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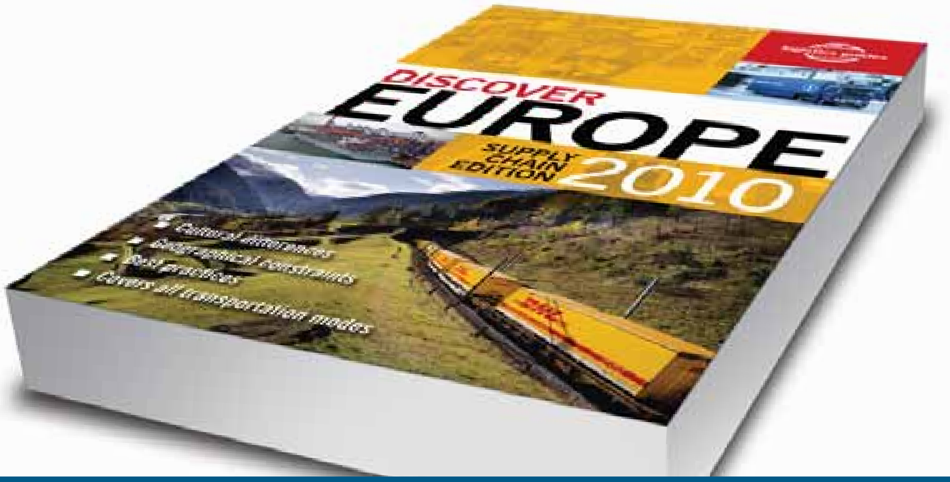

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CHECKINGIN

Keith Biondo

by Keith Biondo | **Publisher**

Retail Week at a Glance

I spent one week last month immersed in retail logistics. After attending Fashion Week in New York, I headed straight to the Retail Industry Logistics Association meeting. Retailers are adapting and evolving at an ever-quickening pace. Here's the latest:

MONDAY: Emerging Markets. Some global fashion and apparel brands expect emerging markets to drive 70 percent of future growth. China, India, Latin America, and other areas are quickly developing a "consumer class" with a taste for top brands. Developed markets such as the United States and Europe may grow slightly, but that's not where the retail excitement is.

TUESDAY: Not a Candy Bar. Net-connected vending machines are being used to sell everything from $18 headphones to $400 iPhones and cameras.

WEDNESDAY: Force Equalizer. Small retailers use the Net to compete against large companies. Amazon, for example, gives small companies huge reach without the cost of bricks and mortar, large payrolls, and infrastructure. That margin goes to price, and price reductions drive sales.

THURSDAY: Free Shipping. Amazon's shipping affinity program reaps results by delivering high repeat sales. For a $79 annual enrollment fee, customers ship free when they buy. The approach works; customers come back at higher rates. Alice.com has created another way to ensure repeat orders: Customers schedule auto-repeat delivery of consumer products, such as toilet paper, soap, and dog food. The products are picked, packed, and shipped–free again–direct to home.

FRIDAY: Private Labels. As the consumer class shops down market, smart retailers are investing in private label brands, hoping to convince consumers they are just as good as national brands. On both national and private label brands, retailers are identifying and eliminating under-performing SKUs, cutting costs, reducing complexity, and focusing on what sells at the best margin.

SATURDAY: Social Networking. Buying trends travel at hyper-speed thanks to social networking. Some e-tailers are using "companion shopping," where friends take a virtual shopping trip and comment on styles and colors while making their purchases. Others, such as PETCO, publish customer reviews on their Web site and push them out via e-mail. Twitter and other social networking venues enable a fashion craze to whip around the world at light speed. To capitalize on what's hot, retailers must scale quickly and globally.

SUNDAY: Don't Reinvent. These trends will change the current of product flow and global trade. If you play in the retail space, borrow what works and you can go with the flow instead of swimming against the tide. ■

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[INPERSPECTIVE]

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

I Brake for Quality

When a network news anchor said Toyota's problems were good news for U.S. automakers, it was irresponsible. And it missed the point.

It's reassuring to hear Toyota President Akio Toyoda explain to the U.S. Congress that maintaining high quality standards is not easy. The important part of the message coming from the company that has served as the benchmark of true quality for decades is this: not only does continuous improvement require continuous effort, so does maintaining the status quo.

Whether the result of growth, contraction, or inattention, any slip in quality – real or perceived – can condemn you in the market, overshadowing repeated cases of uncommon valor that exceeded expectations or overcame obstacles. Today's supply chains not only depend on consistent high quality, they wouldn't be possible if quality wasn't the rule rather than the exception.

In addition to being a moving target, quality lives in many houses. Your end customer typically sees the result, not the supply chain that delivered it. Toyota customers probably don't care whether sudden acceleration comes from their car's computer, a component in the accelerator pedal, or a floor mat. They just want a car that is safe to drive.

In the same way, your customer doesn't care that a shipment was late because someone at a loading dock in Vietnam smeared an entry on a form and a customs official down the line held the shipment for two days while new paperwork was forwarded. Nor does your customer care that the carrier had a mechanical problem with a trailer and had to wait 16 hours for a repair.

If reasonable best practice dictates electronic data entry at an origin terminal to avoid illegible entries on critical customs forms, that sounds like a good baseline requirement for all partners in that supply chain. And if carriers are required to submit basic insurance and safety records, and report on key performance indicators (KPIs) such as on-time pickups and deliveries, part of the due diligence in reviewing bids and contracts should be actually reading those reports. And if the KPIs don't already include a reason for a service failure, it might be time to add that to the request for proposal. When maintenance keeps appearing as a cause for a missed appointment, it's well past time to visit that carrier and have a look at its equipment and facilities.

That's on the logistics side. Every company from Boeing to Toyota knows that flawless delivery of faulty parts still spells supply chain failure. To avoid adding inbound inspections (and the time, space, and personnel in the distribution center to perform them), all members of the supply chain management team need to commit to quality and share data. When a logistics executive sees on-time performance slipping or damage claims increasing, it could be a sign the supplier is cutting corners. That could be an early warning that materials or assembly compromises might be coming.

It's time to commit to total quality and zero defects. Where have I heard that before? Oh, that's right. It was at Toyota. ■


BALL
China
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India
JERSEY
Hong Kong
CLEATS
Honduras
BLEACHERS
United States
BOTTLED WATER
Spain
LAWN MOWER
Canada

DIALOG

LETTERS TO THE EDITO

E-Revolution Edition

I really appreciate the PDF version of *Inbound Logistics* magazine. As a frequent international traveler, I prefer to have documents in electronic format.

I downloaded the PDF version into my Barnes & Noble Nook. It's great, but it would be even better if you could publish an "ePub" version. You would be on the forefront of the next digital revolution!

Joe Harrington,
Vice President of Programs, PowerGenix

Editor's Note: We are testing a version of the magazine formatted for the Kindle and the Nook. Let us know how it works: www.inboundlogistics.com/kindle. We're also developing other versions (think iPad) for release in the near future.

Balanced Criticism

I was taken aback by how politicized John A. Simourian's piece was (*Carriers Corner, December 2009*). His thesis is that President Obama doesn't understand the connection between jobs and infrastructure. There are 535 congressmen and senators in Washington, D.C., but the GOP members are all but silent on everything when it suits them. How come Simourian did not also criticize the Republicans?

I realize it is his opinion, but I think you owe the readers of *Inbound Logistics* a better product than Simourian gave us. Opinions expressed should be balanced and not one extreme or the other.

IL is a good magazine. Please do a better job in the future.

Theodore Fisk, via e-mail

Editor's Note: *Inbound Logistics* welcomes all opinions and we publish the best reasoned arguments. These days, the government is taking many actions that directly impact the logistics community, some not in a good way. John Simourian's piece made that point strongly. If you, or any *IL* reader, care to rebut Simourian's opinion, we would be happy to give it similar space in our pages.

A New Perr-spective

I'm thrilled that Perry Trunick has landed at *Inbound Logistics*. His James Bond analogy (*Shaken and Stirred, January 2010*) is apropos for Uncle Sam's legislators. It's too bad when the players think they are doing the right thing for themselves, when, in fact, it is the wrong thing for the nation.

Dennis M. Grim,
Business to Business Communications

Congratulations to Perry Trunick on his new gig with *Inbound Logistics*. I enjoyed his initial piece and look forward to seeing more of his work in the future.

This is a great addition to your team–Perry is one of the "good guys" covering transportation and logistics.

Chris Baltz, ABF Freight System

Making Wind Power a Breeze

Great article you wrote about wind logistics (*Tilting Toward Wind Turbines, November 2009*). Many wind turbines will be manufactured in Matamoros, Mexico, and shipped on inland river barges, almost fully assembled, to avoid expensive on-site construction costs.

Barge transport allows manufacturers to build the larger, more efficient turbines that truck and rail transport cannot accommodate.

Joseph P. Linck II,
Past director, Port of Brownsville, Texas
The NAFTA Marine Highway Company

Military Maneuvers

I've appreciated *Inbound Logistics* since I started subscribing in 2001. Being a professional military logistician, I find the articles and concepts priceless. Your magazine has provided me a look into the civilian world of logistics and has even provided an idea or two during my career that spans all facets of logistics. We tend to look only to our own ways, often missing something that has been working seamlessly elsewhere.

Major Jason A. Ballard,
Fort Leavenworth, Kansas


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10TIPS

STEP-BY-STEP SOLUTIONS

by Deborah Catalano Ruriani

Growing a Greener Warehouse

If plans for your warehouse/distribution center include becoming more green, consider these tips from Rajiv Saxena, vice president of supply chain solutions, APL Logistics.

1 **Focus on site.** If you can do only one thing to make your DC operations greener, select the most accessible, well-connected facility possible – one that's optimally located in terms of your company's demand and supply. Because transportation contributes far more to carbon footprint than warehousing, your choice of venue will have a huge impact–for better or worse–on your efforts to be environmentally friendly.

2 **Optimize with a forklift.** They may not cross the country or the globe, but forklifts still travel a hefty number of miles each year, including many that are superfluous. Use product slotting optimization programs to reduce the distances equipment has to travel within your facility, then watch your energy bills decline accordingly.

3 **Slam the door on heating and cooling loss.** Do your facility's dock doors open and close slowly or contain barely adequate insulation? Check the sealings. You could lose hundreds of thousands of dollars to temperature loss. Consider installing faster moving dock doors or at least revamping the sealing around your old ones.

4 **Switch your lights.** Swap old light bulbs and other dated fluorescent lighting for more current, energy-efficient lighting. Your facility might end up requiring 70 percent less light-related electricity than it once did.

5 **Sensor energy consumption.** Invest in motion sensors and light timers to make sure certain areas of your facilities are lighted–or more thoroughly heated and cooled–only when personnel are actually working in those areas.

6 **Reach for the skylight.** If your distribution center doesn't have skylights and windows, you're missing the green advantages of using natural light instead of electricity. Even small window installations can make a big sustainability difference.

7 **Reduce idle time.** Every minute a truck spends idling outside a DC is a minute it burns unnecessary diesel fuel–making your facility's carbon footprint anything but green. You can reduce the time trucks wait by using an advanced scheduling software program. Also, encourage drivers to stop running their engines during loading or unloading by providing a comfortable waiting area within your facility.

8 **Engineer your inventory levels.** If your DC's low-inventory strategy forces your company to make greater use of less energy-efficient transportation modes, such as air, you will unintentionally leave a bigger carbon footprint instead of a smaller one. To prevent this, have logistics engineers design your inventory deployment strategy through a detailed simulation or an optimization model first.

9 **Get your feet wet.** Energy efficiency may be the most important part of running a green facility, but water is also a precious resource. Can you incorporate storm water retention and gray water irrigation into your facility's landscaping?

10 **Participate in LEED or SmartWay, or work with partners who do.** The U.S. Green Building Council has done a great job of making Leadership in Energy and Environmental Design (LEED) the standard for sustainable construction. Also consider participating in the EPA's SmartWay Transport Partnership, which has made strides in reducing our industry's energy use. ■

READER
PROFILE

by Merrill Douglas

WHAT'S ON?

NAME: **William Cossey Jr.**

TITLE: Executive director of supply chain integration, since 2009

COMPANY: Cox Communications

PREVIOUS EXPERIENCE: Transportation and logistics sergeant, U.S. Army National Guard; staff accountant, PricewaterhouseCoopers; assistant senior auditor, senior auditor, Cox Enterprises; business manager, Gulf Coast Market, Cox Communications; director of business operations, Middle Georgia Market, Cox Communications; state director of finance, Georgia Key Market, Charter Communications; director of supply chain ERP and logistics, Cox Communications

EDUCATION: Alabama State University, BS in accounting, 1995

Happy in the Middle of the Action

As a transportation and logistics sergeant during the first Gulf War, William Cossey Jr. was responsible for bringing tracked military vehicles to the front. In civilian life, however, Cossey was studying accounting. When he left the Army National Guard in 1994, he assumed that was the end of his association with logistics.

Then in 2001, Cossey was named director of business operations for Cox Communications' Middle Georgia Market, and supply chain fell under his area of responsibility.

He liked that aspect of his work so much that, several promotions later, he embraced the chance to become director of supply chain enterprise resource planning (ERP) and logistics for Cox, the nation's third-largest cable services provider. In December 2009, Atlanta-based Cox named Cossey executive director, supply chain integration.

What makes supply chain management so appealing? "I never wanted to be strictly a bean counter," Cossey says. Throughout his finance career, he'd always felt drawn to operations. "Supply chain puts you in the middle of the action."

Reporting to the vice president of supply chain, Cossey is responsible for all the processes and systems involved in managing Cox's inventory at the corporate level. He's also in charge of forecasting and planning, and distribution and fulfillment.

Inventory at Cox comes in two varieties. The first is customer premises equipment–the set-top boxes, modems, and other equipment used in Cox's TV, data, voice, and wireless services. The second type of inventory is equipment for Cox's network infrastructure.

The Big Questions

What do you do when you're not at work?
I have one child in middle school and two in high school, so after-school activities comprise most of my nights and weekends. We try to take three or four family trips every year. I used to play golf, but I just don't get the chance these days.

Ideal dinner companion?
The composer John Williams. I took my kids to see "Star Wars in Concert," and it was amazing.

What's in your laptop bag?
Laptop cables, general office supplies, and the current issue of *Multichannel News*. When it's time to pack up at the end of the day, the only additions are my trusty composition book and laptop.

Personal business motto?
Anything is possible.

If you didn't work in supply chain management, what would be your dream job?
A conductor or band director. Right now I'm living vicariously through my son, who is becoming a very good alto saxophone player.

Until recently, each of Cox's markets managed its supply chain independently. In 2006, however, Cossey launched an initiative to centralize that function. The effort began with set-top boxes and two suppliers, and has grown to encompass more products and the largest 100 of Cox's 30,000 suppliers.

Cox centralized its supply chain management to better balance supply and demand company-wide. That's not easy in a firm that not only delivers product to new customers, but also must maintain leased consumer products and network hardware. "End-of-life management is a challenge," Cossey says.

But simply delivering new product can become tricky, especially when hordes of customers sign on at once. That's what happened in December 2008, just as the corporate supply chain organization was hitting the ground. With inventory short, Cossey and his team pulled strings with vendors to obtain more set-top boxes in a hurry. They made sure that the product flowed first to markets where the need was greatest.

In the past, managers in each market would have called the suppliers individually, competing for the same limited pool of boxes. The new process was much more effective.

"The fact that we had that model, even though it was in its infancy, made it a very palatable challenge," Cossey says.

With that new model now firmly in place, Cossey's team and Cox's sourcing organization are preparing for a new challenge. "We're going to spend this year giving the supply chain a facelift," he says. That means examining every process to find which ones offer room for optimization. Then, of course, they'll put improvements in place.

For a man like Cossey, who loves working right in the center of things, such a project is bound to be an enjoyable adventure. ■

NOTED

THE SUPPLY CHAIN IN BRIEF

soundbyte

"Reducing carbon in the life cycle of our products will often mean reducing energy use. That results in greater efficiency and, with the rising cost of energy, lower costs, making our business stronger and more competitive."

—Mike Duke, Walmart president and CEO

GREEN SEED

Chicago's Public Health Department is using Entropy Solutions' GREENBOX thermal management system to distribute the H1N1 vaccine to remote immunization sites that do not have ready access to refrigeration.

The 100-percent sustainable temperature-controlled packaging solution keeps contents at a consistent temperature for more than five days, allowing Chicago Public Health to run its program without excessive labor costs because it doesn't need staff to pack and ship boxes as quickly as they had in the past.

London-based watchdog **Carbon Disclosure Project** issued a new report produced by management consultant A.T. Kearney, which points to a sharp increase in the number of global corporations requiring vendors to measure and manage greenhouse gas emissions. More telling, the study indicates that companies are likely to end relationships with vendors who fail to meet carbon management criteria.

YRC Worldwide's new Green Balance Calculator, developed in partnership with Sustainable Travel International, is an optional tool that shippers can use to help offset emissions associated with their shipments via certified carbon offset projects. The calculator evaluates transportation activities including fuel, rail, and air miles that produce or influence carbon emissions.

UP THE CHAIN

Bob Ostryniec has been named chief supply chain officer for **HJ Heinz**. In this role he will drive worldwide initiatives to reduce costs, improve gross margins, and enhance productivity.

English luxury goods firm **Burberry** has tapped **Andy Janowski** to be its new chief operations officer. Previously senior vice president supply chain, Janowski helped create the company's centralized global supply chain.

Cabela's, a multichannel retailer of hunting, fishing, and camping gear, recently promoted **Brian Linneman** from senior vice president of global supply chain operations to executive vice president and chief merchandising officer. Linneman will retain responsibility for distribution, fulfillment, and global sourcing until a new executive vice president and chief supply chain officer is named as replacement.

Lisa Bachmann has been promoted to executive vice president, supply chain management and CIO at **Big Lots**, with additional responsibility for distribution and transportation services. She previously served as senior vice president of merchandise planning/allocation.

SEALED DEALS

Time Warner Cable recently partnered with **Brightpoint North America** to leverage its suite of integrated supply chain solutions for transportation management, inventory management, device customization, fulfillment, and reverse logistics. The cable operator will use the new services to support the launch of Road Runner Mobile, which includes wireless data card, accessory, and collateral fulfillment, returns, triage, and repairs.

▲ **Samsung Panama** selected **Panalpina** to handle most of its full containerload ocean freight traffic from Asia-Pacific to Panama, which amounts to approximately 2,000 TEUs a year. Additionally, the electronics manufacturer awarded the 3PL a three-year extension for its warehouse operation in the Colon Free Trade Zone. Samsung also contracts with Panalpina to handle direct deliveries from its factories in Asia and North America to Central and South America.

Catallia Mexican Foods, a flour tortilla producer, signed an enterprise resource planning (ERP) contract with **SYSPRO**. The software solution will help the food company manage new product additions with greater functionality to track larger ingredient inventories, gather better data consistency and integrity, add production efficiencies, and enhance customer service.

Fenwick Automotive Products, a leading suppler to the North American automotive aftermarket, partnered with **Transplace** to manage transportation planning and execution in the United States and Mexico, as well as imports from Asia.

Used vehicle auctioneer **Manheim** awarded **UPS' Automotive Industry Solutions Group** a contract to arrange and manage transport services from dealerships, auto manufacturers, car rental companies, and financial institutions to the company's 77 operating locations in the United States.

Heineken USA selected **Coyote Logistics** as its national freight forwarder. Under this agreement, the third-party logistics provider will manage the outbound transportation of the beverage company's Dutch brand portfolio from six U.S. Demand Point centers. This supply chain footprint supports Heineken's distributor network, and positions the company to further streamline operations as it expands.

m&a

Bibby Financial Services has completed the acquisition of **FreightCheck**, an Atlanta-based freight bill factoring company that touts more than 700 trucking clients throughout the United States. As a complement to its larger carrier customer base, FreightCheck will operate as a standalone division and provide freight bill financing services to smaller trucking companies.

I.D. Systems, a leading provider of wireless asset management solutions, has purchased **Asset Intelligence**, a business unit of General Electric. Asset Intelligence provides trailer and container tracking solutions for manufacturers, retailers, shippers, and freight transportation providers, and has more than 120,000 units under contract.

awards

Ventana Research has presented **Welch's** with its Supply Chain Performance Leadership award. The honor recognizes the food and consumer packaged goods company's use of software provider Oco's business intelligence solutions to achieve greater supply chain performance and collaboration in its transportation operations. This has streamlined processes, reaped significant cost reductions, and improved customer service and on-time delivery.

Southeastern Freight Lines has been named **Lowe's'** 2009 Platinum Carrier of the Year, the highest award designation from the home improvement retailer. This is the third year in a row that Southeastern has earned the Platinum distinction by achieving all four goals set by Lowe's, including on-time and claims-free deliveries.

For the fourth consecutive year, **Tyson Food Service Group** received the top ranking in an **International Foodservice Distributors Association** member survey. The award recognizes exceptional manufacturer performance in working with distributor customers to drive costs out of the system and to find solutions that support operator customers.

OHL's Activair division has been named Airfreight Forwarder of the Year by the **British International Forwarder's Association**, on behalf of customer Transworld Publishers, for the successful distribution of Dan Brown's book, *The Lost Symbol*. Activair delivered 400,000 copies of the release simultaneously to 50 global locations without shortages, incidents, or damages.

TRENDS

SHAPING THE FUTURE OF LOGISTICS

Alaska Gambles on Arctic 'Pipeline'

America's Last Frontier could be on the edge of a new front for global trade if Congressman Don Young's (R-AK) vision for an arctic port becomes reality.

by Joseph O'Reilly

Alaska, which is wild by nature, also has a reputation for bringing impetuous infrastructure projects to the table–for example, the much-maligned "Bridge to Nowhere" (sponsored by Young) and numerous efforts to relocate the state capitol. Young's vision for an arctic deep-water seaport may be yet another pipe dream–or it may become the dream cargo pipeline of the future, greatly reducing transportation times between Asia and North America.

