international air freight according to the best service and cost options available at that moment, and it showed in inflated shipping costs.

When a market search found no suitable transportation management system (TMS) for international air freight, Ralph Lauren's Transport Operations team decided to take the next logical step: Invent one. One year later, the company was reaping substantial benefits, meeting all the project's objectives, and enjoying a few surprises.

"This tool provides a new way of thinking about air freight," says David Lande, director, international transport and development, Ralph Lauren. "Instead of just point-to-point delivery, it's about customizing our services to meet customer specifications. Air freight is no longer just about speed—it's also about alignment."

Here's how the apparel company developed its tailor-made solution.

WRESTING CONTROL

A look at Ralph Lauren's organizational structure reveals the source of its supply chain complexity. The company's long list of brands—including Polo by Ralph Lauren, Ralph Lauren Collection, RRL, Chaps, and Club Monaco—are sold through a broad

Dressing Up Air Deliveries

Ralph Lauren achieved significant business improvements by developing an international airfreight transportation management system. The benefits include:

- Capturing all first-mile events
- Assigning service levels to shipments
- Reducing exception booking messages, along with the static routing file
- Air forwarders can send alerts electronically and quickly
- Eliminating manual keying at all origin offices
- Reducing turn times and errors for customs entry alerts
- Processing invoices more quickly
- Introducing weight & measures audits at all transload facilities
- Production sees first-mile reporting, with vendors held accountable for handover and booking
- LSPs comply with Ralph Lauren's business rules
- Using small-parcel shipping for four percent of shipments
- Reporting information automatically to a business intelligence tool

spectrum of global retailers, from Macy's to 630 company stores to high-end department stores. Twenty-six separate divisions support the operation, each with different business process rules and functional ownership. The company is growing by 8.5 percent annually, with revenues of nearly $5 billion.

A diverse set of about 400 vendors supports the business. In addition to high-volume producers in Asian countries—including China, the Philippines, Sri Lanka, and Hong Kong—the company contracts with boutique vendors making one-of-a-kind products in Italy, Morocco, and other locations around the globe.

Within Ralph Lauren, the Global Production department owns those vendor relationships. But the responsibility for moving their goods cuts across a number of departments—Transport Operations is in charge of routing shipments, working in concert with the supply chain and vendor compliance teams, and the company's Global Transport Control Tower in Hong Kong. Because Ralph Lauren is in the fast-moving high-fashion business, it must transport 10 to 15 percent of its North American volume via expedited service using a network of ocean and airfreight forwarders.

BEST-LAID PLANS

Each season, Transport Operations published the terms of its carefully negotiated contracts in a static routing guide. Vendors used it to comply with the company's shipping guidelines. But just like any best-laid plans, they often went awry. Among the challenges:

- Some lanes were split among service providers, so shipment allocations were often misaligned with freight awards. That led to inaccurate volume projections, making it difficult to secure capacity and jeopardizing budgeted freight spend. The static routing guide overloaded some freight forwarders while others were light on capacity.
- Ralph Lauren was unable to hold freight forwarders accountable for service standards and capacity commitments. The company began including a "flex" requirement for providers to ensure they could support volume above average weekly run rates.
- Distribution issues meant some vendors did not receive updated routing guides and ended up using old ones.
- The highest-volume lanes were split between two or three providers to ensure capacity, but each freight forwarder had unique capacity requirements and costing. Shipment costs could vary by 15 to 20 percent.
- Because logistics service providers (LSPs) lacked EDI 850 purchase order information from Ralph Lauren, all origin offices were required to re-key purchase order details on booking, and manually send alerts to their freight visibility partner, resulting in visibility delays.
- Transport Operations had no visibility into the work stream for the eight to 10 days prior to shipment departure dates—and, therefore, little ability to make changes.

Those obstacles were daunting enough; throw in the capacity constraints of late 2009 and operations spun even more out of control, with the company taking a financial hit with every setback.

"Airfreight shipments were delayed at origin with limited real-time visibility," recalls Kathleen King, senior director, international transportation, Ralph Lauren. "We had no visibility to airfreight shipments until they were already in the air—and typically not until 24 hours after departure. All we could do was inform the customer that we were experiencing delays."

FAST-TRACKING A SOLUTION

If all these issues were domestic, Ralph Lauren could likely have solved its problems with a traditional TMS. But because the shipments were international, the situation was too complex

to be resolved quickly and easily.

In early 2010, Ralph Lauren's Transport Operations department pulled together a cross-functional team to define its needs. Then it searched for a vendor partner to fill them. From a field of 11 candidates, the company selected Charlotte, N.C.-based Acuitive Solutions, an international air and ocean freight transportation management solutions provider.

"Acuitive was willing to invest in the relationship, and develop a solution that would be marketable to other customers," so Ralph Lauren wouldn't shoulder all the development costs, Lande says.

Together, Ralph Lauren and Acuitive set an aggressive goal: go live with a new international airfreight transportation management system by March 2011, the end of Ralph Lauren's fiscal year.

HIGH RISK, HIGH REWARD

Everyone involved with the project was aware of the risk involved. "These are our most urgent shipments," says King. "Nothing could go wrong, or we would lose business support. The solution needed to be easy to use. We planned to give vendors extensive training and support, but we needed a backup process in case they couldn't handle the new procedures."

A separate committee wrote the business rules that would be incorporated into the solution, and established short- and long-term business process owners. Faced with the prospect of onboarding more than 400 vendors of diverse needs and capabilities, the team decided to implement in three phases, starting with 16 vendors who had large, repeatable airfreight volume and sophisticated technology.

The three-phase onboarding provided the project team early feedback, which let them refine the system before expanding to additional vendors. One early change, for example, was incorporating live feeds to freight forwarders' host systems to reduce the need for rekeying data. Another was revising the code after too many shipments got kicked back for manual approval. The updates allowed the system to automatically assign most shipments to a freight forwarder according to business rules.

The next step was training employees, educating phase-one vendors on new processes, and onboarding phase-two and phase-three suppliers. The diverse group demanded a range of delivery methods: small group on-site training, Web-based and video training, podcasts, and user manuals in English and Mandarin. A feedback forum held in March 2011 was key to collecting input and making changes.

Polo Ralph Lauren tailored a transportation management system that aligned airfreight operations to fit customer specifications.

Today, the completed international airfreight transportation management system functions as an electronic planning, execution, and quality control hub where all Ralph Lauren shipments are dynamically routed based on customer needs, purchase order management, and business rules. Quality data, real-time integrated communications among all internal and external parties, and information sharing prior to shipment drives the routing process.

This transparency, coupled with execution speed and accuracy, ensures that decisions are executed as planned, while allowing all stakeholders to better manage their individual links and responsibilities within the supply chain. International freight activity is recorded in the airfreight TMS for all parties—vendors, freight forwarders, LSPs, and internal Ralph Lauren teams—to see.

Data mapping and integration were key to the project. The vendor-routing portal, freight visibility system, and LSPs all draw from Ralph Lauren's base-level data to provide immediate and reliable visibility. Ralph Lauren analysts now have visibility into the shipping process up to 10 days before ship date, driving a dramatic increase in the use of alternate modes to standard air freight.

Today, at least 30 percent of expedited shipments move via deferred, parcel, sea/air, air/sea, and expedited ocean services, reducing costs and lowering the carbon footprint.

The system has also enhanced collaboration among Ralph Lauren's production, U.S. transportation, customs compliance, supply chain finance, corporate finance, and distribution center operations. The divisions work together to better manage airfreight spend and understand the trade-offs between service and delivery date options.

Measurement tools allow individual divisions to see the positive impact of shipment savings on their profit-and-loss statements—in fact, some engage in friendly competition to attain the greatest savings.

Ralph Lauren's partners benefit as well, through reduced keying and manual data entry, faster payment processing, easy access to required data, and reduced origin fees for small-parcel shipments. Air forwarders also get more visibility into upcoming shipments.

But the biggest benefits come from visibility, driving reduced cost variability, more accurate volume production and capacity planning, increased control, and smarter shopping for rates. One unexpected benefit of the project was providing 10 days of advanced shipment visibility, rather than the anticipated three to five days.

As the international airfreight market began opening up in fall 2011, Ralph Lauren's Transport Operations department took a chance and began spot-bidding expedited shipments exceeding 4,400 pounds.

"We knew that some of our forwarders had space commitments with the airlines, and didn't have freight to fill them," says King. "Even if they didn't have that lane, they might be willing to give us a competitive price. So we started using Acuitive, sometimes acheiving 25 to 50 percent off the contract pricing–which is very competitive to begin with."

Having complete expedited shipment visibility and reporting empowers Ralph Lauren to work creatively with vendors. "It gives us the opportunity to have conversations we couldn't in the past, because we had no way to execute other than looking at a piece of paper, and saying 'Hong Kong to New York is Forwarder A, and Hong Kong to Los Angeles is Forwarder B,'" says King. For example, Ralph Lauren could seek a discount for tendering shipments on days with excess capacity, or offer an advantageous price for a firm, regular-volume commitment.

IN FULL CONTROL

By pioneering a dynamic routing platform and portal, Ralph Lauren now enjoys live, 24/7 global communications with its forwarders, carriers, suppliers, and technology partner. And its Transport Operations team truly controls freight spend.

Because Ralph Lauren co-developed the airfreight TMS with Acuitive, the functionality is available to other companies. While the system offers Ralph Lauren a competitive advantage, it wants to see others follow suit.

"In some lanes, we don't have many options between 10 days and 40 days, and we'd like to have 20- or 25-day service," says King. "If more companies could segment their demand, the market would develop services that aren't yet available."

That kind of flexibility would look good on anybody. ■

IN THIS SECTION:
3PLs – Air/Expedited

3PLs

C.H. Robinson Worldwide, Inc. • www.chrobinson.com

Founded in 1905, C.H. Robinson Worldwide, Inc. is one of the largest third-party logistics companies in the world, providing multimodal transportation, fresh produce sourcing, and information services to more than 32,000 customers globally, ranging from Fortune 500 companies to small businesses in a variety of industries. For more information about our company, visit our Web site at www.chrobinson.com.