The Arctic Deep Water Sea Port Act (H.R. 4576), introduced to Congress as a complement to Senator Lisa Murkowski's (R-AK) legislation in December 2009, proposes a report on the feasibility of establishing a port in the Arctic to protect and advance strategic U.S. interests within the region. A two-year study will determine what strategic capabilities such a facility should provide, as well as identify the most favorable location within Alaska.

"The United States is an Arctic nation because of Alaska, and Alaska will provide the gateway to our nation's future," explains Young. "We have the opportunity now to address the prospects of industry years down the road and how we can use changing arctic conditions to our advantage.

"Now is the time to invest in our infrastructure and lay the groundwork," he adds. "As other countries develop interests in this region, we need to ensure the protection of U.S. interests and make moves now to lay our claim."

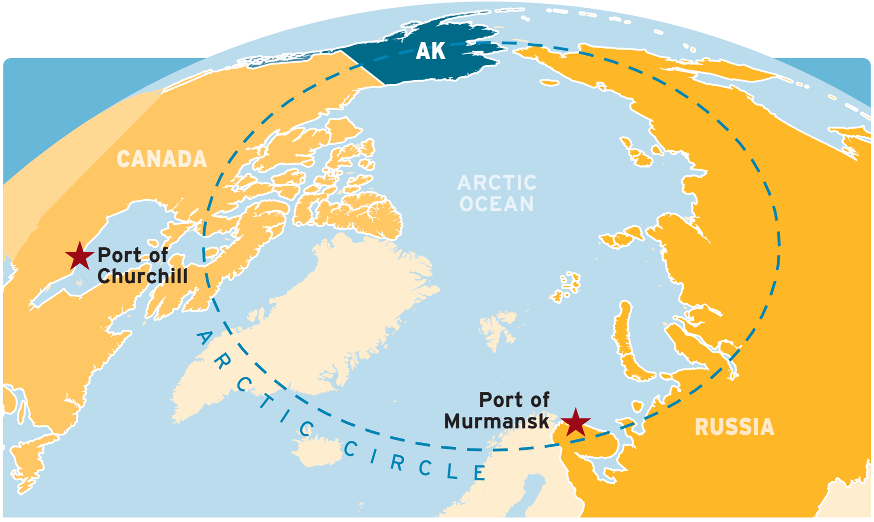
Young's ambition exposes a larger need for transportation vision that capitalizes on immediate demand. As far-fetched as this proposal may be, there is precedent elsewhere in North America and around the globe.

Manitoba, Canada, has the Port of Churchill, on the Hudson Bay's west coast, which serves as an important hub for grain exports. The Port of Murmansk in Russia's northwest is arguably the most important axis for arctic trade.

Developed during World War I to support military installations and movements, today the facility is largely tied to the country's oil industry. If you look at a flat rendering of the world with the North Pole fixed in the center (*see map above*), Alaska is naturally positioned as a third distribution nexus along the Arctic Circle.

The Arctic Triangle

Alaska is naturally positioned to become a third freight gateway to the Arctic, joining the Port of Churchill in Manitoba, Canada, and Russia's Port of Murmansk. The promise of a new Northern trade corridor linking Asia and North America could reduce transportation times considerably.



Moreover, for all the speculation about global warming, if arctic icecaps recede significantly as some climatologists predict, they will open up the Northwest Passage to more freight transportation. In 2009, Beluga Shipping, a German heavy-lift ocean carrier, became the first non-Russian company to move freight on a commercial vessel through the Northern Sea Route from Asia to Europe, reducing transit time by 3,000 nautical miles and 10 days.

Creating a new corridor between Asia and North America promises similar efficiencies and cost savings. The ports of Churchill and Murmansk have already executed on speculative plans to build a cargo bridge between the two continents.

There is also growing demand for an arctic port, as Young pointedly references. The race for oil reserves under the northern ice is well underway, and will serve as a stimulus for infrastructure

John Ruan: 1914–2010

With the passing of John Ruan, 96, on Feb. 13, 2010, shippers and carriers lost one of the pioneers of bulk-freight transportation. His signature bow ties were matched by an Iowan work ethic that helped haul freight through the Great Depression and pave the way for Ruan Transportation, a Des Moines, Iowa-based provider of dedicated contract carriage, logistics, and bulk transportation services.

Beyond trucking, Ruan's passion for humanitarian causes crystallized with his patronage of the World Food Prize. The foundation and award recognize the achievements of individuals who improve the quality and availability of food worldwide, while raising awareness of the importance of sustainable food sources for all people.

From trucking icon to civic beacon, John Ruan was a true Renaissance man.

For more information about John Ruan's storied career, read *90 Years of Ship By Truck (1919-2009)* at inboundlogistics.com/articles/features/0909_feature01.shtml investment and development as the United States stakes its claim along with Canada and Russia. Heavy-lift port capabilities will facilitate bringing in equipment to support exploration and drilling.

Wild ideas are the norm in a state where moving goods requires out-of-this-world innovation and execution, mixing modes, preparing contingencies, and managing exceptions. But Alaska has a pedigree for distribution and logistics, too. Ted Stevens Anchorage International Airport is a transpacific airfreight oasis, ranking fifth in the world in terms of total landed tonnage.

The state also has expertise. Alaska Air Cargo, Lynden, FedEx, UPS, and Carlile Transportation Systems are proven players.

But location is the state's real wild card and Alaska may very well be onto something–building an arctic bridge to somewhere.

Excellence On Demand

The best way to manage consumer variability is to calibrate a supply chain that can quickly capture and respond to demand signals, according to a recent report from Aberdeen Group, *Demand Management: Enabling Sell Side Collaboration to Improve Sales Revenue*.

"In these times of economic uncertainty and a global credit crunch, companies are actively seeking smart strategies for managing demand volatility," explains Nari Viswanathan, vice president and principal analyst for the Boston-based think tank.

"Traditional approaches of solely focusing on being demand-driven from a planning perspective are not adequate. Companies need to balance demand planning with short-term responsive strategies," he adds.

Forecasting demand, especially when consumers are more selective about the products they buy, is rife with uncertainty. Planning is only as good as a company's ability to adapt to changes in the market and tie back-end supply chain functions to customer-facing point-of-sale data.

Aberdeen identifies four key measures of demand management excellence:

1. The accuracy of product family-level forecasts.

2. SKU-level forecast accuracy.

3. Cash conversion cycle.

4. Customer service levels.

Top-performing companies achieve markedly improved performance across these measures, and that has a significant impact on business results.

Between top-performing enterprises and their peers, there are some notable differences in the tools they use for demand management, according to the report. Specifically, high-performing companies are 1.6 times more likely to utilize a best-of-breed solution, and are 30 percent less likely to use manual spreadsheets to solve

A Fork in the Railroad

There's a captive audience on Capitol Hill—and it includes politicians, shippers, and railroads. Senator Jay Rockefeller's (D-W.Va.) introduction of the long-awaited *Surface Transportation Board Reauthorization Act of 2009* late last year has stirred up some dust about the future of rail transportation in the United States.

Among other things, the proposed legislation would make the Surface Transportation Board an independent authority sanctioned to mediate disputes between railroads and shippers, as well as monitor operational performance on the tracks. Traditional rail shippers welcome increased oversight and leverage from the government, while carriers view new regulation as a step back in time and an impediment to future growth.

It's a divisive topic that is drawing plenty of opinions. Here's what some major players on both sides of the rail are saying:

THE LEGISLATOR:

"We have worked hard to address shippers' long-standing complaints, and to strengthen and reform the Surface Transportation Board, but we have been committed to doing so in a way that uses old-fashioned competition to strengthen the railroad industry. We very much want the railroads to be successful as a critical transportation mode for the 21st century — the fastest, cleanest, and most efficient method we have of moving goods in every sector across the country and around the world. But we believe the playing field must be level."

–**Senator Jay Rockefeller (D-W.Va.),** sponsor of the *Surface Transportation Board Reauthorization Act of 2009*

THE CARRIER SIDE:

"We're concerned about actual and threatened federal regulations and mandates that will, without a doubt, cut investment in critical freight systems. We will continue to press key policy makers in the Senate and eventually in the House. Let's make sure we continue to have that ability to invest."

–**Michael Ward,** CEO, CSX

"This bill would be the most significant rewrite of the railroad industry's regulatory system in the last three decades. Under the bill, Class I railroads would be required to open their privately owned and maintained rail networks and would face vastly expanded government involvement in railroad operations."

–**Edward R. Hamberger,** President and CEO, Association of American Railroads

THE SHIPPER SIDE:

"Senator Rockefeller asserted effective leadership on this important legislation, and the result is a bipartisan, fair compromise that balances the competitive interests of the nation's railroads and their customers. The NITL wants a strong, healthy rail industry that will move the nation's commerce efficiently in an enhanced competitive environment. This is a major step in that direction."

–**Bruce Carlton,** President, The National Industrial Transportation League (NITL)

"Nearly 30 years have passed since passage of the Staggers Act, and our nation needs new rail transportation policy to reflect the reality of the marketplace in the 21st century for both railroads and the shipping community."

–**Karl Scronce,** farmer and President, National Association of Wheat Growers demand management problems.

Leveraging demand management technologies, top performers focus on efforts beyond out-of-the-box statistical forecasting. They welcome external collaboration, allocate forecasts to more levels of the enterprise, and improve service by soliciting detailed customer-level data.

Apart from technology adoption, demand-driven companies are more likely to create a single forecast with input from multiple roles in the company, which allows them to fold product promotions and other demand-shaping activity into forecasts.

Express Lane

Global expediters can thank fickle consumers for an uptick in business. A surge in e-commerce flows has given the express transportation market a welcome reprieve as it climbs out of current economic doldrums, according to research by Datamonitor, a London-headquartered market analysis company.

A strong fourth quarter, sustained by online holiday business, has allowed e-tailers to capture increasing market share from brick-and-mortar competitors and aggressively discount products and shipping charges. A spike in home deliveries is benefiting post offices and courier services around the world, despite an otherwise difficult trade environment.

Indicative of this turnaround, both UPS and FedEx have announced rate hikes for their home delivery offerings in the United States.

"The rate hikes offer UPS and FedEx the opportunity to climb out of a situation of generally weak demand and downward pressure on prices," explains Datamonitor's senior analyst Erik van Baaren.

A similar trend is occurring elsewhere around the globe. For example, Dutch express carrier TNT has shifted its focus to home delivery. Beginning in the Netherlands, the company has announced partnership agreements with large retailers to help them establish an online presence in Europe.

TNT is tailoring specialized delivery solutions – such as billing, technology, logistics, and marketing functions – to accommodate high-end retailers. Its objective is to expand services beyond simple parcel delivery to include a full-scale service portfolio that targets returns as well.

Datamonitor expects cross-border business-to-consumer volumes in Europe to track positively for the near term. Combined with demographic changes, enhanced Web sites, and more consumers looking for online bargains, the express market is predicted to remain on an upswing. ■

GLOBAL

THE WORLD AT A GLANCE

by Joseph O'Reilly

Setting Green Standards

At its most recent annual meeting, The World Economic Forum's Logistics & Transport Industry Group, in collaboration with Accenture, agreed to standard guidelines for calculating consignment-level carbon emissions from logistics and shipping operations. The benchmarks will help consumers and businesses assess the carbon impact of transporting products and drive carbon efficiency in the freight and logistics sector. Guidelines also include principles for defining the scope of reportable emissions and how these emissions should be allocated in cases such as shared transport or backhaul.

Damco Debuts in Djibouti

Djibouti is making a new name for itself–and that's saying something. The country, situated on East Africa's "horn," has become a trendy distribution hub for East-West trade between Europe, the Middle East, and Asia. It's why third-party logistics provider Damco recently located a new office there to better manage import/export demand for the region–which is further accentuated by the country's status as a free-trade zone. As a gateway into the African continent, Damco expects its presence will help spur more economic development and trade opportunities. Ethiopia, for example, is an emerging bed for the floriculture industry, which requires specialized transportation. Previously, flowers had to be airlifted to global markets; but now businesses can contract with Damco to run reefer containers via land through Djibouti and transport them by water around the world.

CEVA Goes Zoom Zoom

Mazda has signed a three-year agreement with Dutch 3PL CEVA Logistics to manage spare parts distribution throughout Italy. CEVA collects parts daily from the automobile manufacturer's warehouse in Klagenfurt, Austria, and transports them to its DC outside Bologna. The 3PL sorts and distributes an estimated 120,000 packages to 140 Mazda dealers and repair shops across Italy every year, as well as manages the handling and processing of returns, including collecting parts from dealers and shipping them to the Austria warehouse.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Shaping a European "Union"

In an effort to stimulate innovation and nurture transportation infrastructure investment and development, a consortium of 17 European businesses have joined forces to create the Hinterport initiative. The partnership, spearheaded by Interporto Bologna, an Italian "freight village," or inland port, intends to share best practices, standardize processes, and build a more complete intermodal transport network throughout Europe. Empowered by the European Union's Marco Polo funding program, which earmarks investment for infrastructure projects that shift freight off congested roadways, Hinterport's members include research institutes, port terminal operators and authorities, freight villages, and transport operators.

Cargo Codesharing

Following Lufthansa Cargo's acquisition of Austrian Airlines, the two carriers have agreed to step up cooperation and optimize cargo flows through their respective hubs in Frankfurt, Munich, and Vienna. The partnership also merges and harmonizes global distribution and freight handling activities, product portfolios, and production processes. In the future, both airlines expect to jointly route and boost cargo traffic through Vienna, with the expectation of making it a central European hub for air freight. The move comes as Lufthansa Cargo confronts night flight restrictions in Frankfurt that threaten future expansion plans.

South Africa's Roadblock

Even Africa's most progressive economy is lacking when it comes to transportation and logistics development. South Africa is hamstrung by poor infrastructure and high costs, largely because it is so reliant on over-the-road transport, suggests a new report by Frost & Sullivan. While motor freight dependency can result in more efficient and direct service, it also increases road use, congestion, costs, and infrastructure damage. This modal imbalance is particularly striking in a country with an abundance of raw material sources ideal for rail/intermodal transport. Currently, 80 percent of companies move less than 10 percent of their goods by rail. If adequate rail capacity were available, 46 percent of South African companies could move more than 20 percent of their goods by rail. Consequently, businesses are subjected to needless costs and competitive pressures, while governments elsewhere provide infrastructure and trade incentives to business as a key strategic priority.

America's Pains, Mexico's Gains

Government officials in Mexico are likely to raise its three-percent economic growth estimate for 2010 as a result of a stronger-than-expected rebound in manufacturing and an improvement in domestic demand. Independent forecasts from the International Monetary Fund and JPMorgan have recalculated the country's GDP growth forecast to 4.5 percent. While the U.S. automotive industry has been decimated by slack consumption, shrinking credit, and offshore manufacturing, Mexico reports positive manufacturing growth, with auto industry production more than doubling from January 2009, and exports similarly surging.

Asian Air Freight to Take Off

Airlines in the Asia-Pacific region are forecast to acquire 8,000 new passenger and cargo aircraft, valued at US $1.2 trillion, over the next 20 years, according to Airbus.

Broadly, this represents one-third of global aircraft deliveries between now and 2028, with the region driving demand for larger aircraft types. Consequently, Airbus estimates that Asia-Pacific cargo traffic will increase by 6.3 percent per year, compared with a global average of 5.2 percent. From a freight perspective, this prediction suggests Asian manufacturing potential for, and consumption of, high-value goods will continue to expand.

Ryder Goes East

Ryder System has established a joint venture with Cargo Services Far East Ltd., an Asia-based logistics solutions provider, to offer end-to-end logistics services to North American companies importing goods from Asia. The partnership will help U.S. importers design, plan, and manage product flows from Asian factories to North American retail stores.

Operating as Ryder Supply Chain Solutions Asia, the joint venture provides vendor and purchase order management, inland transport services, export consolidation, and order fulfillment services.

The partnership also builds on Ryder's recent acquisition of CRSA Logistics, which manages transpacific end-to-end transportation and supply chain services for Canadian retailers, including consolidation services in key Asian hubs and deconsolidation operations in Canada. [ ]

More than 35,000 miles of highways and interstates are in

NEW JERSEY

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keeps getting better.
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Jaguar Land Rover North America
Verizon • COSCO Americas Inc.

New Jersey's strategic location—halfway between Boston and Washington, D.C.—means overnight delivery to more than 100 million consumers who purchase $2 trillion in goods and services annually.

"New Jersey's strategic location allows us to distribute our product across the U.S. and around the world, easily, by virtue of its superior transportation network, including roadways, a major seaport and two international airports."

Heidi Manheimer, CEO
Shiseido Cosmetics America

Although companies locate in New Jersey for many reasons, the ability to ship goods to market quickly and efficiently is especially crucial. The state was recently ranked #1 in the country for transportation, warehousing and highway connectivity and #2 for railroad service.* New Jersey also has the largest port complex on the eastern seaboard with facilities in Newark and Elizabeth, supplemented by major ports on the Delaware River. These ports handle more than 620 million tons of freight, valued at over $850 billion annually. And, with two major airports—Newark Liberty and Atlantic City International—New Jersey serves as an intermodal gateway for trade across the country and around the world.

As the third largest industrial real estate market in the country (with nearly 800 million square feet of space), New Jersey offers a wide range of choices. The state has more than 23,000 establishments devoted to warehousing, logistics and distribution; 3,000 warehouse facilities have ceiling heights over 20 feet.

A number of major firms that store and move their products, as well as the thousands of logistics firms that serve them, are located in New Jersey. Contact us at 866-534-7789, we'll put you in touch with one of our representatives so you can learn more about why New Jersey is the right place for your business.

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SMART MOVES

EDUCATION AND CAREER ADVANCEMENT

by Dr. Michael Reilly

Want a Promotion? Get an Education

Success in any career is often measured by advancement, and logistics and supply chain management is no exception. Advancing to a C-suite job will likely require an MBA or a specialized master's degree.

To earn a degree, you don't have to quit your job, sacrifice your life, and go away to school. If you have a strong desire to complete your education, you can do it online.

Many colleges and universities offer excellent logistics and supply chain management bachelor's degree programs, or allow you to add a logistics management specialization to a bachelor's or master's degree program.

Undergraduate and graduate-level courses blend theory and practice at the optimum level to prepare practitioners for advancement and graduate students for various certification program exams, such as the International Society of Logistics Certified Professional Logistician or Certified Master Logistician.

The process of education is important because it is integrative; it teaches you how to be a critical thinker and self-learner. Logistics education prepares you to integrate your personal logistics/supply chain experience with the broader discipline.

Undergraduate and graduate study presents a broader view of business, and provides the analytic tools to assess the performance of your area of responsibility, and project future demands and trends. You won't just be ahead of the curve; you'll anticipate the curve itself.

HELP WANTED

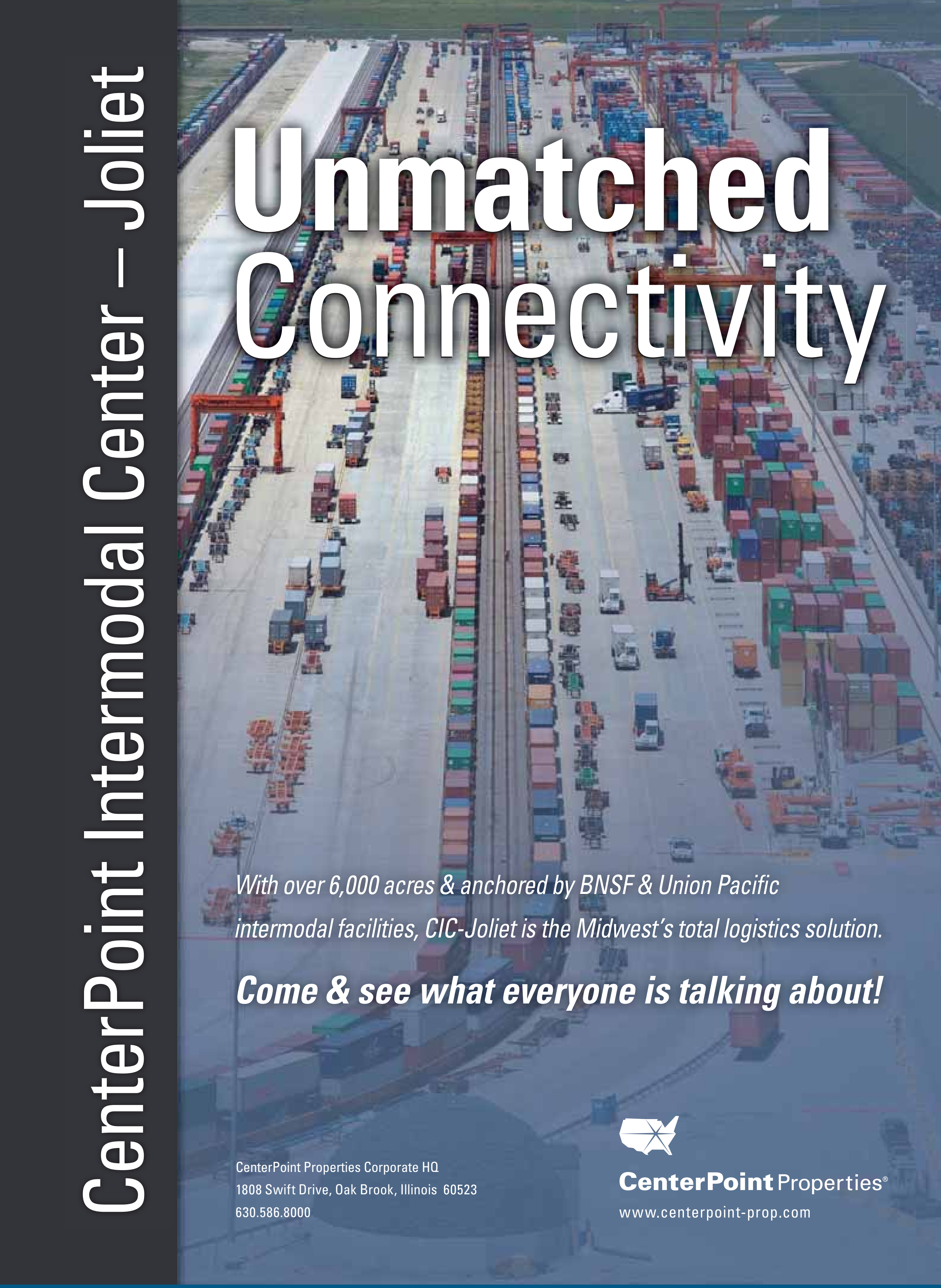
Employment demand for logisticians and supply chain managers is projected to grow much faster than the average through 2018, reports the U.S. Department of Labor. Employment prospects improve significantly with a bachelor's degree, and even more with a bachelor's-plus professional certification or a master's degree.