Lynden • www.lynden.com

Over land, on the water, in the air – or in any combination – Lynden has been helping customers solve transportation problems for almost a century. Operating in such challenging areas as Alaska, Western Canada, and Russia, as well as other areas around the globe, Lynden has built a reputation of superior service to diverse industries.

SDV International Logistics • www.sdv.com

SDV International Logistics has been active in the United States for nearly 40 years, and has amassed the local knowledge and resources to expertly serve our clients. Our 14 offices, situated along the main transportation axes of the country – from Miami to Seattle and from Los Angeles to Boston – cover the entire nation and offer you 360-degree solutions. Not only is SDV a forwarding agent, it's also a global service provider, offering complete global storage and distribution services, inbound or outbound.

AIR/EXPEDITED

Alaska Air Cargo • www.alaskacargo.com

Alaska Air Cargo provides reliable air cargo services to meet your shipping needs. Whether it be small packages, full ULD shipments, or chartered freighter service, Alaska Air Cargo offers a variety of options, including GoldStreak® Package Express, a next-available-flight service for items up to 100 pounds; Priority Air Freight for time-sensitive shipments that are larger than GoldStreak and need to be at a destination by a specific time; and Animal Express, a priority express service that ensures animals a safe and comfortable journey.

IN THIS SECTION:

Associations – Global Logistics

ASSOCIATIONS

Warehousing Education and Research Council (WERC)
www.werc.org

WERC is the only professional organization focused on warehouse management and its role in the supply chain. Through membership in WERC, seasoned practitioners and those new to the industry stay at the forefront of innovation, master best practices, and establish valuable professional relationships. WERC offers seminars, publications, online courses, an annual conference, and peer-to-peer knowledge exchange for distribution professionals.

FREIGHT FORWARDERS/BROKERS

World Freight Network • www.worldfreightnetwork.com

In today's global supply chain, it's important for independent freight forwarders to join together to provide shippers with outstanding personal service. Since its inception in 2004, World Freight Network has successfully linked 214 independent freight forwarders in 100 countries worldwide. For information on joining the network, visit the Web site.

GLOBAL LOGISTICS

COSCO Container Lines Americas • www.cosco-usa.com

As a premier carrier of both import and export refrigerated commodities, COSCO has been very successful in providing the most specialized handling and reporting to meet the stringent demands of the world's top importers and exporters. COSCO is dedicated to creating 21st-century solutions for your high-volume, low-volume, time-sensitive, or hard-to- service locations anywhere in the world.

Jacobson Companies • www.jacobsonco.com

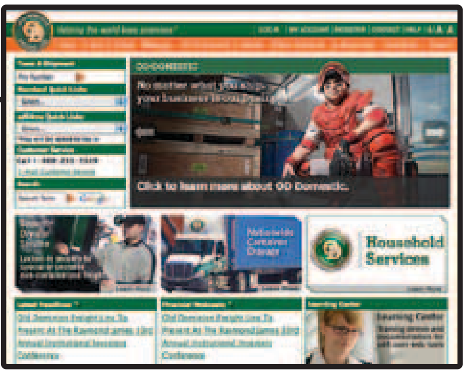
Jacobson Companies is a leading third-party logistics company providing end-to-end supply chain solutions that include warehousing and distribution, contract packaging and manufacturing, freight management, customs brokerage, and international ocean and airfreight forwarding. Jacobson can offer expertise in a wide range of industry verticals including food and beverage, consumer packaged goods, chemicals, healthcare/life sciences, durable goods, consumer electronics, retail, and industrial/automotive. What can we do for you? Contact us at 800-636-6171 or visit our Web site at www.jacobsonco.com.

MIQ Logistics • www.miq.com

Started in 2002, MIQ Logistics has locations in Asia, Europe, North America, and South America. Along with its global network partners, MIQ Logistics provides services in and between more than 80 countries supported by more than 5,000 in-country logistics professionals. Its broad portfolio of global, transportation, and distribution services makes it possible to offer global end-to-end supply chain solutions supported by the visibility of Web-native technology. If your business is seeking supply chain improvements, let MIQ Logistics add value to your business.

Old Dominion Freight Line • www.odfl.com

Old Dominion Freight Line is a less-than-truckload carrier providing complete nationwide service within the continental United States. Through its four product groups, OD-Domestic, OD-Expedited, OD-Global, and OD-Technology, the company offers an array of innovative products and services to, from, and between North America, Central America, South America, and the Far East. The company also offers a broad range of expedited and logistical services in both domestic and global markets.



Ryder • www.ryderscs.com

Ryder provides a complete array of leading-edge supply chain, warehousing, and transportation solutions for multiple industry sectors in North America, the United Kingdom, and Asia. Services range from developing supply chain strategies to managing and executing day-to-day logistics operations. Integrated solutions for optimizing and managing the flow of products, currency, and information all draw upon the company's expertise in supply chain management.