And, because all business is global, third-party logistics companies seek employees who can conduct sophisticated analysis of supply chain activities, coordinate logistics functions across international borders, and understand applicable laws and customs.

The ability to use and understand Electronic Data Interchange (EDI) and the Internet, global positioning systems, and Decision Support Systems greatly enhances advancement opportunities. These technologies have been available for more than 15 years, but are now becoming widely used by 3PLs to deliver high-quality logistics services to customers. Understanding the growing business-to-business and business-to-consumer realities is critical to growing your career in the next few years.

The future for logisticians and supply chain managers is wrought with complexities. Risks are largely influenced by economies and shifts in consumer demand. Rapid changes in product variety; smaller inventories; shortened product life cycles; increased storage and transportation costs; increased governmental compliance requirements; and uncertain market demand create significant challenges and opportunities for business as well as for logisticians.

To succeed in this ever-changing global environment, logisticians and supply chain managers need to support their companies by devising effective and efficient operations and systems to sustain a competitive advantage. Doing so requires ever-increasing competencies and demands new ways of thinking. The supply chain will need more highly educated and sophisticated managers. ■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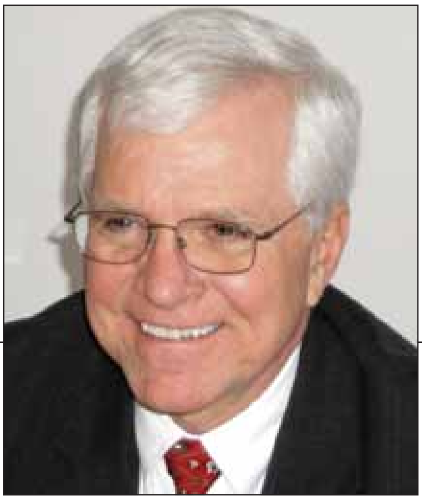

GREEN LANDSCAPE

SUSTAINABILITY IN THE SUPPLY CHAIN

by Bill Armstrong and Arnold Barlow

Hold Everything: Adopting Protective Packaging Practices

Evaluating a company's distribution and fulfillment processes can play a major role in reducing its environmental impact while enhancing its corporate image and reducing overall costs. Protective packaging is an important part of this analysis.

Packaging supports and balances a company's broader sustainability goals and initiatives for reducing carbon emissions, creating operational efficiencies, conserving resources, ensuring supplier compliance, and enhancing brand reputation.

Companies can apply sustainable business practices to packaging and distribution by focusing on the following areas to reduce transportation costs, handling, and replacement shipping.

■ **Packaging materials.** The key to creating a sustainable package is minimizing material without sacrificing protection. While using recycled packaging materials is ideal, it's vital that they adequately and efficiently protect the product being shipped. Some recycled or organic materials, such as soy-based products, may deteriorate in extreme heat or moisture, and not all high recycled-content interior protective packaging materials offer equal protection and shipping integrity.

Reusability is often a goal in creating sustainable packaging, but the materials must be able to withstand the rigors of repeated shipping. Sturdy, reusable plastic pallets, for example, can last longer and have less overall environmental impact than wood pallets, especially if they are constructed of recycled materials and used multiple times.

■ **Cube optimization.** Both globalization and dimensional weight charges have forced companies to consider cube optimization. Sometimes referred to as "right sizing," cube optimization maximizes the product-to-package ratio and often results in less packaging material, which brings source reduction up front and reduces overall environmental impact.

By requiring a premium for lightweight, yet space-consuming, packages, dimensional weight charges help ensure that all shippers pay their fair share for the vehicle capacity their packages occupy during shipment. Broadly adopted in the United States in 2007, these shipping rates have led companies to consider new packaging solutions that take up less space in carrier vehicles.

Numerous packaging materials can protect shipments while occupying minimal space inside the package. Air cellular products provide superior protection using less packaging material compared to loose fill or paper. Inflatable packaging systems allow users to create air-filled cushions, which reduce shipping costs because packages are lightweight and smaller. Using these materials, shippers can create efficient and economical packaging designs for a variety of void fill, cushioning, and blocking and bracing applications.

Carriers, suppliers, and in-house packaging professionals can help companies create more sustainable packages and reduce overall distribution costs through package source reduction, efficient materials use, reduced damages, and cube optimization.

■ **Damage reduction.** When looking at the transportation portion of sustainable supply chains, one of the most neglected–yet most important–aspects is avoiding product damage in transit.

CONTINUED FROM PAGE 34

Damages lead to increased costs for replacing goods, including manufacturing, shipping, and labor associated with processing the replacement and the claim. When a product has to be replaced and re-distributed, and the original damaged item returned and disposed of, the product's carbon footprint multiplies. These incidents can also damage a company's brand reputation.

A variety of packaging materials can protect shipments and minimize damage. Foam-in-place systems, for example, use fitted foam cushions that require less material per pack, often reducing both package size and weight.

Another option is suspension and retention packaging, which is shipped flat and assembled on-site as needed. It can be reused and is easily recycled with common corrugated boxes. Designs feature resilient low-slip film that surrounds products, protecting them from transport shock and vibration hazards.

■ **Temperature control.** Temperature-sensitive items, such as perishables and pharmaceuticals, require adequate thermal protection or temperature-controlled environments. Insulated temperature-sensitive packaging can contribute to efficient distribution methods for these items.

Switching from common expanded polystyrene foam to more efficient polyurethane foam, for example, can help lengthen a distribution cycle. Companies can switch from next-day shipping to two- or three-day service–perhaps converting from air to ground shipping–resulting in reduced costs and environmental impact. Superior insulation can also mean using fewer gel packs or less dry ice, further reducing package weight and shipping costs without compromising product care.

■ **Performance testing.** Appropriate package performance testing can be an essential element in determining whether packaging designs and materials are adequate. Many distribution partners and materials suppliers maintain package design and testing facilities staffed with experts who verify the performance of different packaging configurations to determine what best suits specific situations.

Whether initiated at the product design stage or upstream in the supply chain, sustainable packaging can help shippers be better stewards of the environment while also achieving cost savings and running more efficient operations. ■

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ITMATTERS

by Niko Michas

Getting Off the Bench and Into Benchmarking

While watching the Cubs battle the White Sox last summer at at Wrigley Field, I realized that baseball players and supply chain professionals have a few things in common.

For instance, veteran ballplayers might try to get through a game by relying on experience and talent. But, by studying strategies, statistics, and individual players, they can better size up the competition and develop a strategy that increases their chances of winning the game.

Supply chain and logistics professionals also might be tempted to rely on industry knowledge and current technology when negotiating shipping rates with carriers. If you are willing to do research and explore new solutions, however, you increase the odds of obtaining better rates, achieving greater savings, and beating the competition.

Before you enter into rate negotiations, make sure you have a high-level understanding not only of your competitors, but of where your company ranks in comparison. In today's market, it is no longer acceptable to count on carriers to assess your company's shipping characteristics; shippers have to rely on their own research and data to know for certain that they are obtaining all the incentives they deserve. You have to know which shipments are being sent by ground, air, or ocean; the volume and weight of each shipment; the time each shipment spends in transit; and most importantly, the cost of every shipment in your supply chain.

Imagine if a baseball player relied only on people outside his team for advice on how to hit when a certain pitcher was on the mound. Wouldn't he be better off doing his own research and counting on his own team for advice? The same is true for supply chain professionals. If you obtain electronic shipment-level detail from your carriers, then benchmark your company's shipping characteristics against those of other companies, you will create more leverage you can use during rate negotiations.

Implementing a new benchmarking initiative could be your chance to be a valuable player in your company's quest to achieve better shipping rates.

Benchmarking allows shippers to achieve savings in several ways. It helps determine best practices, but it also empowers you to take action by improving operations and leveraging shipping data to obtain better shipping rates.

These three steps can help ensure that your benchmarking program really works:

1. **Hold a team meeting.** Make sure every team member shares the vision of what they are benchmarking, and why.
2. **Hire a qualified coach.** If you don't have the ability or resources to benchmark your company against the right number or types of companies, consider hiring a data analytics specialist. The right third parties can clean up your data, benchmark it against their own database, then interpret the results.
3. **Keep your eye on the ball.** Benchmarking initiatives commonly fail due to an inability to remain focused and unprejudiced when interpreting and acting on the final data. To avoid these pitfalls, use a proven benchmarking method to come up with findings that can be reproduced.

A good benchmarking initiative allows you to apply your knowledge of best practices to the real world. It provides you with the data to develop your company's complete shipping profile, and it enables you to back up your claims regarding your company's shipping characteristics. Benchmarking improves your overall game. ■

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

2010 Global Logistics Guide

The weight of the world recession was felt in equal measures this past year, shocking local economies and regional trades, and seismically shifting the way U.S. businesses spin and span the globe.

Contraction was widespread. Consumerism dropped, freight flows congealed, and imports, exports, and GDPs took precipitous dives. While the sting of the financial crisis was largely impartial, a global rebound will be anything but. Countries that have made transportation and logistics infrastructure a priority will spring to demand—and it to them—when trade returns.

Global expansion is increasingly complex as new markets open up and developing countries mature. Businesses are exploring secondary and tertiary sourcing strategies to reduce risk; balancing offshore and nearshore manufacturing points to manage lead times, reduce total landed costs, and increase market responsiveness; and they are looking at emerging markets where they can manufacture and sell.

Inbound Logistics' 6th annual Global Logistics Guide offers a reference as you evaluate new horizons for growth.

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.

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 of homegrown logistics talent, cultural and language similarities, government leadership, historical U.S. foreign direct investment outflow, and economic freedom.

This year's methodology adds a new wrinkle with the introduction of a Business Culture index. It includes cultural variables that appeal to U.S. businesses, as well as pro-business trends such as historical investment, future economic potential, and government leadership.

There are intangibles at play as well. Our X-Factor provision takes into account elements, such as political stability and labor availability, 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 the global supply chain to help you quantify and qualify expansion opportunities with countries that best fit your logistics and supply chain needs. If you have questions or suggestions about our methodology and selections, please email: editor@inboundlogistics.com

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; 2010 Index of Economic Freedom, The Wall Street Journal & The Heritage Foundation.

The Americas

While the United States struggles to attract manufacturing, Mexico has become a magnet. The country's economic reformation is well underway and U.S. companies are quickly recognizing the economy of having a source spot close to demand. Location is Mexico's hallmark, especially as transportation development, logistics expertise, security, and IT connectivity catch up to speed.

Canada, by contrast, has much of what Mexico needs, but not enough of what makes Mexico interesting for U.S. businesses—demand-driven maquila distribution and low-cost labor.

In South America, Brazil's well-developed port infrastructure and proximity to the United States also make it appealing. But the region as a whole suffers from poor hinterland connectivity in terms of rail and road, which makes it difficult for foreign companies to capitalize on an abundance of labor in remote locations.

Further afield, Chile has made great strides curbing corruption and investing in technology, becoming South America's leader in that regard. But the recent earthquake will likely stifle short-term infrastructure investment beyond recovery efforts.

Canada

GDP:	$1,319
EXPORTS:	$299
IMPORTS:	$305
FDI 2008:	$227

SCORE **7**

T	I	B	X
2	3	3	-1

X-FACTOR: Pressures to keep U.S. manufacturing at home will never play into Canada's favor.

Mexico

GDP:	$866
EXPORTS:	$224
IMPORTS:	$235
FDI 2008:	$96

SCORE **6**

T	I	B	X
2	1	2	1

X-FACTOR: Investment in transportation infrastructure makes nearshoring a viable option for U.S. companies.

Chile

GDP:	$150
EXPORTS:	$49
IMPORTS:	$41
FDI 2008:	$13

SCORE **4**

T	I	B	X
1	2	2	-1

X-FACTOR: Despite great efforts developing IT infrastructure and reforming economic policies, the recent earthquake will be a major impediment to near-term growth.

Brazil

GDP:	$1,482
EXPORTS:	$159
IMPORTS:	$136
FDI 2008:	$46

SCORE **4**

T	I	B	X
2	1	1	0

After Mexico, Brazil is the next likely nearshore manufacturing location for U.S. businesses. But transportation infrastructure still lags beyond the country's developed coastline.

FDI: U.S. Foreign Direct Investment, 2008
T: Transportation Infrastructure
I: IT Competency
B: Business Culture
X: X-Factor

All amounts in $US billions.

Europe

Apart from the Asian continent, Europe has the most container ports among the world's top 50, which given its relative scale, is why infrastructure densification ranks the best in the world. Germany, the Netherlands, and Belgium earn top scores for transportation as they have a full complement of air, ocean, road, and rail resources—and the logistics pedigree to connect modes. It's partly why Germany and the Netherlands are the top two U.S. foreign investment destinations besides Canada.

Short-sea shipping has always been a strong suit for Europe simply because it needs to be. Road congestion and intra-Europe rail inconsistencies are recurring concerns. Emerging release valves in the south (Italy), east (Poland and Estonia), and through Switzerland's much-anticipated Alptransit Gotthard Base Tunnel, forecast even greater expansion on the continent's periphery.

Given Europe's cultural diversity, its primary challenge remains aligning national interests into a collective whole, breaking down political and economic barriers, privatizing transportation, and balancing progressive social democratic agendas with policies that incent foreign investment. Rigid labor laws, for example, do little to attract heavy process industry.

Of greater concern for Europe at large is the continuing assimilation of newer European Union entrants, their development, and the long-term stability of the euro—which could ultimately threaten manufacturing activity in the region.

Belgium

GDP:	$462
EXPORTS:	$296
IMPORTS:	$315
FDI 2008:	$65

SCORE **8**

T	I	B	X
4	2	2	0

Between Antwerp, Liege, and Brussels, Belgium has air and ocean transport covered—which is important because it depends so heavily on export trade.

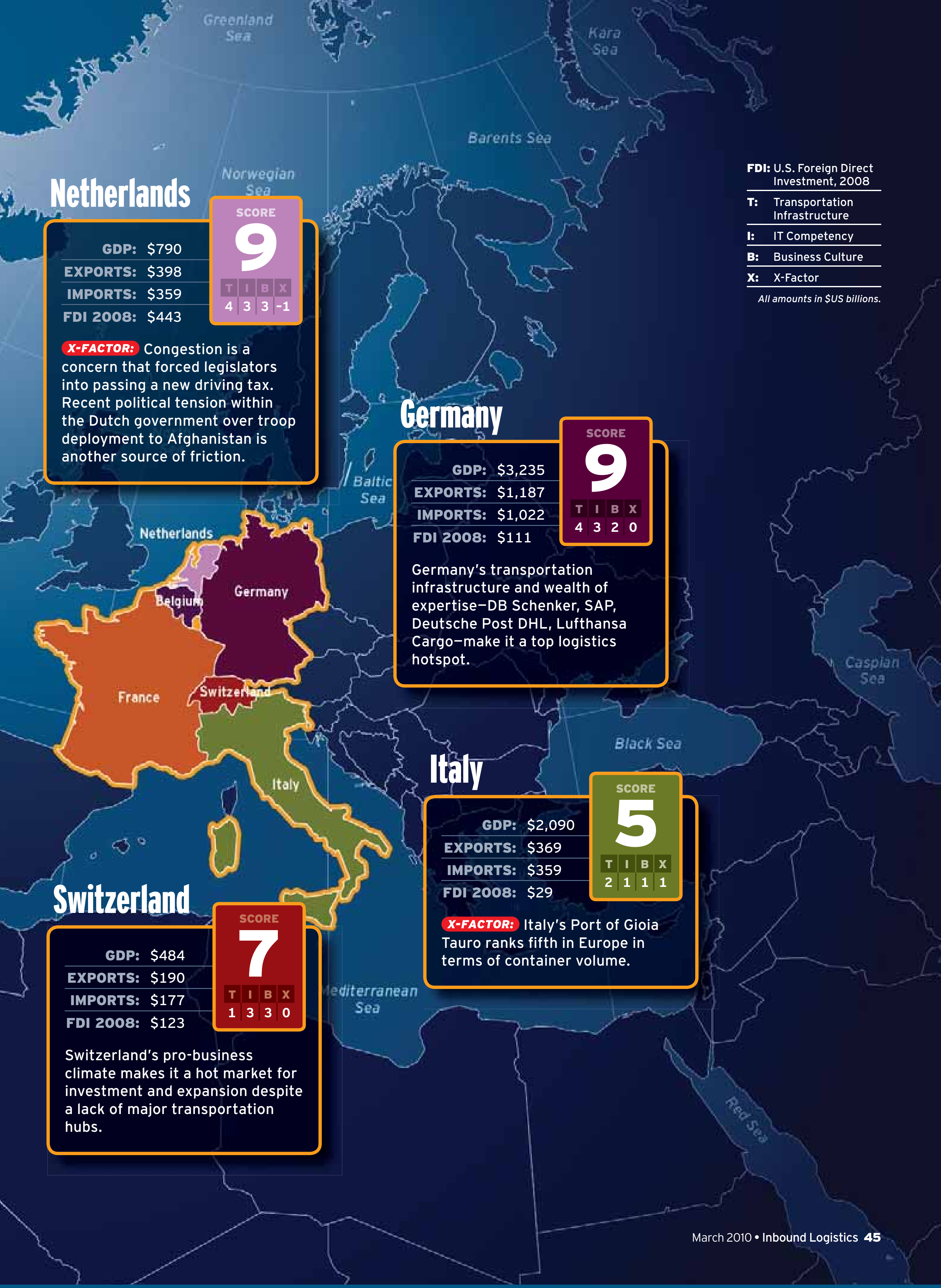
France

GDP:	$2,635
EXPORTS:	$457
IMPORTS:	$532
FDI 2008:	$75

SCORE **8**

T	I	B	X
3	3	2	0

France's transition to a more privatized free market economy has amplified its well-developed transportation footprint. Still, labor rigidity and tax burdens make some investors wary.



FDI: U.S. Foreign Direct Investment, 2008
T: Transportation Infrastructure
I: IT Competency
B: Business Culture
X: X-Factor

All amounts in $US billions.

Netherlands

SCORE 9

T	I	B	X
4	3	3	-1

GDP: $790
EXPORTS: $398
IMPORTS: $359
FDI 2008: $443

X-FACTOR: Congestion is a concern that forced legislators into passing a new driving tax. Recent political tension within the Dutch government over troop deployment to Afghanistan is another source of friction.

Germany

SCORE 9

T	I	B	X
4	3	2	0

GDP: $3,235
EXPORTS: $1,187
IMPORTS: $1,022
FDI 2008: $111

Germany's transportation infrastructure and wealth of expertise—DB Schenker, SAP, Deutsche Post DHL, Lufthansa Cargo—make it a top logistics hotspot.

Italy

SCORE 5

T	I	B	X
2	1	1	1

GDP: $2,090
EXPORTS: $369
IMPORTS: $359
FDI 2008: $29

X-FACTOR: Italy's Port of Gioia Tauro ranks fifth in Europe in terms of container volume.

Switzerland

SCORE 7

T	I	B	X
1	3	3	0

GDP: $484
EXPORTS: $190
IMPORTS: $177
FDI 2008: $123

Switzerland's pro-business climate makes it a hot market for investment and expansion despite a lack of major transportation hubs.

Eastern Europe/ Russia

Eastern Europe and Russia are the great unknowns for U.S. companies exploring offshore locations. The area as a whole holds great promise, largely because investment to date has been minimal. Poland and Estonia are new entrants to the European Union, so integration is still a work in progress. Both countries are strategically positioned as gateways between central Europe's established commercial centers and Russia's expanse. As European manufacturing chases low-cost labor east, Estonia, Poland, and Russia come into play.

Both Poland and Estonia have strong economic ties with Germany and have pursued policies of liberalization to drive their economies forward. Russia, by contrast, remains a laggard in transportation infrastructure development, which has been exacerbated by its dependence on oil exports and the volatility of that market.

As a consequence of the global recession, near-term investment will be stifled. But there are still signs of opportunity. Russia is a necessary part of an emerging land bridge between Asia and Europe and an intermodal pipeline linking the two continents could stimulate transportation infrastructure development that supports new manufacturing and distribution growth.

Estonia

GDP:	$18
EXPORTS:	$9
IMPORTS:	$9
FDI 2008:	$0.16

SCORE 5

T	I	B	X
1	3	2	-1

X-FACTOR: U.S. FDI dropped precipitously over the last reporting period, from an all-time high of $32 million in 2007 to $16 million in 2008.

Poland

GDP:	$423
EXPORTS:	$135
IMPORTS:	$142
FDI 2008:	$16

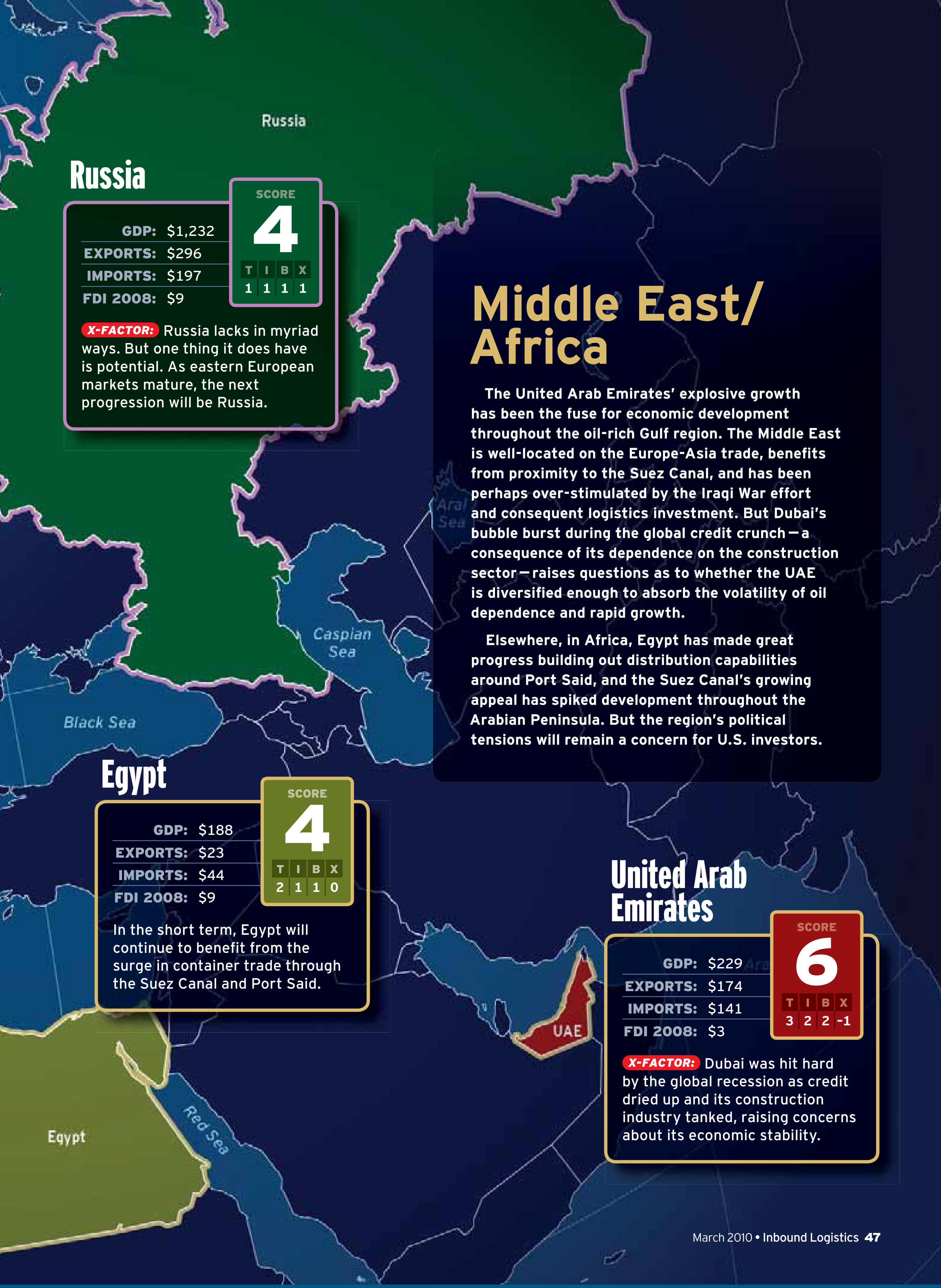
SCORE 5

T	I	B	X
1	2	2	0

A recent EU entrant, Poland has made a swift transition in liberalizing its economy. Siphoning production from Germany, the country's manufacturing sector continues to grow.

FDI:	U.S. Foreign Direct Investment, 2008
T:	Transportation Infrastructure
I:	IT Competency
B:	Business Culture
X:	X-Factor

All amounts in $US billions.



Middle East/ Africa

The United Arab Emirates' explosive growth has been the fuse for economic development throughout the oil-rich Gulf region. The Middle East is well-located on the Europe-Asia trade, benefits from proximity to the Suez Canal, and has been perhaps over-stimulated by the Iraqi War effort and consequent logistics investment. But Dubai's bubble burst during the global credit crunch—a consequence of its dependence on the construction sector—raises questions as to whether the UAE is diversified enough to absorb the volatility of oil dependence and rapid growth.

Elsewhere, in Africa, Egypt has made great progress building out distribution capabilities around Port Said, and the Suez Canal's growing appeal has spiked development throughout the Arabian Peninsula. But the region's political tensions will remain a concern for U.S. investors.

Russia

GDP:	$1,232
EXPORTS:	$296
IMPORTS:	$197
FDI 2008:	$9

SCORE 4

T	I	B	X
1	1	1	1

X-FACTOR: Russia lacks in myriad ways. But one thing it does have is potential. As eastern European markets mature, the next progression will be Russia.

Egypt

GDP:	$188
EXPORTS:	$23
IMPORTS:	$44
FDI 2008:	$9

SCORE 4

T	I	B	X
2	1	1	0

In the short term, Egypt will continue to benefit from the surge in container trade through the Suez Canal and Port Said.

United Arab Emirates

GDP:	$229
EXPORTS:	$174
IMPORTS:	$141
FDI 2008:	$3

SCORE 6

T	I	B	X
3	2	2	-1

X-FACTOR: Dubai was hit hard by the global recession as credit dried up and its construction industry tanked, raising concerns about its economic stability.

Southeast Asia

India is a worthy challenger to China in terms of labor cost differential, and its cultural commonalities, logistics expertise, and educated workforce are major advantages for companies considering offshore expansion in Asia. The country also has a growing cluster of port facilities around its horn, though connectivity to the interior is still a major problem. As with China, India's socio-economic standing is stressed by a large population and sizable disparity in wealth distribution. Still, its conservative fiscal policies and import/export trade balance have given foreign companies a solid footing for speculation.

Apart from Singapore and Malaysia, which are top logistics spots by virtue of their transportation facilities, Southeast Asia's allure lies in non-developed countries such as Vietnam, Laos, and Cambodia. These markets are still on the fringe for most U.S. companies, largely because primitive transport capabilities impede time to market. Still, some are circumventing these obstacles by regionalizing their offshore supply chains. Using locations such as Hong Kong, Mumbai, and Klang to distribute product from, thereby shortening transport miles where roads and resources are scarce, companies can still capture manufacturing economies without sacrificing expediency.

China

GDP:	$4,758
EXPORTS:	$1,194
IMPORTS:	$922
FDI 2008:	$98

SCORE **8**

T	I	B	X
3	1	2	2

X-FACTOR: China remains the top target for U.S. interests – for both manufacturing and selling opportunities.

Thailand

GDP:	$266
EXPORTS:	$151
IMPORTS:	$132
FDI 2008:	$9

SCORE **4**

T	I	B	X
2	1	1	0

Thailand is well-positioned in the Southeast fray and relies on a top-heavy export market, which took a hit in 2009. Of greatest concern for U.S. companies is political instability and violence.

India

GDP:	$1,095
EXPORTS:	$165
IMPORTS:	$254
FDI 2008:	$16

SCORE **5**

T	I	B	X
2	1	2	0

India has a lively domestic market and is attracting investment from companies that are both selling and producing goods there. Infrastructure development and connectivity are still problematic.

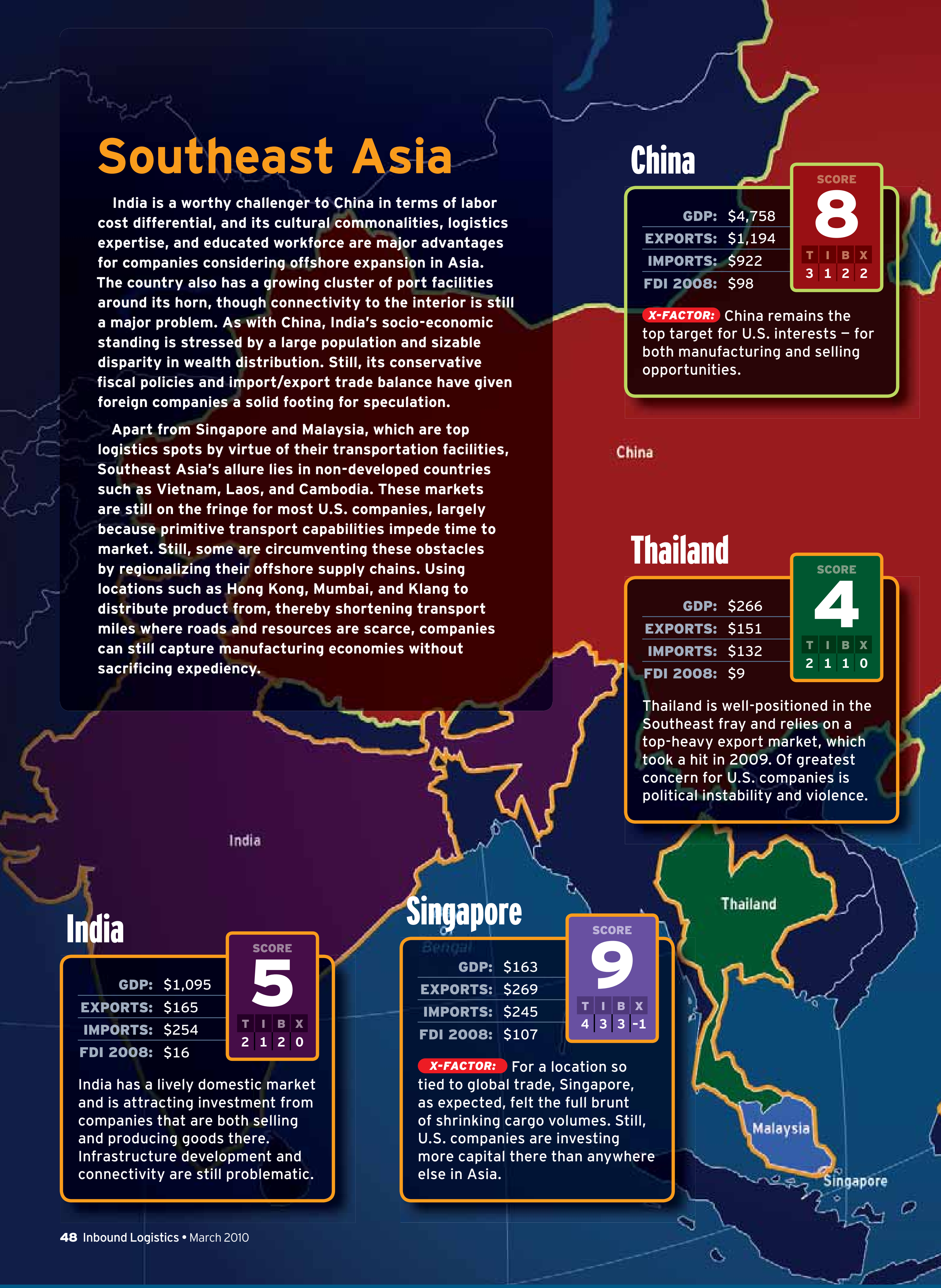
Singapore

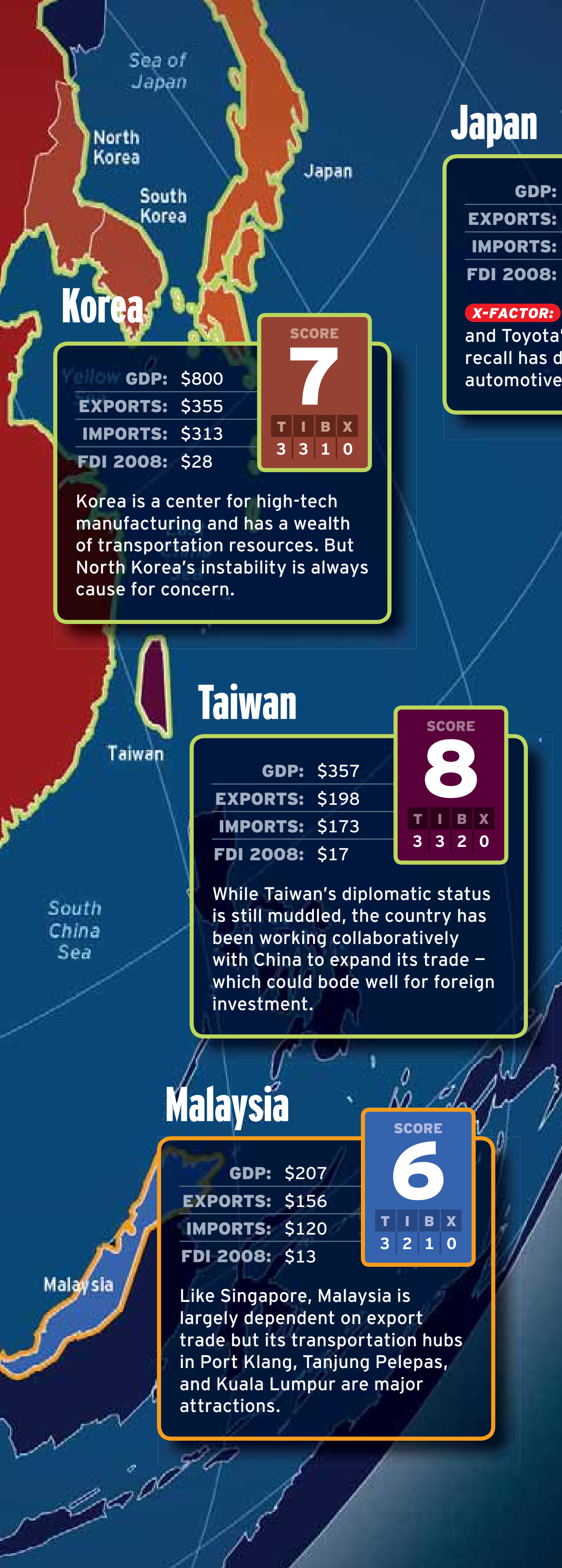
GDP:	$163
EXPORTS:	$269
IMPORTS:	$245
FDI 2008:	$107

SCORE **9**

T	I	B	X
4	3	3	-1

X-FACTOR: For a location so tied to global trade, Singapore, as expected, felt the full brunt of shrinking cargo volumes. Still, U.S. companies are investing more capital there than anywhere else in Asia.





Japan

SCORE **8**

T	I	B	X
4	3	2	-1

GDP: $5,049
EXPORTS: $516
IMPORTS: $491
FDI 2008: $79

X-FACTOR: The global downturn and Toyota's most recent mass recall has deflated Japan's automotive industry.

FDI: U.S. Foreign Direct Investment, 2008
T: Transportation Infrastructure
I: IT Competency
B: Business Culture
X: X-Factor

All amounts in $US billions.

Korea

SCORE **7**

T	I	B	X
3	3	1	0

GDP: $800
EXPORTS: $355
IMPORTS: $313
FDI 2008: $28

Korea is a center for high-tech manufacturing and has a wealth of transportation resources. But North Korea's instability is always cause for concern.

Taiwan

SCORE **8**

T	I	B	X
3	3	2	0

GDP: $357
EXPORTS: $198
IMPORTS: $173
FDI 2008: $17

While Taiwan's diplomatic status is still muddled, the country has been working collaboratively with China to expand its trade – which could bode well for foreign investment.

Malaysia

SCORE **6**

T	I	B	X
3	2	1	0

GDP: $207
EXPORTS: $156
IMPORTS: $120
FDI 2008: $13

Like Singapore, Malaysia is largely dependent on export trade but its transportation hubs in Port Klang, Tanjung Pelepas, and Kuala Lumpur are major attractions.

Asia

Between Japan's production legacy and China's manufacturing hegemony, Asia's footprint is well fixed. In the middle, literally, Taiwan and South Korea have become legitimate suitors for U.S. investment.

China's appetite for infrastructure is bottomless. Every year the country introduces a new wave of ports to its rotation. This year alone it touts 17 facilities among the world's Top 50 tonnage ports. Last year there were nine.

By contrast, Japan, South Korea, and Taiwan are saturated with development and limited by geographic constraints, which has forced them to direct attention toward R&D and high-tech manufacturing. Japan's automotive sector continues to show cracks as a result of global competition, slack consumer spending, and a recent spate of product recalls. South Korea's instability lies due north, while Taiwan's political identity and export trade are inherently tied to China. All three countries face an emerging labor shortage as cultural mores shrink the workforce.

In terms of labor and leadership, China has no equal. When demand for exports dried up, the government responded by stimulating domestic spending and consumption—giving U.S. manufacturers and retailers further incentive to tap a booming middle class market. But China does face challenges. Growing logistics talent, addressing ethical criticisms and labor unrest, linking more remote manufacturing pockets to coastal hubs, and increasing competition from Southeast Asia are outstanding concerns.

EUROPE

Touring Transportation Best Practices

U.S. companies exploring uncharted markets to expand their global presence might consider taking a second pass through Europe for a fresh perspective on transportation best practices.

by Joseph O'Reilly

If you've ever found yourself lost in an unfamiliar European roundabout, there probably wasn't anywhere to turn except clockwise. Veering left didn't feel right. But circling the rotary again did. And so you learned your way around and gained a new perspective, perhaps appreciation, for European transportation flow.

Traffic patterns are just one of many peculiarities that distinguish European and U.S. views on transportation. In logistics terms, idiosyncrasies are no less apparent: there are lorries in lieu of trucks, phonetically confused distribution centres, performance metrics measured in *metrics*, and charming "freight villages" that make U.S. intermodal sites seem alien. These anomalies are semantic, but they also reflect the unique ways Europeans approach transportation planning and execution.

In today's global village, logistics best practices are sweeping across continents, creating a more integrated and educated supply chain. North America and Europe are the two most developed continents in the world–and prosperity lends itself to transportation and logistics wealth. But cultural and economic

Europe's extensive coastline, inland waterway system, and short-sea shipping structure enable shippers to utilize a "moving highway." This gives logistics companies the flexibility to move cargo via water closer to demand, then truck to final destination.

diversity, and unique geographies, have their own ways of shaping how businesses and governments devise tactical and strategic solutions to common problems.

A Matter of Diversity

If the United States is a cultural goulash, then Europe is a pot not yet stirred. Since its inception in 1993, the European Union (EU) has made great progress building on the original foundation of the European Economic Community, assimilating new members into a cohesive trading bloc.

Despite this singular entity, and largely uniform, if increasingly unstable, currency, EU countries are nationalistic by nature, with unique cultural wrinkles. Many of these subtleties are easily obscured by business commonalities. As a developed, consumer-oriented region, a historical hub for manufacturing and trade, and a single market, the EU is more like the United States than different. This harmony plays out on the logistics side as well, especially in terms of technology and process, which increasingly have no bounds.

"Logistics best practices tend not to differ significantly," suggests Simon Dixon, owner of Hatmill, a management consulting firm located in Harrogate, United Kingdom. "Principles such as minimizing touches, balancing stock with availability, and proximity to the customer are ever present in both the United States and Europe."

Differences emerge where borders end, and specifically where geography and transportation divide. Europe, less than one half the size of the United States, presents a far different trade dynamic. There are as many sovereign states on the continent as there are in the United States–and only 27 of those countries are part of the EU.

"European nations, being relatively small and close to one another, have had to learn how to deal with many different cultures," notes Dr. J. Rod Franklin, vice president, product development, Kuehne+Nagel. "Operating in this manner means they are much more at home trading internationally than U.S. operators who have become accustomed to a large, relatively homogeneous home market."

Smaller countries are largely dependent on raw material imports and finished goods exports to drive their economies, which places greater emphasis on global trade flows and efficient throughput. As a consequence, transportation demands in Europe are markedly different.

"In the United Kingdom, for example, trailer turnaround speed is of great importance to maximize asset utilization," explains Dixon. "It makes economic sense to devote more time, resources, and cost to maximizing vehicle fill in the United States" because distances are far greater.

Given its scale, Europe also has a greater density of port facilities, and richer multimodal (rail, road, river, and ocean) connectivity between transport hubs than the United States. This diversity, further squeezed by geographic constraints and cultural nuances, exposes different approaches to intermodal transport and sustainable infrastructure development.

Closing Gaps Between the Tracks

European transportation is dynamic simply because geographies are constrained and modal options are without bounds. The continent has more miles of railroad and considerably more navigable inland waterways than the United States, even if road networks are comparatively lacking.

Still, as the EU has evolved and borders have collapsed, road infrastructure within the region has expanded and improved measurably. The Trans-European Transport Networks, a set of road, rail, air, and water corridors throughout Europe, have helped pave the way for greater intra-EU connectivity.

But this concentrated effort has also flowed investment toward roadways while siphoning resources away from a pan-European railroad.

"Rail freight share in Europe has been decreasing since the 1970s because the increased importance of just-in-time and door-to-door deliveries makes road transport a better alternative than rail," says Martijn Tasma, global business solutions manager, Geodis Wilson.

This scenario is all too familiar in the United States, where demand tendencies and modal competition over the past 30 years have placed a premium on efficient and expeditious motor freight services. But even where the U.S. railroad industry has lagged in terms of attracting and embracing mainstream industries, it still has a leg up on Europe.