Werner Enterprises Inc. • www.werner.com

Werner Enterprises, Inc. is a premier transportation and logistics company, with coverage throughout the United States, Canada, Mexico, and China. Werner maintains its global headquarters in Omaha, Neb., offering 24/7 service 365 days a year. Werner is among the five largest truckload carriers in the United States, with a portfolio of services that includes long-haul, regional and local van capacity, temperature-controlled, flatbed, dedicated, and expedited. Werner's value-added services portfolio includes import and export freight management, PO and vendor management, truck brokerage, intermodal, load/mode and network optimization, and global visibility. Internationally Werner provides freight forwarding and customs brokerage services, and is a licensed NVOCC.

IN THIS SECTION:

Global Trade – Ocean/Intermodal

GLOBAL TRADE

Integration Point • www.integrationpoint.com

Integration Point provides import/export capabilities, regulatory information for 140-plus countries and connectivity to supply chain partners and government agencies around the world. Built on a single, Web-based platform, Integration Point allows organizations to secure their supply chains and comply with global regulatory requirements while improving visibility and realizing savings.

SEKO Logistics • www.sekologistics.com

SEKO prides itself on a commitment to customer service, whether it's a 2 a.m. pickup for a critical industrial part for a plant that is 4,000 miles away, or the cost savings achieved from proactive communication with your vendors overseas. SEKO offices have the knowledge and expertise to expedite or to consolidate, depending on your need. From Hong Kong to Amsterdam, SEKO knows how to serve its clients. As a non-asset-based third-party logistics provider, SEKO has the flexibility to meet your supply chain needs using a variety of modes and carriers.

OCEAN/INTERMODAL

Seaboard Marine • www.seaboardmarine.com

Seaboard Marine is an ocean transportation company that, for more than 29 years has provided direct, regular service between the United States and the Caribbean Basin, and Central and South America.

SeaFreight Agencies (USA), Inc. • www.seafreightagencies.com

At SeaFreight, "service" means your needs come first. Since 1992, we've been building for the future by meeting your needs today. Over the past 19 years, SeaFreight Line has evolved to currently operate six 1,100-TEU and three 500-TEU vessels between Florida, the Caribbean, and the South and Central America trades with weekly and bi-weekly fixed-day-of-the-week services.

IN THIS SECTION:
Trucking – Windpower Logistics

TRUCKING

ABF • www.abf.com

ABF's eCommerce solutions have a proven track record of performance in meeting the needs of customers. For shippers requiring advanced online controls and full visibility of the shipment management process, ABF continues to be the carrier of choice. The ABF eCenter is a complete suite of Internet-based tools tailored to the services requested by ABF customers. These services include simple tracking, proactive notification of shipment status, dynamic rerouting of in-transit shipments, advanced reports, and much more.

U.S. Xpress Enterprises • www.usxpress.com

U.S. Xpress Enterprises Inc. is a service leader in the transportation industry, providing customized transportation and information services that position the company as a preferred provider to a diversified group of high-quality customers. Services include time-definite and regional truckload services, and expedited truckload service comparable to second-day and deferred airfreight services at much lower cost. Check out the Web site for freight tracking, load tendering, and electronic data exchange information.

YRC Freight • www.yrc.com

If you are looking for seamless transportation throughout Canada, Mexico, and the United States, look to YRC Freight. The carrier's reliable two-day, three-day, and coast-to-coast service connects key markets with guaranteed delivery windows. YRC Freight also offers dedicated protective services for a single shipment or entire trailer; special project and logistics management; and transportation and logistics for import and export shipments. Find out more about YRC Freight by visiting the Web site.

WINDPOWER LOGISTICS

American Wind Energy Association (AWEA) • www.awea.org

The American Wind Energy Association (AWEA) is a national trade association representing windpower project developers, equipment suppliers, services providers, parts manufacturers, utilities, researchers, and others involved in the wind industry – one of the world's fastest growing energy industries. In addition, AWEA represents hundreds of wind energy advocates from around the world. With over 2,400 members and advocates, AWEA is the hub of the wind energy industry.

IN THIS SECTION:
Windpower Logistics – Yard Mgmt.

Landstar • www.landstar.com

Landstar, a safety-first transportation services company, provides complete logistics services throughout the United States, Canada, and Mexico. Landstar's extensive brokerage network increases customer options as it brings a wider array of equipment options to handle the toughest transportation challenges. With innovative use of Internet technology, Landstar communicates in every medium, from the most sophisticated satellite tracking systems to the simplest pagers. That means customers know where their shipment is every step of the way, with every carrier selected. You'll find complete details on our Web site.

Nebraska Public Power District • www.sites.nppd.com

One Web site with everything you need to know about doing business in Nebraska. Find valuable information including sites and building availability; community profiles; fact books; population characteristics; labor availability; profit opportunity studies; contact information; and much more. It's the one place to go to find out why doing business in Nebraska is a smart move. Contact Nebraska Public Power District, 800-282-6773 x5541, e-mail econdev@nppd.com, or visit the Web site.