"Early privatization of the U.S. railroad helped to develop a market-based focus on the mode as an attractive freight alternative, whereas most countries in Europe had a nationalized railroad," observes Patrik Thollesson, director operations and business excellence, Americas Region, Geodis Wilson. "The rail system in Europe was built up from the individual countries' perspective, focusing on domestic rather than international traffic."

Over the past decade, European countries have made strides to deregulate and privatize the rail industry, which increased competition and lowered costs. But obstacles still remain.

Europe's railroad system has evolved to transport people, not cargo. "This creates problems for freight because it is always moved on a 'rail space available' basis, which usually means during off hours or in a start/stop manner through the day," explains Franklin.

Unlike in the United States, rail freight doesn't take priority over passengers, and development has been engineered toward the latter. "The European rail system is largely electrical, and, until recently, the dead weight pulling capacity of these types of engines has been considerably less than the diesel locomotives used in the United States," Franklin adds.

Moreover, because European rail operators have traditionally been government owned or regulated, operational inconsistencies between countries–such as signaling, communication, and rail gauge conformity–impede connectivity and flow.

All Modes Lead to Innovation

For logistics companies operating in Europe, these railroad gaps present challenges. "Utilizing rail networks is often difficult because suppliers and customers have limited access to track," says Michael Samuels, executive vice president, business development, for DHL's UK operation. "Combined with on-time service requirements and the relatively short distances needed for European distribution, rail/intermodal can be problematic."

Consequently, European businesses have been forced to adapt and devise more innovative intermodal solutions. In Switzerland, for example, sustainable transportation is a priority given

SBB Cargo has devised an innovative Cargo Domino solution to circumvent Switzerland's strict truck-driving restrictions. The intermodal service allows containers to slide on and off rail and truck flatbeds for faster delivery.

the country's sensitive alpine climate. Night driving, weight restrictions, and a yearly quota on trans-Alps truck moves, make rail/intermodal a necessity. To bypass these regulations, SBB Cargo, the freight division of Switzerland's national railroad, offers an innovative door-to-door intermodal service.

Geared toward short- and medium-distance, time-sensitive hauls, the Cargo Domino solution eliminates transshipment and maximizes asset utilization between rail and road. The railroad's specialized carriage equipment mechanically slides intermodal containers on and off rail and truck flatbeds, allowing for multiple hand-offs at once. McDonald's uses the Cargo Domino service for half its transport moves in Switzerland.

Progressive Approaches

Elsewhere, the RETRACK Consortium, a group of European rail freight operators, IT companies, and research and development organizations, has taken the initiative to design, develop, and implement a new trans-European rail freight service concept, linking Rotterdam to Constanta, Romania, the Black Sea, and Turkey. The objective is to shift long-haul cargo from road to rail, creating an effective and scalable freight corridor between high-growth areas in Western and Eastern Europe.

The Netherlands is also taking a progressive approach to intermodal transportation with a "green" twist, says Stephan Satijn, senior manager logistics North America, for the Holland

International Distribution Council. The Port of Rotterdam is in the process of reclaiming land from the sea to double capacity at the port. But before it could sign off on the expansion, it had to cap the number of outbound truck movements.

Such an ambitious undertaking is only possible because Rotterdam is Europe's leading short-sea shipping hub. Between freight barge and ferry services, it has maritime connections to more than 100 European ports. Eighty-two percent of all shipments flowing through the country are intermodal and nearly 20 percent move via water; 40 percent of Europe's barge fleet sails under the Dutch flag.

"Intermodal infrastructure is well developed in the Netherlands. We have choices, we have the flexibility to explore more economical modes, and we have scale in terms of connecting to Europe's many entry points," says Satijn.

Historically, Europe has always been anchored in maritime trade. That pedigree provides an ideal complement to, and cover for, fragmented or underdeveloped road and rail networks.

"Because of Europe's independent country history, most nations have some maritime experience and developed ports," notes Franklin. "This infrastructure enables countries to utilize short-sea shipping instead of trucking to move freight from major east/west terminal ports, such as Hamburg or Rotterdam, to smaller ports closer to the cargo's final destination."

Thollesson agrees, suggesting that the prevalence of coastal and river transport options in Europe reveals a stark contrast to U.S. intermodal flows. "The United States has more than double the size of landmass compared to the EU, but has only one-ninth the total coastline of Europe. This is one reason why Europe has a much more developed short-sea shipping structure, and has a lower freight share on rail than the United States," Thollesson explains.

In spite of railroad inconsistencies and increasing road congestion concerns, Europe has enhanced short-haul intermodal efficiency by mixing rail, road, and water transportation to varying degrees. Individually there are limitations. But collectively, and with greater integration, this multimodal footprint keeps freight flows fluid while building a more economical and environmental network for distributing shipments.

Where U.S. transportation investment is fueled by highway infrastructure development, Europe's vision is anchored around intermodalism.

Anchoring Infrastructure Development

Europe's approach to transportation development is largely tied to its extensive intermodal use, so there is much greater parity between water, road, and rail investment. By contrast, in the United States, highway infrastructure has always been the top priority.

In terms of short-term tactics and long-term vision, Europe holds the edge, thanks to the unlikeliest of sources – World War II and the U.S. Marshall Plan. The comprehensive devastation of infrastructure throughout Europe during the war required a large-scale reconstruction effort to stimulate economic development and trade within the region. As a consequence, European transportation networks are generally in better shape than those in the United States.

Like everywhere else, EU countries face financial burdens that place infrastructure issues in a precarious position. But different pressures at play give Europe a discernible advantage.

"European countries have in their favor the fact that they are all traders," says Franklin. "There is an understanding, to a much greater extent than the United States (or at least the U.S. electorate), that they must maintain their port, road, rail, and river systems for trade so that their economies can keep growing. This fact provides them with more ability to divert scarce funds to infrastructure projects."

This is readily apparent in countries such as the Netherlands, where government and private sector interests have found common ground on the importance of sustainable development.

Given road congestion problems around Dutch cities, and the volumes of freight moving in and out of the country's ports, the government recently passed legislation to introduce a per-mile driving tax beginning in 2012.

The recent collapse of the Dutch government may postpone the mandate, but its trajectory thus far reveals a national understanding of the interests at stake, Satijn notes. Similar proposals in the United States have been largely panned.

"There isn't a strong headwind in front or tailwind behind, but there is a common understanding that the Netherlands needs to be sustainable," adds Satijn. "We pay higher taxes but we also see the benefit of a government that drives infrastructure projects." For example, there is a noticeable difference between driving on Belgian and Dutch motorways.

Europe's penchant for intermodal transport and green leanings have explicitly steered transportation planning and policy-making toward meeting these shared goals. Franklin perceives this as yet another difference between U.S. and European transportation strategies.

"The United States devotes most of its infrastructure investments to road-related projects, but Europe does not," he says. "Much of the EU's outlay is used to improve rail, barge (inland ports), air, and seaport infrastructure, although in Eastern Europe the road system is a key area for investment. The United States has fallen a bit behind."

Approaching New Roundabouts

Myriad pressures dictate how countries and industries execute on and invest in transportation. In the United States, motor freight has been a mainstay, and the railroad has re-emerged as a competitive force. This is a consequence of sheer scale, demand sensitivities, and capacity constraints, among other factors. Europe's strength remains in the maritime trade, largely because of its extensive and developed coastline. There are best practices to be gained in either direction.

Ironically, one area where there has been convergence is U.S. adoption of European road interchanges. Plagued by congestion around populated enclaves, countries such as the United Kingdom, Ireland, and France have long engineered practical traffic patterns for managing vehicle movement. Roundabouts and countless other creative, Euro-bred junctions are becoming more commonplace across the United States.

In Europe there are upwards of 60,000 different types of interchanges in use, but in the United States they are still a novel alternative to traffic lights. Once merely the domain of U.S. ski towns, the rotary has become a popular solution for communities looking to increase safety, alleviate bottlenecks, reduce carbon emissions, and improve traffic flow.

For these reasons, transportation officials in Missouri recently introduced the European "diverging diamond"–or double crossover intersection. It's a sophisticated step up from traditional rotaries, but it demonstrates the imaginative progression from simple circles to convoluted loops.

Transportation innovation proceeds in a similar way. Different perspectives trigger new approaches and better solutions. That may mean yielding to routine and giving the familiar another spin to find missed opportunities; or it might demand an escape from circular thinking and a break from convention.

Either way you turn, it's like navigating a roundabout. ■

A MIGHTY WIND

Rapid change follows rapid growth in the wind power industry. Here's how logistics providers are working to go any way the wind blows.

As the picturesque windmills of Dutch fame grow increasingly rare, the sleek, modern wind turbines used for electric power generation have experienced explosive growth. Wind turbines, which can top 400 feet in height, are cropping up in rural wind farms in large numbers, and even dot the landscape as an occasional lone, urban power source.

About seven years ago, The Port of Houston Authority provided the first direct handling of the hubs, blades, nacelles, and towers that make up the wind turbine, loading them directly onto railcars and shipping as a unit train. Since then, the port has handled hundreds of wind power units moving from Houston to Sacramento, Iowa, Illinois, and other U.S. destinations.

Lars Buchwardt's experience with wind turbines dates back considerably earlier than that. The regional director for logistics service provider IJS Global recalls fitting an entire wind turbine, blades and all, into a 40-foot ocean container. That's a far cry from the massive size of today's single wind turbine.

There has been a drop in the volume of wind turbines moving through the Port of Houston, in part because of the economic downturn. But the commercial and economic reasons for the shift run deeper.

As recently as 2008, wind power was experiencing dramatic growth, according to Pat O'Malley, co-COO of Landstar System, a Jacksonville, Fla.-based third-party logistics provider. Alternative energy tax credits were set to expire at the end of the year, focusing some of the demand.

But credit markets were extremely liberal, and the combination of available capital and incentives was driving new construction. Government initiatives intended to aid U.S. economic recovery, while improving air quality, led a number of organizations to concentrate resources on wind power.

The Georgia Ports Authority, for instance, has identified wind energy equipment as a target commodity for its breakbulk teams. IJS Global has targeted wind power as a strategic market that offers growth and sustainability.

IS WIND DYING DOWN?

Predictions earlier in the year had been for a drastic reduction in wind power development. Concerns grew that, as an energy source, wind had died down. However, the U.S. wind energy market (installed capacity) actually grew by nearly 40 percent in 2009 and now powers approximately 8.4 million homes, making wind one of the leading sources of newly installed electricity-generating capacity, according to the DHL Global Forwarding Renewable Energy Team.

"Nearly all renewable energy generation techniques are more expensive at face value than traditional and nuclear sources," says DHL. "The only way investments in wind power are currently feasible is through government subsidies."

Whenever a government decides to offer feed-in-tariffs (FITs) – a guaranteed minimum price over a certain amount of time for selling electricity back to the grid – it becomes an interesting deal for developers and the demand for turbines ramps up. Among the focus countries for 2010-2012 are the United States, Germany, Italy, Turkey, the United Kingdom (mainly off-shore), China, India, and parts of Latin America.

For many years, Europe was the main producer and consumer of wind turbines. But this is changing. The United States, China, and India have all become key manufacturing markets for wind turbine components that satisfy domestic demand and are shipped globally.

Current wind turbines average 1.7 megawatts (MW), but vary widely, with larger units in the West, and somewhat smaller units in the East. Their average height is 262 feet and weight is approximately 200 tons (not including foundation).

And the major parts, including towers, are getting bigger. Wind turbines used to be 1.5 MW units and towers came in three sections. Now, they are 2.5 MW and come in four sections, along with bigger and more complex components. This helps account for some of the distortion in growth figures. The power industry measures growth in output, while those who look at the units shipped would see at least some leveling as fewer, but larger, units are needed to produce the same amount of energy.

A typical wind farm will source an array of components–ranging from gearboxes, bearings, and generators to 131-foot rotor-blades–from 30 or more locations. For shipments of that size and complexity, sequencing becomes an important function.

The "knowledge-heavy" components, such as rotor-blades, are being moved to low-cost countries, says DHL. The components requiring less know-how, such as towers, are being produced closer to the anticipated installation site. A major driver is that these low-tech, bulky, and heavy components account for nearly 50 percent of the transportation cost.

John Fricker, general manager of RoRo/Special Projects Europe for Atlantic Container Line (ACL), suggests even the rotor blades are being sourced closer to destination, while the technology-rich mechanical components are produced at the manufacturer's plant. ACL has moved the

Wind turbine blades used to move on ocean vessels primarily to Europe. Today, China, India, and the United States are key markets for these components.

tower sections and blades, and more recently, has moved some of the blade molds to U.S. plants, where they could be produced closer to the point of consumption.

Landstar's O'Malley points to the area of the United States nicknamed the Wind Corridor, which stretches from Texas to the Midwest. Here, sustained winds are sufficient to produce power using wind turbines. Manufacturers have followed the demand and located plants closer to the regions where the wind farms are being erected.

A lot more logistics know-how is required for the long-haul shipment of "high-tech" components, says the DHL team. At least that's the medium-term strategy. But for the long term, major manufacturers plan to produce regionally for regional consumption and minimize transportation, which accounts for up to 20 percent of total landed cost, according to DHL estimates.

In addition to being highly engineered and sensitive, wind turbine blades are matched and balanced, and must be delivered to the job site in sets.

While he still sees stacks of tower sections and wind turbine blades at breakbulk ports, Scott Mager, operations manager for BNSF Logistics, says U.S. manufacturing is, in fact, increasing. And, he adds, many manufacturers of the turbines themselves have begun fabrication or plan to fabricate components in the United States.

Whether the forecast is for a flat beginning in 2010 with an uptick by the fourth quarter, or steady growth, the demand for wind power generation equipment appears to be on the rise.

Whether or not the increase is driven by a pure desire to clean the air that drives the wind turbines, or a combination of environmental conservation and commercial growth, there's no doubt that predicting a bright future for wind power is a breeze.

PROJECT FREIGHT, DELIVERED JUST IN TIME

From factory floor to wind farm is a just-in-time move for Atlantic Container Line.

European manufacturers of wind turbine components are so particular about how their freight is handled that they'll send engineers from the factory to oversee and inspect loads to ensure they are properly stowed, says John Fricker, general manager of RoRo/Special Projects, Europe, for Atlantic Container Line (ACL), headquartered in Westfield, N.J.

The components are heavy and bulky, but also sensitive. Fricker offers a recent shipment as an example: Units destined for a U.S. wind farm measured 9.62 meters long by 3.7 meters wide by 4 meters high (31.6 by 12 by 13 feet). The full order was for 20 nacelles (the part between a wind turbine's tower and rotor), 20 hubs, and 20 spinners. The nacelles weigh 75 tons and the hubs 24 tons.

A project charter vessel could have handled the entire shipment for the manufacturers (as could ACL, Fricker notes), but that would involve staging the components at or near the origin port while the major components for the full order are built and assembled for shipment. In the case of Fricker's example, that's 60 major components.

At destination, the process would be reversed, with the entire load being lifted off the vessel and moved into storage while partial shipments are sequenced and transported inland to the wind farm construction site.

ACL proposed taking a different approach. With weekly sailings from Hamburg to the U.S. East Coast, ACL suggested using RoRo (roll-on, roll-off) methods and moving smaller shipments from the factory to the installation site without the interim accumulation and storage–a just-in-time approach. Employing this method, components flow from the factory to the destination port, where a logistics company arranges the final inland move to a storage or staging site, or directly to the wind farm.

At the origin port, the massive components are loaded onto mafi trailers (roll trailers used in RoRo applications) and positioned according to the manufacturer's specifications. Some components need to be angled on the trailer and welded into place. The mafi trailers then roll aboard the vessel and are lashed or welded in place for the journey across the Atlantic.

With the nacelles comes an added requirement: the mechanism must be rotated regularly during transit. The vessels have power stations, so the necessary connections can be made and factory engineers can inspect and approve the load before it embarks for one of the U.S. East Coast ports.

At destination, the mafi trailers are rolled off, and the loads are transferred to specialized trailers or rail cars for the inland portion of the move.

Fricker sees a strong future for the wind power business,

Tower sections and blades for wind turbines are often imported, but their size and complexity has more manufacturers setting up production in destination countries.

based on interest that is fueled, at least in part, by U.S. government incentives. Manufacturers have located some blade and tower production in the destination markets, but they tend to hold the more highly engineered components for their own plants. This suggests that wherever demand develops, the heavy components for wind power generation will continue to be a long-haul logistics issue.

To that end, Fricker and ACL's RoRo/Special Projects group is already lining up moves between Europe and Canada, landing in Halifax with a similar just-in-time solution.

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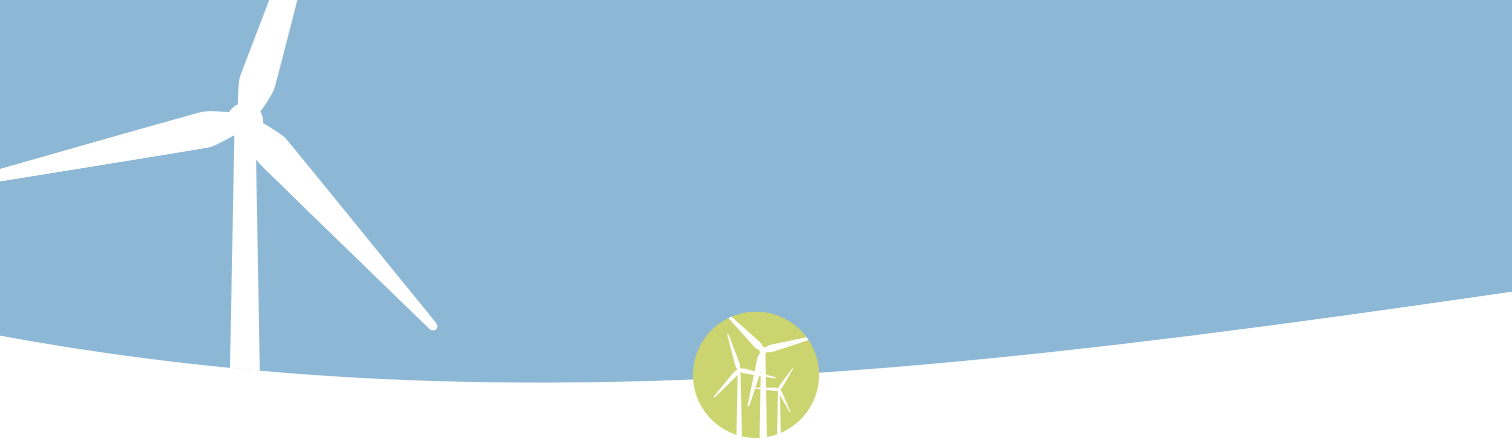

POOLING KNOWLEDGE

No two wind projects are ever the same. Pooling knowledge from global sources pays in specialized moves.

The rapid growth of wind power presents both an opportunity and a challenge. While the segment is growing, it is also changing. One example: sourcing, in some cases, is becoming more regional, notes Gille de Groot, global sales development director for freight management company Geodis Wilson.

Most wind energy technology still comes from Europe, in part because of the region's history of alternative energy development and use. But, some European companies are establishing production in their strong foreign markets, including the United States and China.

Wind power growth in the United States and China is not limited by technology or manufacturing capability. Wind energy manufacturers such as GE Energy already operate in the United States, and China is rapidly developing its own alternative energy industry. China has seen production grow from six wind energy manufacturers in 2004 to 70 today.

This rapid growth in the wind power segment compelled Geodis Wilson to form a wind power group as part of its larger Industrial Projects division. The group draws from the knowledge base of other logistics professionals in its global network who have experience in various types of industrial project cargo moves.

"Best practices today don't last long," says Henrik Funk, manager industrial projects Denmark for Geodis Wilson. "Because no two wind logistics projects are the same, we draw on lessons, experience, and knowledge from across our network to keep up with new challenges."

"Because no two wind logistics projects are the same, we draw on lessons, experience, and knowledge from across our network to keep up with new challenges."

—**Henrik Funk,**
Geodis Wilson

One such logistics challenge is dealing with a constantly changing product. While many industries measure growth by the number of units being moved, the wind industry measures growth in output. The generating capacity of wind turbines has risen from 1.5 megawatts to three megawatts in recent years.

But, while the size and complexity of wind power equipment has changed, the supply chain demands have not. Driving last-mile performance are issues such as the rising expense of large cranes used to handle and erect wind turbines, and the speed of construction at the job site. In most cases, Geodis Wilson clients want to erect the wind turbine the same day it arrives. With U.S. wind farms receiving between 20 and 300 turbines during the course of construction, that spells a lot of synchronized, sequenced loads.

The role Geodis Wilson plays in wind logistics projects varies widely by installation. In some cases, the company may only handle traditional logistics functions, such as arranging transportation and ensuring available capacity. In more complex contracts, Geodis Wilson could be responsible for everything from delivering shipments to the site to commissioning the wind turbine.

Wind equipment manufacturers appear to be focusing on determining demand for their product and meeting it in a timely manner, according to Funk. Manufacturing blades and tower components locally doesn't lift the pressure on delivering all the components to the job site in a tight time frame.

In addition, "the companies handling the transportation equipment have been forced to be more mobile with their resources," says Funk. Their challenge is to bring wind power equipment as close as possible to the job site, without using special trailers if possible. And all modes come into play during planning.

"We attack a wind logistics project from all angles and base a solution on the manufacturer's or customer's footprint," says Funk. "We turn over every stone looking for hidden factors that could affect the project."

Wind logistics experience is an added advantage, according to de Groot. The Geodis Wilson team working on these projects brings knowledge from other heavy and oversize industrial moves. And, the flexibility of having a global network allows Geodis Wilson to be wherever the customer needs it to be.