Union Pacific • www.up.com

Union Pacific Corporation operates North America's premier railroad franchise, covering 23 states in the western two-thirds of the United States. Union Pacific Railroad links every major West Coast and Gulf Coast port and provides service to the East through its four major gateways in Chicago, St. Louis, Memphis, and New Orleans. Additionally, Union Pacific operates key north/south corridors and is the only railroad to serve all six major gateways to Mexico. UP also interchanges traffic with the Canadian rail systems.

YARD MANAGEMENT

C3 Solutions • www.c3solutions.com

C3 Solutions is a supply chain execution company specializing in yard management and dock scheduling. C3's *Yard Smart* product integrates into warehouse and transportation management systems, allowing for constant inventory visibility and optimized trailer movements that correspond to the business's needs. C3's dock scheduling system, *C3 Reservations*, is a Software as a Service (SaaS) offering that allows operations of all sizes to optimally plan the arrival and departure of vehicles to and from their site.

White Paper Digest

Industry experts amass supply chain management best practices and skill sets, and invest in new research and evaluation tools. Now you can benefit. *Inbound Logistics* has selected this collection of whitepapers that will give you a jump on important supply chain issues. For more information on any of these whitepapers, visit the Web sites listed below.

LEGACY Supply Chain Services

TITLE: ***Adopting a Values-Driven Corporate Culture to Create Resiliency***
LENGTH: *4 pages*
DOWNLOAD: *www.legacyscs.com/about-us/white-papers*
SUMMARY: The current economy has served as a reminder that there are no guarantees in business. Many companies are finding themselves struggling to stay afloat, and many are sinking. In better economic days, a company could survive with a moderate profit margin achieved through dedicated attention to its bottom line. Focusing on values increases performance levels, improves service, reduces employee variability, and supports sustainability.

3PL Central

TITLE: ***The ABCs of EDI - A Comprehensive Guide for 3PL Warehouses***
LENGTH: *12 pages*
DOWNLOAD: *bit.ly/zyoXyR*
SUMMARY: Your 3PL's ability to support EDI can often be the difference between winning a new customer – or losing an existing account. To ensure your warehouse management system (WMS) is up to the challenge, download 3PL Central's must-have whitepaper, *The ABCs of EDI*, today.

Ryder

TITLE: ***Ryder's Lean Guiding Principles White Paper Series***
DOWNLOAD: *www.ryder.com/supplychain_resources_lean-guiding-principles.shtml*
SUMMARY: Ryder's Lean Guiding Principles are the foundation for operational excellence in all its customers' warehouses. These principles can help your company eliminate waste, drive efficiency, and increase customer satisfaction. To learn more, check out this series of whitepapers.

GENCO ATC

TITLE: ***Secondary Market Sales: New Strategies to Protect Your Brand While Maximizing Profits***
LENGTH: *6 pages*
DOWNLOAD: *www.genco.com/perspectives/secondary-market-sales-wp.php*
SUMMARY: To protect retail sales of new product, some retailers and manufacturers dispose of or recycle returned products and distressed inventory rather than aggressively reselling these products in the secondary market. But it's no longer necessary to absorb these significant hits to revenue and profit. Brand-protection strategies can reduce or eliminate risk, while maximizing recovery value on store returns, excess inventory, closeouts, irregulars, and seasonal items. This whitepaper will show you how.

Amber Road

TITLE: ***Key Strategies for Automating the Import Supply Chain***
LENGTH: *9 pages*
DOWNLOAD: *bit.ly/tOB8Ia*
SUMMARY: New global trade management technologies are increasingly important to automate global operations across procurement, logistics, and trade compliance business processes. Download this whitepaper, *Key Strategies for Automating the Import Supply Chain*, to discover steps to drive performance, reduce costs, and simplify your import supply chain.

Purolator International, Inc.

TITLE: ***Border Hassles That Can Put the Canadian Market Out of Reach: What Your Business Should Know***
LENGTH: *18 pages*
DOWNLOAD: *bit.ly/yVrpB6*
SUMMARY: This whitepaper discusses regulatory and logistical hurdles U.S. businesses must be aware of when shipping across the U.S./Canadian border. These challenges must be understood and addressed as part of the cross-border experience. Transporting goods into Canada is a complicated process. Regulations and protocols are constantly changing and U.S. businesses must entrust their Canadian-bound shipments to a qualified logistics provider that ensures shipments are afforded every trade enhancement, priority clearance review, and duty/tax reduction to which they are entitled.

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WhitePaper Digest **is designed to bring readers up-to-date information on all aspects of supply chain management. We're building a database of SCM whitepapers, and you can help. E-mail us with whitepaper recommendations: editorial@inboundlogistics.com**

◀ **Lift Trucks: Crown Equipment**

The new Crown TSP 7000 and TSP 6500 series turret trucks feature regenerative braking and lowering systems that capture lost energy and return it to the battery. This technology, combined with the option to use a larger battery, positions the turret truck for energy savings and run-time improvements of 25 percent or more depending on the application. With a maximum capacity of 3,300 pounds, the lift trucks operate in very narrow-aisle spaces. The TSP 7000 models offer 56-foot maximum lift height; the TSP 6500 models offer 44-foot maximum lift height.