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KEEPING UP WITH CHANGE

Knowledge, skill, and capital commitments are important to serve the logistics needs of the wind power market.

"2008 was an explosive year for wind power growth," says Pat O'Malley, co-COO of Landstar System, Inc., Jacksonville, Fla. That's good news for a company that specializes in oversize and heavy cargo moves. But the last few years have brought changes to this specialized segment.

The wind power industry measures growth by power output. If you analyze the trend by units shipped, it would be easy to mistake changes in those numbers as a leveling or decline in demand. In fact, the units are growing larger in both output and physical size.

For example, just a short time ago, Landstar was moving 1.5-megawatt (MW) units in three sections. Recently, it has been handling 2.5-MW units in four sections.

"Wind power components are growing bigger and more complex," says O'Malley, and that requires a corresponding upgrade in the carrier's ability to handle the loads.

It also requires an upgrade in resources. 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, Landstar acquired the modified equipment necessary to transport wind power components.

Landstar's structure as an asset-light logistics provider didn't stop it from investing in some trailers. It acquired four Schnabel trailers at about $500,000 each, and its network of Business Capacity Owners (BCOs) invested in 24 trailers. One agent, who handles much of the wind power business, is frequently called in by engineers at various manufacturers to consult on the transport and logistics implications of making design changes to wind power components.

Careful handling, detailed planning, and specialized loading and hauling equipment are needed to move oversize and overweight wind power components from port to site or plant to site. *(Photo courtesy of Landstar System)*

The BCOs bring their own experience to bear on wind power moves, and Landstar enhances that knowledge with additional training. Landstar provides long-commercial-vehicle training, as well as specialized training in Schnabel trailer operations.

"But just owning a piece of specialized equipment like a Schnabel trailer doesn't necessarily mean it can automatically move within the Landstar system," O'Malley notes. For instance, if Landstar hasn't trained and certified a BCO on a piece of equipment, it wouldn't be qualified to move.

The BCOs concentrate on the domestic portion of specialized wind power shipments, handling port-to-site or plant-to-site moves. When they first started handling these shipments, a high percentage of moves were from ports. Now, thanks to the growth of U.S. wind power equipment manufacturing and overseas manufacturers siting production in the United States, more moves come from domestic U.S. plants. That's another reason wind power growth numbers might be misleading.

Manufacturers are focusing on the last-mile portion of these moves because of their size and scope. Not only do oversize components have to arrive at the site as planned, careful coordination is required to ensure the crane needed to manipulate the components is on site, as well as the engineers and technicians who will be involved in the installation. It's a case of synchronized logistics, and that can entail some off-site staging.

In O'Malley's opinion, Landstar is positioned to meet the requirements of wind power's next evolution. "Reputation and a solid financial background put Landstar in a position to address any new challenges," he concludes.

CLOSE COMMUNICATION KEY TO SUCCESS

Large, complex project cargo moves succeed through constant communication.

Every port has its perceived strengths, but geography is one you can't argue with. As the westernmost port on the U.S. eastern seaboard, location plays a key role for the Port of Savannah when it comes to wind energy project cargo.

The complexity of the overland move drives manufacturers to land their project cargo close to the destination site to minimize highway or rail miles. With new wind energy projects developing in the Midwest, the Port of Savannah finds itself benefiting from geography.

"If you follow the longitude lines due north from Savannah, you will find yourself on a line that runs between Cleveland and Akron, Ohio," notes Bill Barrs, cargo sales and trade development for the Georgia Ports Authority (GPA).

On an operational level, the Port of Savannah's dedicated breakbulk facility, Ocean Terminal, is located in close proximity to interstate highways. It also has good clearance to move large project cargo. Savannah has enjoyed considerable success moving long wind turbine blades between the port and the highway. The Port of Savannah also provides on-dock rail capabilities with Norfolk Southern and CSX.

Project cargo tends to move to those load center ports offering access and lift capacity, says Barrs. Recognizing the huge potential for alternative energy projects, the Georgia Ports Authority has built strong breakbulk teams to work closely together on wind energy projects. With most of the moves leaving the port by truck, these teams of specialists assist port customers during the entire process, including pre-delivery planning and post-shipment follow-up.

With the fall 2009 announcement by heavy-lift dependent Mitsubishi Power Systems to construct a large-scale steam and gas turbine plant within minutes of Savannah's two deepwater terminals, the GPA's breakbulk team received

The Georgia Ports Authority employs a dedicated breakbulk team well-versed in handling the special requirements of moving wind power components.

more good news with the announcement of extra lift capacity.

"The addition of a new mobile crane to supplement existing heavy-lift capabilities will further enhance our ability to capture a larger portion of the heavy-lift market, which includes wind power equipment," says Tom Swinson, general manager commercial communications, GPA.

Swinson is quick to point out that the port already has on-site lift capacity and, when needed, can bring in outside crane capacity. A delivery date for Savannah's new mobile crane has not been announced.

A wind energy movement in mid-2009 led the GPA's breakbulk teams to identify challenges of escort requirements for oversize shipments. The close relationship the Georgia Ports Authority has with the Georgia Department of Transportation helped them receive a clarification on some rules that will allow the use of private escort services rather than police escorts, adds Barrs.

The change in escort requirements should improve not only cost, but efficiency on highway moves of the wind power components. With most of these loads moving into the Midwest by truck, police escorts were tied up driving across the entire state of Georgia. In addition to the large turbine components, each wind turbine includes three blades. Multiple turbines moving in convoy could require a number of police units for escort, adds Barrs.

The GPA's team approach is central to project cargo operations. Many projects involve bringing a variety of components from different origin ports to the load center port in the United States, then to the construction site.

Wind energy equipment is not only large, it is very delicate, adds Barrs, and planning and handling the loads requires a high level of expertise. The breakbulk team can help secure permits, including the Superload-plus Permits that require route surveys, bridge analysis, and alternative transport modes.

In the end, says Barrs, it's communication that keeps these large, complex loads on track.

EXPERIENCE COUNTS

Involvement from beginning to end, and knowledge of project cargo complexities, keep things moving.

The growth of wind energy may be a recent development, but the field isn't new to Lars Buchwardt, regional director of IJS Global, a Stamford, Conn.-based global logistics service provider.

When Buchwardt started his logistics career, one of his first jobs was loading components for a wind turbine manufacturer and driving them to the airport for shipment. Back then, he could load an entire wind turbine, including the blades, in a 40-foot ocean container.

But, a logistics challenge arose as the industry evolved and new blades were produced that were too long to fit into a 40-foot container. The solution was to load the blades and leave the container doors open. Those containers were then loaded on the back of an ocean vessel with the blades extending over the water, Buchwardt recalls.

Solving wind logistics challenges is no longer as easy as opening a container door. Today's complex shipments require the expertise of a project group, such as IJS Global's team of professionals with experience in project cargo.

The days of containerization are well behind the wind

power industry, so it is important to move shipments through ports that specialize in project cargo, Buchwardt notes. Wind shipments are growing larger and typically fill or share a charter vessel. Those vessels tend to call at ports where project cargo is a large part of the mix.

It is important for a third-party company such as IJS Global to become involved from the onset of a wind power project. In addition to handling site surveys, route surveys, and landside planning, a professional third party can manage details specific to each job. Some job sites, for example, have specific requirements – such as completing two wind turbine installations per day, or limiting the number of trucks they can handle daily. These details can impact the entire flow of the project cargo.

IJS Global tries to take a holistic approach to its wind energy moves, from inception to delivery. That means getting involved with clients from the time they are preparing their proposal, to ensuring the logistics flows are realistic and achievable.

For example, with flows to some job sites constrained by the capacity to store and install equipment, a large part of a shipment may need to move to a marshaling yard, preferably one with Foreign Trade Zone status for import cargo. Then the "pull" from the site can be managed in a timely manner in case of weather delays or an increase in the pace of work. Companies that set up a project plan at the beginning of a job, and try to stick to it without accounting for variation, risk delays and additional costs.

Things also tend to go wrong when parts of a project are handed off to another entity, says Buchwardt. That's one reason why IJS Global added specialized compliance expertise to its service portfolio. As part of the end-to-end approach Buchwardt prefers, IJS Global brings in customs brokers who are dedicated to the classification of project cargo and wind components. This helps importers classify and process loads through U.S. Customs and Border Protection, and manage customs audits as needed. And increasingly, the IJS Global group is working closely with Homeland Security.

To be successful in the complex and ever-changing wind power logistics industry, the experience of specialized logistics professionals can make all the difference. "There is a passion we have for this sector of our business," says Buchwardt. "Involvement in each step of the process is not only professionally gratifying, but also a strong contribution to our planet's environment."

GREEN MOVE FOR GREEN ENERGY

Environmental considerations take priority in all CN shipments.

While it is true that sustainable energy is a target market for CN, the Montreal, Canada-based railroad also has a strong policy of environmental stewardship. Its aim is to integrate environmental priorities into each of its operating units, according to the carrier's corporate statement.

One environmental initiative is called Precision Railroading. It focuses on ensuring the scheduling of every support process prior to a move, the actual move, and the on-time delivery of every shipment. That type of commitment fits well with CN Specialized Services (CNSS), the group responsible for over-dimensional moves. And when it comes to moving wind turbine components, CNSS coordinates from port to wind farm with a host of custom services.

As generating capacity has increased, the size of components has changed dramatically. Certain components now exceed railroad clearances.

Since 2005, CN has shipped more than 2,100 carloads of wind tower components including tower sections, blades, nacelles, and hubs. It also participated in the first rail move of twin-pack wind turbine blades.

The blades, which measure 135 feet (41 meters) long, were transported aboard three vessels from the Port of Emden, Germany, through the St. Lawrence Seaway and across the Great Lakes to the Port of Thunder Bay, Ontario. CNSS, which coordinated the unloading and transfer to rail, also arranged for modifications that would allow the rail cars to accept the container locks on the special frames used to nest two blades "tip to root," explains CN's Doug Coleman. Six trains were needed to complete the move to Dawson Creek,


GEODIS
wilson

where CNSS provided unloading services.

With these types of loads, there is almost always a truck move at one or both ends, but for the long-haul component, CN is the only North American railroad that serves all three coasts–Atlantic, Pacific, and the Gulf of Mexico, notes Coleman. And that means CN has been involved in wind power component moves entirely within Canada, from Canada to the United States, from the United States to Canada, and intra-U.S.

As the generating capacity of the wind turbines has increased, the size of the components has changed dramatically as well, Coleman notes. Some base sections for the towers can measure as wide as 15 feet in diameter. And while certain components now exceed railroad clearances, some manufacturers keep transportation in mind when designing components. For example, Denmark's Vestas Wind Systems, a manufacturer, seller, installer, and servicer of wind turbines, operates its own fleet of specialized rail cars.

As wind energy continues to grow in North America, more of the manufacturing has been moving to the United States and Canada. Some incentive is the complex logistics involved in wind power moves, but there are also provincial moves in Canada to require a percentage of local content. Provincial governments are helping manufacturers locate production in Canada, and the United States also is experiencing production growth.

CN remains confident rail will play a significant role in wind power development, pointing out that rail itself is a very green mode: Rail emits six times less greenhouse gases than heavy trucks. CN can move one tonne of freight 197 kilometers on just one liter of fuel.

In addition, CN's new main-line locomotives produce approximately 40 percent less nitrogen oxides than older locomotives and consume up to 20 percent less fuel. ■


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"Since 2000, the state of Nebraska has made transportation and logistics a target industry," says Terry McMullen, a board member of the Nebraska Logistics Council. The state government, local communities, and their corporate partners work together to ensure that when a business wants to locate a factory, distribution center, or other logistics facility in Nebraska, it gets plenty of help.

These efforts clearly pay off. *Forbes* magazine named Nebraska the ninth-best state for business in 2009, and CareerBuilder.com named it the fourth-best state for jobs in 2008. As of February 2010, Nebraska's unemployment rate stood at only 4.7 percent – less than half the national rate.

Companies that locate in Nebraska enjoy a business-friendly political climate; an enthusiastic, well-educated workforce; reasonable labor rates; abundant, low-cost real estate; and some of the lowest utility bills in the nation. People who work for those companies enjoy uncongested highways, a clean environment, and an excellent quality of life in Nebraska's communities.

Nebraska also is located right in the middle of the continental United States and is well-connected to markets across the country and around the world. It's a prime location for a manufacturing plant or distribution center.

Location, Location, Location

Within one day, goods shipped by truck from Nebraska reach 26 percent of the U.S. population. Add a second day and that reach extends to 91 percent.

MANY WAYS TO REACH MAJOR MARKETS

Nebraska's history as a transportation center goes back to the days of our country's westward expansion, when pioneers followed the Great Platte River Road west. The Oregon Trail, Mormon Trail, California Road, and the route of the Pony Express all converged in the valley of Nebraska's Platte River. When it came time to build the nation's first transcontinental railway, the rails followed those older paths across Nebraska, running through the Platte River Valley to connect Omaha with Sacramento, Calif.

Today, Nebraska remains an important center for transportation and logistics. The state's location at almost the precise center of the contiguous 48 U.S. states makes it a natural hub for commercial transportation. More than 55 million people live within 500 miles of Nebraska. That's a tremendous advantage to transportation and logistics leaders operating in the state, such as Union Pacific Railroad (UP), Burlington Northern Santa Fe Railway (BNSF), Werner Enterprises Inc., Crete Carrier Corp., and Cargo Zone LLC.

■ **Highways**. With 482 miles of Interstate 80 crossing the state from east to west, Nebraska lies in the middle of one of the nation's busiest transportation corridors. I-80 and connecting interstate roadways offer easy, direct transportation to major markets such as Denver, Salt Lake City, and Sacramento to the west, and Des Moines, Chicago, and Detroit to the east.

Seven U.S. highways run north and south through Nebraska, and I-80 connects with I-25 just west of the state. These roads put Nebraska in the center of the NAFTA trade corridor. For businesses in Omaha, South Sioux City, and other points at the eastern end of the state, it's an easy hop to I-29, another major north-south route.

Transportation opportunities in the southeastern part of the state will continue

Cover forklift photo: Jim Ferguson

to grow as Nebraska upgrades I-80 to six lanes from Omaha to Lincoln and points west. "We're also hoping to build new Missouri River bridges south of Omaha," says Richard Baier, director of the Nebraska Department of Economic Development.

Nebraska maintains more than 8,500 miles of interstate, freeway, and arterial roads. Among the businesses that benefit from that highway network are the state's 11,500 trucking companies, two of which – Werner Enterprises Inc. and Crete Carrier Corp. – are among the nation's top 10. In all, those companies operate more than 815,000 pieces of power equipment.

"The number of trucking companies here guarantees a reliable freight pattern in and out of the state, which moderates rates without the seasonal highs and lows many areas have," says Larry Johnson, president of the Nebraska Trucking Association.

Jarrod Marinello, a partner in non-asset-based service provider BAT Logistics, Papillion, Neb., appreciates that truck capacity in the state is abundant and reliable. "If you need a load picked up in Omaha, there are likely to be 200 trucks in a 100-mile radius to choose from," he says.

The seasonal nature of manufacturing in many other markets means that at some times of the year, it's nearly impossible to get your freight on a truck, Marinello says. In Omaha, by contrast, many manufacturers ship year-round, and there's plenty of capacity to meet that steady demand.

■ **Rail**. The two largest railroads in the nation – UP and BNSF – operate extensively in Nebraska. In fact, Nebraska is home to UP's headquarters, its dispatch center, and its largest rail yard. From its base of operations in Omaha, the railroad provides service spanning 32,000 route miles to 23 states across the western two-thirds of the country. UP serves every major West Coast and Gulf Coast port, and, through its gateways in Chicago, St. Louis, Memphis, and New Orleans, customers can also reach the East Coast. Its north-south corridors provide links to Canada's rail systems and connections to Mexico's six major gateways.

Among UP's facilities in Nebraska is Bailey Yard, the world's largest classification yard. Located in North Platte, the facility is more than eight miles long and two miles wide, covering more than 2,850 acres and incorporating about 315 miles of track. The yard handles more than 10,000 rail cars daily, sorting them and assembling them into trains.

UP is so important as an employer in the North Platte region that the Nebraska Department of Labor's Nebraska Workforce Development division set up a facility to help recruit employees. "They do most of the front line screening for UP out of a retail storefront in downtown North Platte," says Baier.

Although BNSF is based in Texas, its parent company, Berkshire Hathaway Inc., is a prominent fixture in Omaha, and the railroad maintains rail yards in Lincoln and Alliance. BNSF operates about 32,000 route miles in 28 states and two Canadian provinces.

■ **Air**. Nebraska has 95 municipal airports, including nine that offer direct

Perfectly Positioned

Nebraska's position in the center of the country makes it an ideal location for an asset-based logistics firm such as Omaha-based Ford Moving and Storage Co. "Nebraska offers speed to market," says Chad Ford, the company's vice president of business development. "Trucks can cover approximately 91 percent of the domestic United States within two travel days."

Ford Moving and Storage operates two warehouses in Omaha and three in La Vista, Neb., along with another facility in Kansas City, Kansas. Besides warehousing and fulfillment, it offers truckload transportation and intermodal drayage and serves as an agent for Allied Van Lines. Ford serves customers in many industries, with a special focus on mixed commodities, food grade products, animal health, and seasonal businesses.

"Many organizations consider transportation costs, transit periods, and access to railways as deciding factors when locating manufacturing and distribution services," Ford says. Nebraska rates well in all those areas, making it an excellent choice.

Ford Moving and Storage operates five warehouses in Nebraska.

The state's central location also is a major plus for Distribution Inc., which provides warehousing and distribution services from a 200,000-square-foot facility in Lincoln. "We're right on I-80, so we can deliver overnight service between Denver and Chicago," says Bob Winter, the company's CEO and president. "And we sit on I-29, which goes to Sioux Falls, Sioux City, Minnesota, and Kansas City."

For some of its customers, Distribution Inc. receives and stores raw materials and then delivers them to local plants for use in manufacturing. Other companies in the Lincoln area use Distribution Inc. to warehouse their finished goods and transport them to customers. The company operates a fleet of trucks that covers a radius of about 300 to 500 miles.

In some cases, suppliers outside the Midwest ship materials to Distribution Inc. for eventual delivery to their customers in the region. "One overseas shipper has customers in Denver, Chicago, and Kansas City," Winter says. "From our site, it can service all three locations overnight."

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commercial airline service to major hubs. The principal airports are Lincoln Airport, Eppley Airfield in Omaha, North Platte Regional Airport, and Kearney Regional Airport. In addition, UPS operates hubs in Omaha, Scottsbluff, and Grand Island.

Twenty jet service carriers and eight freight carriers offer service from Eppley Airfield, with approximately 90 departures each day.

Service from the airport includes nonstop travel to 18 cities. In 2009, the airport handled 102 million pounds of cargo.

Built originally as a military air base, Lincoln Airport provides service on Delta/Northwest and United. The airport offers significant infrastructure capacity, including property with development potential. The Lincoln Chamber of Commerce and the Lincoln Partnership for Economic Development are starting to map a master plan for industry utilization of the airport, including development of a cargo hub.

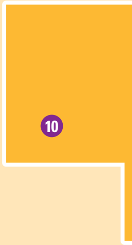
The property already is served by UP and BNSF rail lines, and it's immediately adjacent to I-80. "There are potentially hundreds of acres that can be developed for future logistics opportunities," Baier says.

■ **River**. Along with highway, rail, and air, Nebraska also boasts another cost-effective transportation option: the Missouri River. Barge service on the Missouri offers access via all-water routes to both the Gulf of Mexico and the Atlantic Ocean.

The construction of Fort Calhoun Station, a nuclear power plant owned by the Omaha Public Power District, provides an example of strategic barge shipping. Several years ago, this facility received two steam generators, a pressurizer, and a reactor head,

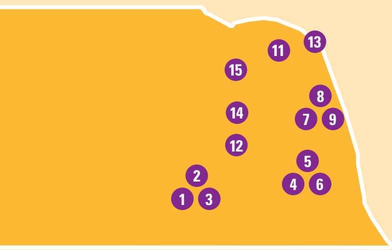
Room to Expand

In the past several years, Nebraska has emphasized developing industrial and business parks. Omaha has a site development advisory group, and Lincoln is developing new land north of I-80. A site in Grand Island has received considerable attention from wind energy companies looking for manufacturing space, and Kearney and North Platte both offer zoned and annexed sites close to the interstate. Among the available sites in Nebraska are:



1 Hastings Industrial Park West (Hastings) Available lots of 16 acres to 179 acres, served by BNSF

2 Hastings Industrial Park North (Hastings) 71 acres with rail service available through UP and BNSF



3 Speculative Building (Hastings) 97,500 square feet

4 South Industrial Park (Lincoln) 87,038-square-foot warehouse available for sale

5 Lincoln Air Park (Lincoln) More than 1,000 acres adjacent to the airport, zoned industrial

6 6000 Fulton (Lincoln) Speculative building

7 Hilltop Industrial Park (Omaha) 800,000 square feet of industrial space in 13 complexes, located on 100 acres

8 Altech Business Park (Omaha) 26 acres zoned for retail, commercial, office, and light industrial

9 Crown Industrial Park (Omaha) 91,938 square feet available for lease and 21 acres available for sale.

10 Adams Industries (Sidney) 560 acres and 700,000 square feet of buildings available, rail served

11 Speculative Building (Wayne) 20,000 square feet

12 Speculative Building (York) 40,000 square feet

13 Roth Industrial Park (South Sioux City) 250 acres

14 East Industrial Park (Columbus) 174 acres

15 Southwest Norfolk (Norfolk) 160 acres

Visit www.NebraskaAdvantage.biz for a full list of Nebraska's available sites and buildings.

all enormous equipment manufactured in Kobe, Japan. The components made the final leg of their trip via barge.

POWER AT A GREAT PRICE

Another factor that makes doing business in Nebraska a bargain is the low cost of electrical power.

Nebraska is the only U.S. state served entirely by publicly controlled utilities – either municipal power companies, rural public power districts, or electricity co-ops. Nebraska's focus on public power dates to the 1930s, when the state's U.S. Senator George Norris authored legislation that created both the Tennessee Valley Authority and the Rural Electric Administration.

NPPD's Cooper Nuclear Power Plant (*left*) and North Platte Hydro generate affordable electricity.

"In Nebraska, he was an advocate for a law that allowed for the formation of public power districts," says Dennis Hall, economic development manager at Nebraska Public Power District (NPPD), the state's largest generating electrical utility.

Public power makes electricity considerably cheaper in Nebraska than in most of the rest of the country. "Our electric rates typically average about 42 percent less than the national average," says Baier.

According to the Edison Electric Institute, the average monthly bill for industrial service in Nebraska in the summer and winter of 2009 was $2,882. That made Nebraska the eighth least-expensive state for power. This economical power supply offers big savings to businesses with high energy usage, such as refrigerated warehouses.

Because the public power companies own both the generation and transmission facilities, no money goes into paying a middleman. "The companies also are not trying to maximize corporate profits for reinvestment," says Baier.

Since public utilities report directly to the citizens they serve, they take great pains to maintain low costs, says Todd Hall, vice president, consumer services at Lincoln Electric System (LES), which serves about 130,000 accounts in Lincoln and the surrounding area. "We run on a thin margin, but we operate successfully and still maintain a double-A bond rating and exceptional financial performance," he says.

Besides being inexpensive, the electrical supply in Nebraska also is highly dependable. "LES is operational 99.996 percent of the time," says Hall.

NPPD's reach is wide; its chartered territory includes all or parts of 91 of the state's 93 counties. "Our major transmission and distribution lines cross the state," says NPPD's Hall. The utility relies on a variety of power sources, including hydroelectric, low-sulfur coal, natural gas, nuclear, and some of the newer renewable sources.

"NPPD owns the second-largest wind

farm in the state, and we have a power purchase agreement to buy wind energy from the largest wind generator in the state," says Ken Lemke, an NPPD economist.

Along with generating power at a competitive price, Nebraska's utilities participate fully in the partnership that makes it easy for businesses to locate or expand in the state. For example, working with the Nebraska Department of Economic Development, local communities, the railroads, rural power districts, and other partners, NPPD helps to ensure that companies can get all the information and services they need to increase their footprints in the state or to find new locations. That effort includes keeping an inventory of land available for development and existing industrial sites on the NPPD Web site.

One international pharmaceuticals manufacturer engaged LES to help it study the benefits of expanding into Lincoln. "We did a full-on comparison of all the sites they were considering, evaluating factors such as utility operations and cost of living," Todd Hall says. "The analysis showed that the lifecycle cost of operating in Lincoln was significantly lower, even compared to low-cost operating parts of the world, such as India. That study enabled us to bring 100 new jobs to our community and keep an international corporation satisfied with doing business here."

COMPELLING INCENTIVES

Since 2006, businesses that locate in Nebraska have benefited from a formidable array of economic incentives under the Nebraska Advantage program. Originally designed as a five-tier program, Nebraska Advantage gained an additional component, called Super Tier 6, in 2009. Businesses eligible for the Nebraska Advantage program include manufacturing, distribution, storage/warehousing, and transportation.

The Nebraska Advantage Program includes:

Tier 1: For companies that make $1 million in new investments and create 10 new jobs. A business is eligible for a refund of one-half the sales tax paid for capital purchases at the project; a sliding scale wage credit of three to six percent, depending on wage level; and a three-percent investment tax credit.

Tier 2: For companies that make $3 million in new investments and create 30 new jobs. A business is eligible for a refund of all sales tax on capital purchases at the project; the sliding scale wage credit; and a 10-percent investment credit.

Tier 3: Jobs-only tier, for companies that create 30 new jobs. The company receives the sliding scale wage credit with no capital investment required.

Tier 4: For companies that make $11 million in new investments and create 100 new jobs. The company receives a sales tax refund, jobs and investment credit, and a personal property tax exemption for turbine-powered aircraft, computer systems, agricultural processing machinery, and personal property used in distribution facilities for up to 10 years.

Tier 5: For companies that make $34 million in investments and maintain employment. The company receives a refund of all sales tax on the project's capital purchases, and a personal property exemption up to 10 years on computer systems for a Web portal.

Super Tier 6: For companies that make $10 million in new investments and create 75 new jobs, or $102 million in new investments and 50 new jobs. The program is open to any business activity other than retail. The company receives a refund on all sales tax on capital purchases for the project; a 10-percent job credit on new employees who meet certain wage thresholds; and personal property tax exemption for all personal property at the project for up to 10 years.

Nebraska Advantage offers special opportunities for companies that engage in logistics activities. "The Nebraska Advantage economic development package is one of the few that has tax credits for material-moving equipment," says the Nebraska Trucking Association's Johnson. "Anything from forklifts to power racking to conveyor belts receives a tax incentive."

Beyond Nebraska Advantage, Nebraska holds many other attractions for businesses. A few of the highlights are: no state property or inventory tax; no personal property tax on intangibles; and no sales tax on raw materials used as ingredients or components in manufacturing, water used exclusively in manufacturing and processing, or manufacturing machinery, equipment, and related services.

STABLE ECONOMY

While Nebraska offers an array of attractive business incentives, an equally large attraction is the stable economic climate. "Nebraska runs a balanced budget," says Derek Leathers, chief operating officer at Werner Enterprises Inc., a major truckload carrier and logistics services provider based in Omaha. "It's not a state that's burdened with extreme debt. Therefore, it's not a state that's going to suddenly and abruptly raise taxes just as quickly as it lowered them."

GREAT COMPANIES IN NEBRASKA

Who's Where?

Its central location, highly trained workforce, low industrial power rates, and excellent quality of life continue to attract new companies to Nebraska. Here are some of the major companies with operations in the state:

COMPANY	LOCATION(S)
Alegent Health	Omaha
BD	Holdrege, Columbus, Broken Bow
Behlen Mfg. Co.	Columbus
Berkshire Hathaway Inc.	Omaha
Buckle	Kearney
Cabela's	Sidney
Cargill Inc.	Blair
ConAgra Foods	Omaha
Crete Carrier Corp.	Lincoln
Kawasaki Motors	Lincoln

COMPANY	LOCATION(S)
Lindsay Corporation	Omaha
Monsanto Company	Gothenburg, Lindsay
Mutual of Omaha	Omaha
Nelnet	Lincoln
Novartis Consumer Health/OTC	Lincoln
Novartis Seeds Inc.	Phillips
Novozymes	Blair
Nucor Steel	Norfolk
Omaha Steaks	Omaha
Oriental Trading Company	Omaha
Paypal	Omaha
Peter Kiewit Sons Inc.	Omaha
Pfizer Inc.	Lincoln
Reinke Manufacturing	Deshler
Schering-Plough Animal Health Corp.	Omaha, Elkhorn
Shopko Stores Operating Co. LLC	Omaha
Streck Laboratories Inc.	La Vista
Swift & Co.	Grand Island
Syngenta Crop Protection	Omaha
Tyson Foods Inc.	Dakota City, Lexington, Omaha, York
Tyson Fresh Meats	Madison
Union Pacific Railroad	Omaha and other locations
Valmont Industries Inc.	Omaha, McCook, Valley
Werner Enterprises Inc.	Omaha
West Plains Co.	Omaha, Hay Springs, Gering
Yahoo!	Omaha, La Vista

Also, government leaders at all levels – from mayors to the governor – are extremely accessible. "If you have concerns, you can express them," Leathers says.

Several years ago, for example, officials at Werner questioned how their unemployment taxes were calculated. "We didn't feel that companies were rewarded for having low turnover," he says. "So we expressed those concerns, and eventually they passed laws that do reward companies that retain their employees."

The strong agricultural focus of Nebraska's economy has a lot to do with the state's economic stability, says Tom Hastings, president and CEO of TSL Companies. A steady and growing demand for products produced in Nebraska keeps the economy on an even keel.

Based in Omaha, TSL Companies consists of four subsidiaries whose services include: transporting ocean containers to and from rail heads; storing empty containers for steamship lines; non-vessel operating common carriers (NVOCC) service; and freight forwarding.

"We export from Nebraska constantly," Hastings says. Products that his company helps on their way to overseas markets include corn, soybeans, soybean meal, animal feeds, and many other food commodities. TSL also moves equipment such as center pivot irrigation systems – which are widely manufactured in the state – and grain bins.

Along with its agricultural heritage, Nebraska's economy benefits from the conservative nature of the Midwestern character. "There's not a lot of speculative building here," says Bruce Meyers, co-owner of Omaha-based Nebraska Warehouse Company, which provides public and contract warehousing in three local warehouses. Its trucking company, Cannonball Express, offers refrigerated

University of Nebraska - Lincoln

Nebraska's well-educated workforce is a direct result of its numerous colleges and universities. The state's publicly and privately funded institutions of higher learning include the following:

COLLEGE/UNIVERSITY	LOCATION(S)
Bellevue University	Bellevue
Chadron State College	Chadron
College of St. Mary	Omaha
Concordia University	Seward
Central Community College	Grand Island, Hastings, Columbus
Creighton University	Omaha
Dana College	Blair
Doane College	Crete, Lincoln, Grand Island
Hastings College	Hastings
Metropolitan Community College	Omaha, Bellevue, Elkhorn, Fremont, La Vista
Midland Lutheran College	Fremont
Mid-Plains Community College	McCook, North Platte
Nebraska School of Technical Agriculture	Curtis
Nebraska Wesleyan University	Lincoln
Northeast Community College	Norfolk, O'Neill, South Sioux City, West Point
Peru State College	Peru
Southeast Community College	Lincoln, Milford, Beatrice
Union College	Lincoln
University of Nebraska	Omaha, Kearney, Lincoln
University of Nebraska Medical Center	Omaha
Wayne State College	Wayne
Western Nebraska Community College	Scottsbluff, Sidney, Alliance
York College	York

less-than-truckload (LTL) service and intermodal transportation in the Omaha-Lincoln market. The company also builds large warehouses and warehouse office/showroom facilities that it leases to other companies.

The company does not, however, construct those buildings without a reasonable certainty that there's a tenant waiting. "Overbuilding is rare here. Very few developers do commercial or industrial real estate on spec," Meyers says. "If we build 100,000 square feet, we may need 60,000 for ourselves, and then we'd try to lease the other 40,000. We take some risk, but not a lot."

Nebraska's government shares that knack for fiscal prudence. "We have a provision in our constitution that prohibits the state from borrowing money," says Baier. "Some states are borrowing their way out of problems with no plans for repaying. That won't be the case in Nebraska."

It took state legislators in Nebraska only 12 days to trim approximately $350 million from the state's budget, and lawmakers have made a conscious decision not to raise taxes. "We feel very fortunate that not only have we been able to cut taxes in the past four years, we've also been able to control our spending through good decision-making," Baier says.

WORK ETHIC BREEDS SUCCESS

As of 2008, approximately 964,700 people were employed in non-agricultural jobs in Nebraska. The state's large pool of hard-working, dedicated employees is one of Nebraska's major attractions. "The quality of Nebraska's workers is a huge part of Werner's success," says Leathers.

Leathers attributes Nebraska's work ethic to the state's agricultural heritage. But it's not only on the farm that you find workers who get up early and make it to their job site even in the most difficult conditions. "On a snowy Nebraska day, our parking lot is full of cars. Our workers make the extra effort to come in," he says. "That dedication translates into a high level of service for our customers."

Hastings agrees that workers in Nebraska demonstrate a tremendous sense of responsibility. “Over the years, that has been an advantage for us as a company,” he observes. “We’re doing business worldwide, and competing against companies that aren’t located here and may not have the labor resources we have.”

Thanks to the low cost of living in Nebraska, staffing up with dedicated, educated employees doesn’t have to mean that a company pays top dollar. When Marinello and his business partner were deciding where to start a third-party logistics company, they considered both Omaha, where the partner was working for UP, and Atlanta, where Marinello was located. One major factor that tipped the scales toward Omaha was the cost of labor.

“Applicants in Omaha were asking 20 percent less in salary than people in Atlanta,” Marinello says.

LOGISTICS-FOCUSED EDUCATION

Part of the secret behind Nebraska’s outstanding workforce is the state’s education system. Nebraska boasts one of the highest teacher-to-pupil ratios in the country, and one of the best rates of high school graduation. After high school, students who seek further education within the state can choose from among eight community colleges, three four-year state colleges, five public universities, and 12 independent institutions of higher learning.

Nebraska has made a special commitment to creating a pool of trained employees to work in transportation and logistics positions. That effort is intense and starts early. Government and industry partners have taken a “middle school-to-master’s-degree” approach, providing opportunities to train for careers in logistics at numerous levels.

McMillan Middle School in Omaha, a magnet school focused on mathematics, engineering, communication arts, and technology, offers a curriculum in Transportation, Distribution, Warehousing, and Logistics (TDWL). Omaha’s Bryan High School also offers a four-year TDWL sequence designed to train students for careers in areas such as driving, diesel engine repair, transportation sales, and supply chain management.

> **“The quality of Nebraska’s workers is a huge part of Werner’s success.”**
>
> Derek Leathers, Chief Operating Officer, Werner Enterprises Inc.

“Millard South Public Schools in west Omaha are also starting a TDWL career academy program, so young adults have another learning opportunity,” says McMullen. “These students graduate high school with a significant head start on an associate’s degree in logistics.”

The commitment continues with diesel driver and diesel technology training programs at four community colleges: Metropolitan in Omaha, Southeast in Lincoln, Central in Hastings, and Northeast in Norfolk. The University of Nebraska - Lincoln offers a graduate certificate in logistics. And Bellevue University offers a Bachelor of Science in logistics management and a Master of Business Administration with a concentration in supply chain management.

McMullen has experienced firsthand the advantage of operating a business within reach of Bellevue’s logistics programs. An employee at one of his businesses, Cargo Zone LLC, currently is going through the Bachelor of Arts program and considering continuing there to earn an MBA. “He had the interest from working as a warehouse laborer, and he has already become the foreign trade zone administrator,” says McMullen.

A further indicator of Nebraska’s commitment to the logistics industry is the $75,000 job training grant that the Department of

Motor carriers and 3PLs, such as Werner Enterprises, gain access to a qualified workforce thanks to driver training programs in Nebraska's community colleges.

Economic Development awarded to the Nebraska Trucking Foundation in 2008. Designed to alleviate the driver shortage that existed at the time, the grant was provided to fund 250 hours of training behind the wheel for prospective drivers who had just completed a commercial driver's license program at one of the community colleges. It would also allow 13 small trucking companies to send one of their experienced drivers to a state community college to become a driver trainer.

LEADING THE WAY IN RESEARCH

Nebraska also is a leader in transportation research. The Nebraska Transportation Center at the University of Nebraska - Lincoln operates programs in transportation systems engineering, technology transfer, public administration and finance, structural and safety engineering, health, safety education, hydraulics and fluid mechanics engineering, and geotechnical engineering.

In addition, the university's Department of Industrial Management Systems Engineering operates the RFID and Supply Chain Logistics Lab, focused on applications of radio frequency identification (RFID) technologies. The lab represents an alliance between the university and partners such as Square D, Lincoln Plating, Riviana, UPS, General Dynamics, and the National Aeronautics and Space Administration.

One of the lab's current projects is improving grain transfer from truck to train. The researchers seek to cut the cost of making these transfers, save energy, and reduce greenhouse gas emissions. Another project is investigating the use of RFID technologies to help astronauts better manage onboard inventory during space missions. By integrating RFID with a real-time location system, the researchers hope to produce a system that can make inventory updates automatically and help astronauts locate misplaced equipment.

THE OMAHA ADVANTAGE

The roots of trade and the transportation industry run deep in Omaha. "Omaha grew up as a trading post. That's how the area was founded," says Rod Moseman, vice president of economic development at the Greater Omaha Economic Development Partnership.

Today, the Omaha metropolitan area is home to about 840,000 residents. Businesses in the region enjoy abundant service via all four transportation modes that connect Nebraska with the rest of the United States and the world. Omaha sits at the crossroads of Interstates 80 and 29. It's the headquarters of Union Pacific Railroad and home to Berkshire Hathaway, the parent company of Burlington Northern Santa Fe Railway. Omaha also is home to the state's largest airport, Eppley Airfield, and provides access to barge transportation on the Missouri River.

Moseman cites a fifth vital transportation mode in Omaha: the movement of information over telecommunications lines. The region has been a telecommunications center since the days when Offutt Air Force Base, just south of Omaha, became headquarters for the Strategic Air Command (SAC), which commanded the U.S. nuclear arsenal during the Cold War.

SAC required excellent communications capacity. "As a result, from the very early days, redundant cabling came into Omaha," Moseman says. Since then, the region has become a node on numerous transcontinental fiber optic cable routes, ensuring abundant access to bandwidth.

That communications capacity has persuaded many companies to establish data centers in Omaha. It also offers a priceless resource for logistics – a sector where the movement of freight has become inextricably tied with the movement of information.

Omaha is a center for global trade as well. "The Omaha Chamber is the grantee for Foreign Trade Zone Number 19," Moseman says. The public warehouse operated by Cargo Zone LLC provides FTZ services for companies that don't move enough volume to justify establishing a facility of their own. One manufacturer, Syngenta Crop Protection, operates its own sub-zone within the general purpose FTZ.

In addition, "we have property near the airport that is already pre-designated as a general purpose foreign trade zone," Moseman says. A company that builds a facility on that property would be able to operate its own FTZ.

Omaha has its own U.S. Customs and Border Protection office as well. "Shippers don't have to wait for a Customs agent to drive here from hundreds of miles away," Moseman says. "Omaha is truly a port of entry."

Businesses looking to site logistics facilities enjoy a special advantage in the Omaha region. The Greater Omaha Economic Development Partnership is a regional enterprise, including organizations from both the city of Omaha and several surrounding counties. They all work out of the same office, and they all collaborate in helping businesses.

"Our team operates as if there were no city limits or county lines," Moseman says. Companies that locate in the region can choose from urban, suburban, or rural settings.

"We're not constrained by artificial or governmental boundaries. We have room to grow," he adds.

FRESH POTENTIAL IN LINCOLN

In economic terms, life in Lincoln today is terrific. According to a Feb. 18, 2010, article in *USA Today*, the unemployment rate in the Lincoln metropolitan area stands at only 4.1 percent, the second-lowest in the country. In fact, unemployment in Lincoln has never gone above five percent in the 120 years that the federal government has been tracking such numbers. And the real estate bubble and subsequent collapse that wreaked so much havoc on the national economy barely affected Lincoln.

One center of opportunity for businesses in Lincoln is Lincoln Air Park West, the 1,000-acre industrial park owned and operated by the Lincoln Airport Authority. Developed on the site of the former Lincoln Air Force base, the park offers a variety of buildings, including hangars constructed for the air base and new, modern buildings in steel or precast concrete. Many of the tenants are engaged in light manufacturing or warehousing.

Omaha offers businesses easy access to multiple transportation modes, an FTZ, and a local U.S. Customs and Border Protection office.

Photo: Timothy Keen

The park also has plenty of room for expansion. "Within the old Air Force base area itself, there is open land, and all the infrastructure – streets and utilities – is there," says John Wood, executive director of the Lincoln Airport Authority. North of the airport, land that has not yet been developed offers space for businesses that require large parcels.

"Part of that property could be served by both Union Pacific and BNSF," he says.

That undeveloped section of the Air Park also boasts an FTZ, making the advantages of that designation available to companies that locate on the property in the future.

Lincoln Air Park West is only 1.5 miles from I-80 and, of course, the airport is right next door. "If a company had an industrial need for access to the runway and taxiway system, we could accommodate it," says Wood.

Because the Air Park is publicly owned, it is not subject to local property taxes. Also, if the Authority is doing a "build-to-suit" development for a tenant, public financing is available through industrial revenue bonds issued by the Airport Authority. "That's a very economical method of financing," Wood says.

ALONG I-80

For companies that locate in central Nebraska along the I-80 Corridor, one of the biggest attractions is the transportation infrastructure. Not only does "America's Main Street" run through the region, but the area affords easy access to four major U.S. highways running north and south. The Corridor also offers several access points to the UP and BNSF railroads.

"In Hall County, Buffalo County, and Adams County, both railroads cross each other," says Marlan Ferguson, president of the Grand Island Area Economic Development Corp., which is a member of the I-80 Nebraska Coalition.

Easy access to these facilities makes transportation a simple matter for businesses in locations such as the Platte

Valley Industrial Park in Hall County. "It's three miles from the Interstate and has access from two four-lane highways that go to the Interstate," Ferguson says.

With their abundant, inexpensive real estate and pro-development attitudes, communities along the I-80 Corridor are attracting interest from companies in several key industries. Nova-Tech, a manufacturer of pharmaceuticals for animals, has been expanding in the Platte Valley Industrial Park. The area also has caught the attention of businesses looking to locate distribution centers, and businesses that manufacture products for wind energy production.

"The interest is partly based on our location," Ferguson says. Central Nebraska stands in the center of a triangle formed by wind farms in Minnesota, Iowa, Montana, Oklahoma, and Texas. Also, thanks to the area's agricultural roots, many workers have experience in manufacturing machinery and buildings, giving them skills that transfer easily to manufacturing wind turbines and associated products.