www.crown.com 419-629-2311

OCEAN

CaroTrans

A new weekly, fixed-day, less-than-containerload export service to South Africa leaves Charleston, S.C., with a 25-day transit time to Durban, 30 days to Johannesburg, and 32 days to Capetown. Cargo moves from CaroTrans' container freight stations in Dallas, Houston, Miami, Jacksonville, Atlanta, Charlotte, Memphis, and Savannah to the Charleston gateway for consolidation.

www.carotrans.com 732-540-8121

DATA COLLECTION

Accu-Sort Systems

The AccuLazr AL5010 adjustable raster bar-code scanner is housed in a compact, rugged enclosure. The raster itself is dynamically adjustable by up to 20 degrees to match application requirements. The AccuLazr browser-based user interface can be accessed remotely via iPhone, iPad, or laptop computer and a WIFI connection. Designed as a warehouse bar-code scanner that functions in almost any industrial environment from distribution centers to manufacturing plants, the adjustable raster model is especially suited for stop-and-scan, pick-and-pass, and pallet/tote presentation scanning applications.

www.accusort.com 800-BARCODE

Honeywell

The Honeywell HX2 series hands-free, wearable data collection terminals and voice-ready ruggedized computers feature advanced audio circuitry and noise-canceling techniques to support voice-directed logistics applications in harsh and noisy conditions. Operators can capture bar-code data using the low-profile ring scanner, and input additional data through an impact-resistant touchscreen or one of two keypad configurations.

www.honeywell.com	800-582-4263

Psion

A new version of the Neo handheld computer integrates ultra high frequency (UHF) with its radio frequency identification technology. The small-scale UHF model is easily mounted to the back of the Neo, allowing for fast ID tag reading and enabling use in dense tag environments.

www.psion.com	800-322-3437

3PLs

Associated Global Systems

A new 30,000-square-foot warehousing and distribution center in Jamaica, N.Y., provides eight docks, located near John F. Kennedy International Airport. The facility's services include domestic and international time-definite, warehousing, inventory control, recovery and return, expedited freight, and same-day delivery.

www.agsystems.com	718-276-759

Averitt Express

A new business unit, Averitt Retail Distribution Services, provides customized services to retailers needing delivery in large Southern markets, such as Atlanta, Ga.; Charlotte, N.C.; Miami and Lakeland, Fla.; and Houston and Dallas, Texas.

In these markets, Averitt is establishing retail distribution sites equipped with conveyor systems and scanning technology to meet retailers' specialized needs.

www.averittexpress.com 800-AVERITT

Flash Global Logistics

A new 45,000-square-foot climate-controlled distribution center in Parsippany, N.J., features three high-dock doors and a drive-up ramp. The facility, which is home to the service provider's Flash Courier and Transportation division, manages special value-added services, including sub-assembly, kitting, reverse logistics, and specialized processes such as testing and repair. The 3PL also moved its global command center, which manages all communications and order processing, to a new facility in Mountain Lakes, N.J.

www.flashlogistics.com 866-611-7874

FREIGHT BILL PROCESSING

Data2Logistics

Data2Logistics expanded its freight bill auditing, payment processing, and advisory services to the European market, with dedicated staff serving Germany, the United Kingdom, and the Belgium-Netherlands-Luxembourg region.

www.data2logistics.com 609-577-3756

TRUCKING

Estes Express Lines

Estes Express Lines opened a three-door terminal in Del Rio, Texas, to support the Del Rio and Eagle Pass markets.

www.estes-express.com 956-712-3349

Data Collection: Intermec

Designed specifically for manufacturing and warehousing environments, the SG20 family of omnidirectional handheld scanners minimizes the time and effort required to read a bar code by providing more than 50 times the motion tolerance of other scanners on the market.

www.intermec.com 425-348-2600

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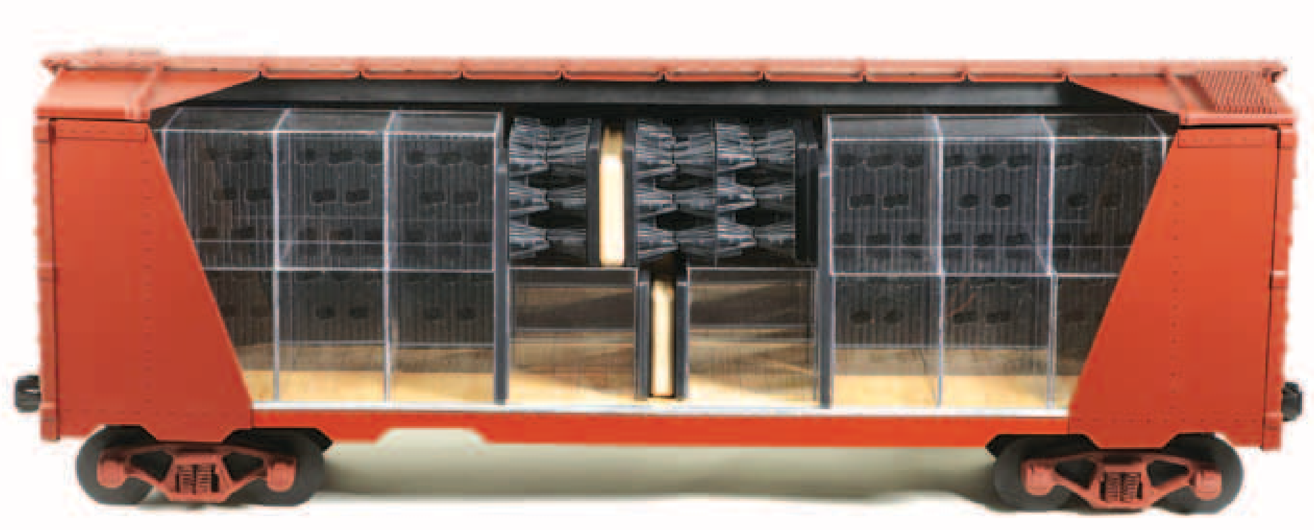
www.con-way.com/truckload 800-641-4747

Cargo Protection: Paylode Cargo Protection Systems

Paylode's reusable Rail Bulkhead Spacer fills longitudinal voids in railcars, absorbing up to 41,000 pounds of force without crushing. Manufactured from lightweight and rigid polyethylene, the spacer weighs 55 pounds, which makes handling and loading easy, and has a service life of more than seven years. It is typically configured as two interlocking units snapped together and combined with Paylode's Void Panels and airbags to prevent destructive load shifting caused by longitudinal and lateral forces, as well as harmonic vibrations inside railcars.

www.paylode.com 877-421-2914



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KLM Royal Dutch Airlines and Kenya Airways

KLM Royal Dutch Airlines and Kenya Airways have partnered to offer twice-weekly direct service between China and Africa. The service connects China's industrial zone in Guangdong with the Kenyan capital Nairobi, offering access to all key African markets.

www.klm.com	866-434-0320
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AirNet Systems

Express air cargo airline AirNet introduced a cargo charter division. Operating a fleet of more than 130 aircraft, AirNet Cargo Charter Services provides scheduled and on-demand charters throughout North America.

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INTERMODAL

Maersk Line

The containerized shipping carrier launched a new Flagship import service direct from Asia to five key markets in North America: Chicago, Dallas-Fort Worth, Houston, Memphis, and Northwest Ohio. It features dedicated, time-definite, non-stop rail service, provided by BNSF Railway. Flagship trains bypass connecting points along the route, enhancing service velocity. Three Maersk Line Transpacific import routes offer Flagship service, connecting at the Port of Los Angeles.

www.maerskline.com	800-321-8807

INTERMODAL EQUIPMENT

Boyd Intermodal

The Boyd Intermodal Raildeck converts flatbed industrial cargo from over-the-road to intermodal rail in a safe and secure process. The product is an open top flatbed unit that is transported over short distances via highway on a chassis. Once inside an intermodal yard, the flatbed unit is lifted onto intermodal trains for transport to an intermodal hub where it is loaded onto a chassis and drayed to the final consignee.

www.boydbros.com	800-633-1502

▶ Warehousing Equipment: Southworth Products

The PalletPal 360 Air level loader allows operators to build or break down pallet loads with a minimum of bending, reaching, stretching, and walking around. The unit, which can accommodate loads from 400 to 4,500 pounds, automatically adjusts the height of pallets as boxes are added or removed. A heavy-duty reinforced rubber air bag maintains the top layer of stacked containers at a convenient height.

www.southworthproducts.com	207-878-0700

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Encompass Global Logistics

A cargo management mobile application for use on iPhone, iPad, and iPod products allows importers and exporters to access the latest ocean and air sailing/freight schedules to identify best transit times and routes; track and trace shipments using Encompass' proprietary information management service, Globe Trak; and access bills of lading, packing lists, and commercial invoices, among other items.

www.encompassglobal.com	949-468-4400

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Jifram Extrusions

A new instant-quote online tool enables shippers to price custom-sized, 100-percent recycled PVC plastic pallet solutions using a simple questionnaire.

www.custombuiltpallets.com	920-467-2477

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Interstate Warehousing

Interstate Warehousing, a Tippman Group company, plans to expand its 428,000-square-foot frozen and refrigerated storage facility in Franklin, Ind. The 140,000-square-foot extension will be operational in July 2012.

tippmanngroup.com/iwi.htm	260-490-3000

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Delmar Group

Expanding into Latin America, Delmar Group launched Delmar-Locksley Logistica, an international freight forwarder, consolidator, and non-vessel-operating common carrier headquartered in São Paulo, Brazil.

www.delmarcargo.com	888-4-DELMAR

April 13-June 1, 2012, APICS CSCP Certification Training, Bethlehem, Pa. The Center for Value Chain Research at Lehigh University helps supply chain practitioners prepare for the Association for Operations Management's (APICS) Supply Chain Professional (CSCP) certification through five eight-hour courses, held April 13 and 27; May 11 and 18; and June 1. Each class covers one module of the CSCP Learning System, plus a review session.

610-758-6428
www.lehigh.edu

April 22-24, 2012, SCOPE East, Chicago, Ill. The Supply Chain Operations Private Exposition (SCOPE) program offers educational sessions focused on consumer goods, retail, and industrial supply chains; 3PL/distribution; and summits for CIOs and procurement executives. The event also features strategic presentations from industry thought leaders, real-world customer-led case studies, targeted research meetings with leading suppliers, and networking opportunities with industry peers.

310-706-4150
www.scopeeast.com

April 22-25, 2012, COSTHA Annual Forum and Expo, Savannah, Ga. The Council on Safe Transportation of Hazardous Articles (COSTHA) presents expert guidance on navigating the continually evolving regulations for shipping dangerous goods. The program's diverse offerings explore new technologies, regulatory requirements, and strategies for protecting corporate profits through enhanced compliance, risk management, best practices, and training.

703-451-4031
www.costha.com

April 23-25, 2012, Transportation and Logistics Council Annual Conference, Orlando, Fla. Discussion topics cover regulatory compliance, risk management, and freight charge liability. Pre-conference seminars explore the practical aspects of contracting for both purchasers and providers of transportation and logistics services; freight claims; and the laws and regulations affecting the supply chain and governing the relationships among shippers, carriers, and intermediaries.

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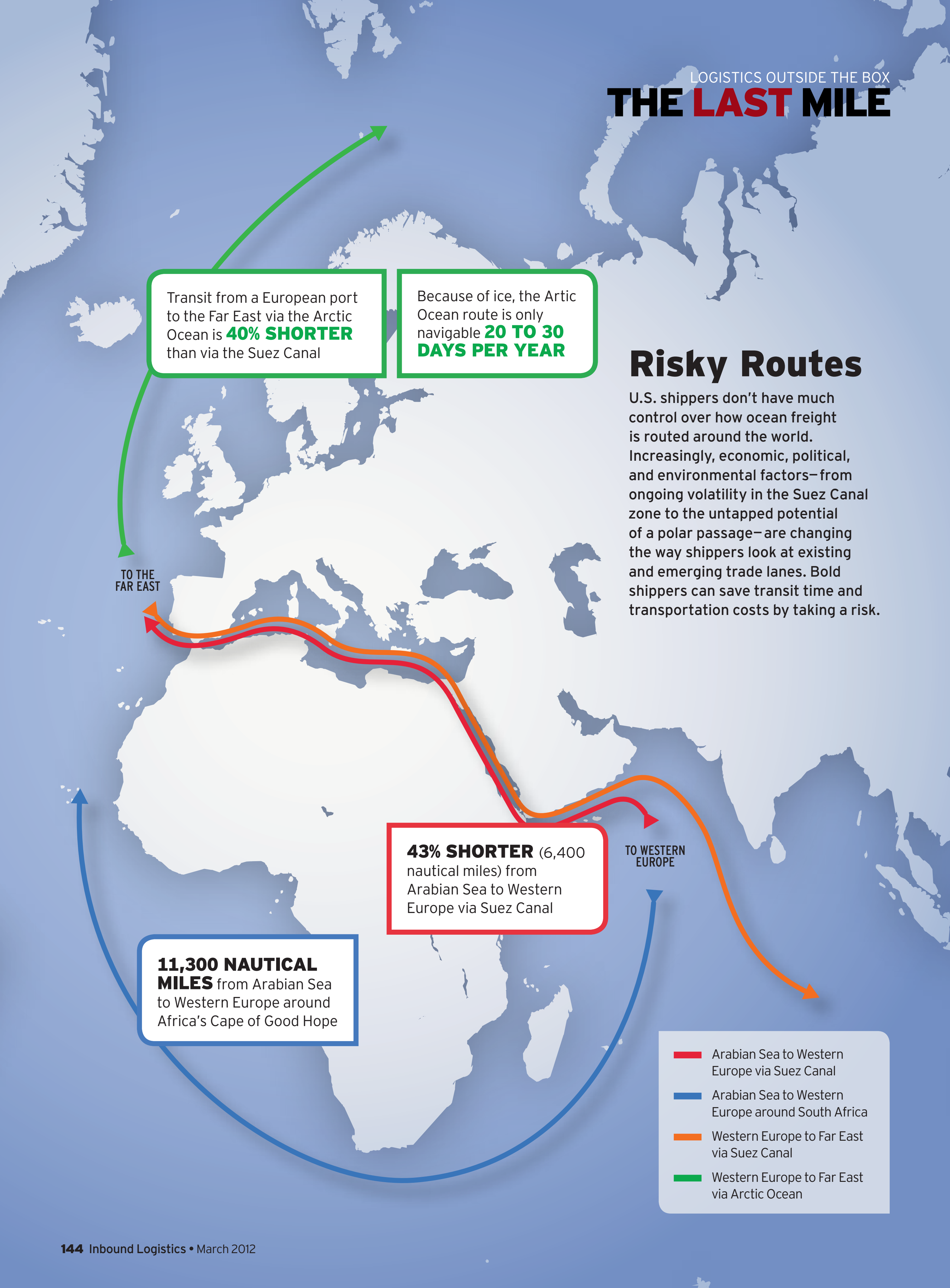

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