NEW CONSTRUCTION IN KIMBALL

In western Nebraska, the City of Kimball offers quick access via I-80 to points east and west, and via U.S. Highway 71 to markets from Mexico to Canada. Highway 71 is part of the Heartland Expressway, a federally designated transportation corridor created to provide multi-lane transportation between Rapid City, S.D., and Denver and to link Colorado Springs with cities in Texas.

Union Pacific Railroad also serves Kimball, with a small rail spur on the west side of town. By the end of 2010, the city plans to have a second, larger spur in operation to serve the east side of town, says J.P. Komorny, director of economic development for the city.

The new, $7-million facility will include a high-speed line with two high-speed switches and several tracks for loading, unloading, and distributing rail cars. The project also includes 9,500 feet of main line connecting to Union Pacific's track.

In conjunction with the rail construction, Kimball is developing about 60 acres of land, with more possible. "We could potentially develop 600 acres," Komorny says.

Castronics, a manufacturer of pipes for oil and water wells, recently leased land along the new spur. City officials also are talking with several other companies about taking space there.

Another transportation upgrade in the works in Kimball is a bypass that will connect I-80 and U.S. 71, with outlets on Highways 30 and 71. That project, too, is expected to attract new businesses.

"Toward Highway 30 East, we are developing plans to increase the infrastructure to support new construction," Komorny says. "I'm currently in discussions with a few large rest areas and truck stops, and some additional developers for purchasing land and developing commercial sites."

Interstate 80 crosses central Nebraska, providing connections to other major highways.

Another factor stimulating interest in Kimball is the growth of wind energy in the region. Wind turbines are already operating in Kimball, and new construction will begin this year in Banner County, just north of Kimball, and Weld County, Colo., just south of town. As these installations grow, Kimball is becoming a key transit point for both the turbine components and the equipment used to construct them, and a point for housing the short- and long-term maintenance crews.

NEWS FROM NORFOLK

In the northeastern section of Nebraska, transportation opportunities via the U.S. highway and rail systems have helped to draw manufacturers and distributors to Norfolk and the surrounding region. "Between our five largest manufacturers, about 500 semi truckloads leave this area daily," says David Simonsen, executive director of the Elkhorn Valley Economic Development Council.

Affiliated Foods Midwest has a distribution center in Norfolk. Nucor Corporation, a leading manufacturer of steel products, operates four facilities in the community. Milk Specialties, a producer of ingredients used in protein drinks, recently closed on a property in Norfolk. "That's a $10-million project," Simonsen notes.

Plans to develop a new stretch of road connecting Highways 35 and 81 outside of Norfolk will spell good news both for companies already operating in that area and for others that might want to locate nearby. A joint venture of the city of Norfolk, Madison County, and Stanton County, the project to build the approximately three-mile-long connector is set to start this spring. The targeted completion date is in 2011.

"Our businesses wanted the new road," says Simonsen. Nucor Steel, Norfolk Iron and Metal, Apache (a division of farm equipment manufacturer Sinco Industries, Inc.), and a Louis Dreyfus ethanol plant are all located near the proposed connector and all will enjoy easier highway access because of it.

Norfolk and the two counties are conducting the $13-million construction project without any state or federal funds. Together with a $1.4-million road project that the city of Norfolk is conducting in the same area, the connector will help to open new land for industrial development, possibly including a multi-county industrial park. "There's a lot of untapped potential," Simonsen says.

NEBRASKA ADDS UP

Many virtues that make Nebraska a great place to do business also make it an attractive home for the people who work in those businesses. No wonder *Business Facilities*

ADAMS INDUSTRIES: From Munitions Depot to Inland Port

Just as Lincoln has turned a former Air Force property into a thriving industrial park, a logistics service provider in the western part of the state has given new life to a former military installation.

Adams Industries Inc. in Sidney has taken over part of an old World War II Army munitions depot, creating 700,000 square feet of indoor warehouse space and more than 500 acres of outdoor storage.

The property is close to I-80 and is served by both the Union Pacific and Burlington Northern Santa Fe railroads. In fact, the company has just been designated a BNSF Premier Transload Partner.

This facility has become popular for distribution into Colorado's Front Range, says Richard Baier, director of the Nebraska Department of Economic Development. "Adams has attracted significant attention because of the on-site dual rail, trucking capacity, and available vacant buildings."

Among other uses, Adams is transporting specialty pipe, used in the natural gas industry, from ocean ports in Texas to this inland port via rail, says Larry Johnson, president of the Nebraska Trucking Association. From there, Adams transports the pipes by truck to their final destination.

"Adams can keep the shipments on the largest vehicle longer and transport them to a central point," Johnson says.

The wind energy industry is also discovering Adams as a central site from which to distribute components used in wind turbines to surrounding states such as Wyoming, Colorado, North Dakota, South Dakota, and Iowa.

magazine ranked the state fourth on its "Best Quality of Life" list in 2008.

The same low costs that benefit businesses in Nebraska make the state an economical place to live and raise a family as well. "The cost of living is 89 to 90 percent of the national average," says Baier. Whether you're shopping for food, housing, utilities, transportation, or health care, you'll get more value while spending less in Nebraska.

Even hospital care is a bargain: the average daily cost of a hospital stay in Nebraska is 27 percent lower than the nation's average. While the price may be low, though, the quality of care is high. The ratio of hospital beds to patients in Nebraska is one of the highest in the country, and the state's hospitals are equipped with the latest technology. In 2007, *Expansion Management* magazine ranked Nebraska among the top 10 states that received five stars on its Healthcare Cost Quotient.

Nebraska's low unemployment levels – even in the midst of a recession – mean that willing workers find a warm reception throughout the state. And getting to work in Nebraska is quick and easy: the U.S. Bureau of the Census finds that Nebraskans have the fourth-lowest average travel time to work in the country.

"Strong communities, a clean environment, and quality education make life in Nebraska attractive," says Baier. "Couple that with sound government, low crime, and quality healthcare, and you have a long-term foundation for a successful state."

Add those quality of life factors to all the virtues that make for a flourishing logistics operation – central location, strong transportation infrastructure, numerous service providers, abundant and inexpensive real estate, and an educated, dedicated workforce. Taken together, these advantages make Nebraska an outstanding business location. ■

For information on featuring your region in an Economic Development Supplement, contact James O. Armstrong at 815-334-9945 or jim@inboundlogistics.com.

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For more than 30 years, Adams Industries has been a leader in industrial logistics, transportation, and storage. The company is a common and contract carrier specializing in flatbed and van hauling in both interstate and intrastate capacities for a wide variety of shippers. Adams' warehousing capabilities – which include 700,000 square feet of secure and USDA-approved indoor warehouse space, graded and treated multi-acre stabilized ground, and a footprint of 550-plus acres of outdoor storage – can be tailored to any of your industrial storage needs. If you would like to speak with a representative regarding our services, please call 800-525-6958.

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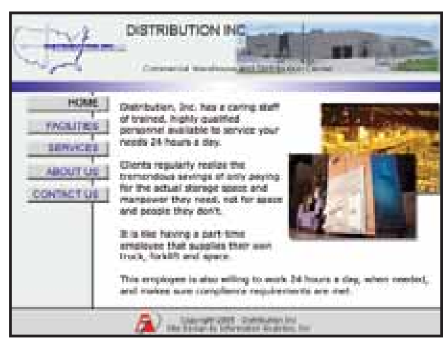

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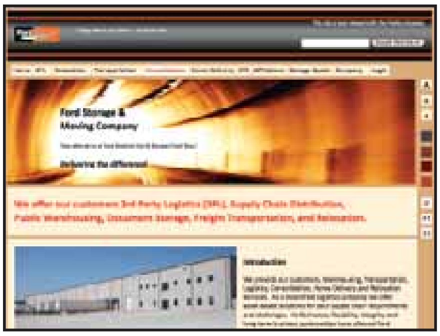
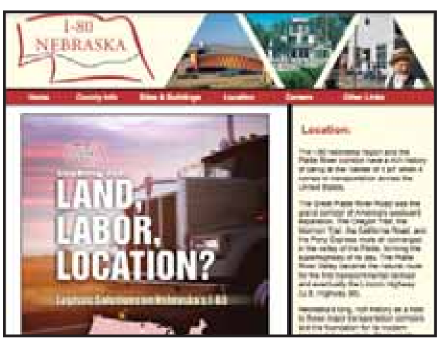
Located in Lincoln, Neb., Distribution Inc. is a 120,000-plus-square-foot warehouse that supplies value-added services to companies that realize the cost-saving advantages of outsourcing their warehouse needs. With its 24/7 warehouse services and fleet of late-model power units and trailers to handle your cartage, Distribution Inc. is your logistics and warehousing partner.

Elkhorn Valley Economic Development Council • www.elkhornedc.com
The Elkhorn Valley Economic Development Council (EVEDC) is a collaborative public-private partnership formed to promote new economic development opportunities and to support existing small businesses in the Madison, Pierce, and Stanton three-county region. The EVEDC "Resource Team" approach to economic development customer service assures access to all agencies and programs that can be of assistance on your project. The regional approach and collaborative philosophy for economic development in the three-county, 13-community Elkhorn Valley cuts through the red tape to provide a fast track for your project completion.



Ford Storage & Moving Company • www.fordstorage.com
Ford Storage and Moving Company, Omaha, Neb., is an asset-based logistics company specializing in the successful execution of all logistics activities required to take your products from production to delivery. Let Ford be your partner in resource management including production assistance, materials handling, storage, and distribution. The company's transportation programs include truckload and LTL shipments; in-transit merge; postponement; inbound materials management; order fulfillment; and reverse logistics. The Web site provides online inventory management capabilities so you can track your products every step of the way.

Greater Omaha Chamber of Commerce • www.accessomaha.com
The Greater Omaha Chamber of Commerce represents an eight-county metro area of more than 800,000 people (1.1 million within a 60-minute drive) and offers a full range of consultative services: current data on available sites and buildings; manpower availability, wage rates, and productivity levels; energy rates and availability; training programs; and guidance on use and application of development incentives including major tax credits, refunds, and exemptions for new and expanding businesses. For information, contact Rod Moseman, vice president, Economic Development, at 800-852-2622 or via e-mail at rmoseman@accessomaha.com.



I-80 Nebraska Coalition • www.I80nebraska.com/logistics.asp
The I-80 Nebraska Coalition was organized in 2003 by local economic developers out of a recognized need to work together as a region. Made up of nine counties spanning 250 miles across central Nebraska, the Coalition represents a region with a population exceeding 230,000. The common thread linking these counties is the transportation lifeline known as Interstate 80. Looking for a new location? Nebraska has what you need right here!

The City of Kimball • www.kimball-ne.org
The City of Kimball is considered the Gateway to Nebraska. Located in western Nebraska, at the crossroads of Interstate 80 and U.S. 71, Kimball is ideally located, and offers easy access to and from larger towns. The city's economic development mission is to enhance and strengthen the local economy through the support and expansion of local companies and the attraction of new businesses.

Lincoln Air Park West • www.lincolnairport.com/industrial-park.cfm
Lincoln Air Park West is a 1,000-acre industrial park operated by the Lincoln Airport Authority, an independent political subdivision of the state of Nebraska. The industrial park is located within three miles of Interstate 80, is served by Burlington Northern Santa Fe Railway, and has direct access to the runways and taxiways of the Lincoln Airport, which is capable of handling the largest aircraft in service today. The Authority offers a wide variety of leasing options, including build to suit. Zoned heavy industrial, the park can accommodate any tenant. Currently the Authority is engaged in developing a portion of the park as a rail center capable of accommodating almost one million square feet of rail-accessible buildings suited to warehousing or light manufacturing. For more information visit our Web site and click "Industrial Park Info" or call 402-458-2400.

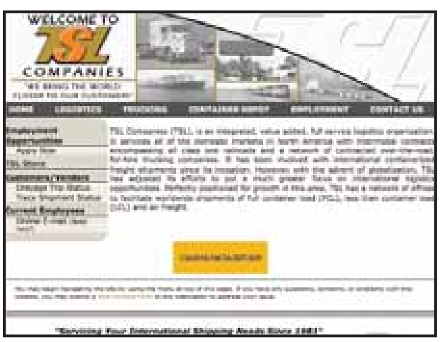
Lincoln Electric System (LES) • www.les.com
LES is the electric utility serving the City of Lincoln and Lancaster County, Neb. LES' rates are competitive, with industrial 22 percent and commercial 40 percent below the national average. In addition, Nebraska has recently introduced some important incentives for logistics companies, such as refrigerated warehouses, which are based upon a company's overall investment. Call 402-473-3273 or e-mail us at econdevelopment@LES.com for more information.

Manning's Truck Brokerage Inc. • www.mtbinc.com
As a national third-party logistics company, Manning's Truck Brokerage Inc. offers shippers a wide range of transportation, logistics, warehousing, and supply chain solutions. Our specialty is providing dependable next-day truckload delivery service to points within 600 miles of point of origin. We also maintain a strong carrier following for truckload and less-than-truckload service to the East and West Coasts.

Nebraska Department of Economic Development • www.neded.org
Right in the middle of it all: Nebraska is a great place to do business. An ideal location, low traffic congestion, positive business climate, quality affordable workforce, industry-leading business to meet your needs, and the absence of inventory taxes are just a few of the many reasons to make Nebraska the home of your next transportation, distribution, and logistics center. The Nebraska Logistics Council serves its members as a forum for professional and educational advancement in the area of worldwide transportation, warehousing, distribution, and logistics. The Council is available to meet with your business to share how a Nebraska location can make the ultimate cost difference in terms of shipping and distributing your products; please visit the Web site for more information.

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; facts 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.

Nebraska Warehouse • www.nebraskawarehouse.com
Warehousing is more than a building with obsolete inventory; it is a logistics opportunity that can open new markets, enhance and improve current markets, and improve your bottom line. Leverage that opportunity by letting Nebraska Warehouse help you maintain JIT inventories with min-max monitoring; label or price promotional items; process and inspect merchandise returns; provide light assembly of parts and components; process import merchandise for customs clearance; prepare and package export shipments, and much more. Visit the Web site for more information.



TSL Companies • www.4tsl.com
TSL Companies is an integrated, value-added, full-service, asset-based logistics organization. International Logistics Inc. (ILI), a TSL Company, is a licensed NVOCC and freight forwarder with more than 100 affiliated offices located worldwide. We service all domestic markets in North America with intermodal contracts encompassing all Class I railroads and a network of contracted over-the-road, for-hire trucking companies. TSL Companies has been a global supply chain solutions provider for 30 years, offering ocean, air, rail, and trucking logistics.

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.

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.


TMSi LOGISTICS

Are You Ready for a Third Party Logistics Provider (3PL)?

TMSi Logistics

TITLE: ***Are You Ready for a Third-Party Logistics Provider?***
LENGTH: *3 pages*
DOWNLOAD: *www.tmsilog.com/FileAccess/FileAccess.aspx*
SUMMARY: Outsourcing your supply chain is a big step. Many companies have built their logistics alongside their business, keeping supply chain management in-house. The right 3PL partner will maintain and strengthen your relationship with your clients and customers, while improving your bottom line. Don't know the right questions to ask? This TMSi Logistics whitepaper provides the answers.

Logility

TITLE: ***Fuel Your Green Supply Chain: Optimizing Transportation Efficiencies***
LENGTH: *9 pages*
DOWNLOAD: *www.logility.com/library/white-papers.cfm*
SUMMARY: Sustainability and green supply chain initiatives are rapidly moving to the top of many companies' priority lists as they seek to reduce supply chain costs while reducing their carbon footprint and becoming better stewards of the planet's natural resources. Not only will a Transportation Management System (TMS) help you with your green supply chain initiatives, but it can help your company save from five percent to 40 percent of your freight expense. Download this whitepaper to find out how.

Zebra Technologies

TITLE: ***How Mobile Printers Drive Efficiency Throughout the Supply Chain***
LENGTH: *8 pages*
DOWNLOAD: *www.zebra.com/id/zebra/na/en/index/resource_library/white_papers.html*
SUMMARY: To remain competitive, distribution centers, manufacturers, and short-haul and long-haul carriers must change the way they label and track goods. The most effective way to improve efficiency and keep labor costs under control is to minimize the time required to label materials, work in process, finished products, boxes, and pallets. In this whitepaper, you'll learn how centralized labeling solutions can significantly reduce productivity and inaccuracies, and yield significant cost savings.

Tompkins Associates

TITLE: ***Evolution to World-Class Inventory Management***
LENGTH: *8 pages*
DOWNLOAD: *www.tompkinsinc.com/publications/monograph/inventory/world-class-inventory-management.pdf*
SUMMARY: The evolution from elementary to world-class inventory management progresses from within a planning department to multi-functional management that involves internal groups as well as customers and suppliers, usually with significant need for change management support. This whitepaper provides an overview of the growth process toward world-class inventory management–from the theoretical and technical approaches undertaken within small planning groups to the multi-disciplinary, strategy-oriented approaches of fully evolved organizations.

Werner Enterprises

TITLE: ***Transportation Management Systems & Supply Chain Sustainability***
LENGTH: *7 pages*
DOWNLOAD: *www.werner.com*
SUMMARY: Two of the greatest concerns for transportation executives is driving efficiencies within their supply chains and reducing costs. In this whitepaper, you'll discover why Transportation Management Systems (TMS) are one of the most effective measures for cutting costs and eliminating inefficiencies. TMS solutions focus on long-term savings rather than immediate cost avoidance. This inherent characteristic adds stability, reliability, and transportation process cost controls. Successful TMS solutions provide connectivity, optimization, transparency, and collaboration.

Kuehne + Nagle

TITLE: ***Real-World Network Optimization***
LENGTH: *6 pages*
DOWNLOAD: *www.kn-logistics.com/whitepapers.cfm*
SUMMARY: Logistics network optimization can yield significant warehousing, transportation, and inventory savings. But many companies mistakenly conduct optimization studies that are almost exclusively data-driven. A better solution is outlined in this whitepaper: A six-step approach that weighs strategic and practical factors, in conjunction with data analysis, to deliver optimal results.

One Network Enterprises

TITLE: ***Creating a Green Footprint***
LENGTH: *4 pages*
DOWNLOAD: *www.onenetwork.com/resources/index.php*
SUMMARY: The push for "green" companies is on. Your customers are demanding it; if you are in the U.S. automotive or grocery industry, your government is requiring it. While there is no playbook for becoming a green company, your company can implement, execute, and market several steps that can become a competitive and green advantage. In addition to the ecosystem advantages of moving to green, your company could also enhance its market advantage by deploying solutions from SaaS providers. Find out more by downloading this free whitepaper.

nasstrac

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- Outsourcing practices

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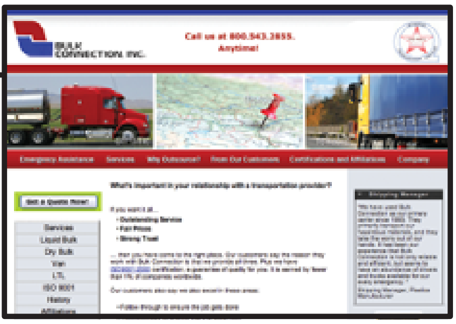
IN THIS SECTION:
3PLs • DC Management

3PLs

BNSF Logistics • www.bnsflogistics.com

BNSF Logistics creates, implements, and executes high-value logistics solutions for customers by utilizing experienced logistics professionals; leading logistics technology; multi-modal execution including LTL, truckload, intermodal, and rail; and a deep understanding of its clients' business. Ultimately, blending these factors together enables BNSF Logistics to become your most valued partner–the most critical link in your supply chain. Visit www.bnsflogistics for more details.

Bulk Connection Inc. • www.bulkconnection.com



Bulk Connection Inc. (BCI) specializes in providing transportation services for liquid/dry bulk, truckload, and LTL shippers nationwide. Recognizing the transportation needs of its customers, BCI has also established strategic alliances with airfreight, intermodal, and international freight organizations. Through its network of carrier partners, BCI has used its ability to mobilize and coordinate large volumes of equipment in emergency situations to help customers get the job done on time and in budget.

Greatwide Logistics Services • www.greatwide.com

Greatwide has the people, processes and technology to make freight transportation more efficient and cost-effective. Greatwide offers customers an integrated service platform including dedicated, irregular route truckload, full-service truckload brokerage, warehouse-based logistics, and managed transportation services.

DC MANAGEMENT

Ryder • www.ryder.com

Ryder provides end-to-end supply chain, warehousing, and transportation solutions including: third-party logistics (3PL), fleet management, RFID operations, reverse logistics, supply chain management, transportation management/freight management, truck rental, truck leasing, warehousing, lead logistics provider, lead logistics manager, service parts operations, and distribution center management.

IN THIS SECTION:
DCC – Site Selection

DEDICATED CONTRACT CARRIAGE

Greatwide Logistics Services • www.greatwide.com

Greatwide has the people, processes and technology to make freight transportation more efficient and cost-effective. Greatwide offers customers an integrated service platform including dedicated, irregular route truckload, full-service truckload brokerage, warehouse-based logistics, and managed transportation services.

OCEAN

Maersk Line • www.maerskline.com

Maersk Line is a world-class leader in container shipping. We offer our customers door-to-door transportation service that is second-to-none. With more than 550 container vessels, 1.4 million containers, and our own terminals and intermodal network, we guarantee you will receive reliable global coverage. Our advanced e-commerce services offer a comprehensive suite of business tools including sophisticated Electronic Data Interchange (EDI) solutions and a partnership with the leading industry portal, INTTRA. Through our award-winning e-business solutions, you can quickly, accurately, and securely view schedules, request rates, submit booking and shipping instructions, retrieve bills of lading, and track your cargo 24 hours a day, seven days a week.

PORTS

Port Corpus Christi • www.portofcorpuschristi.com

Strategically located on the western Gulf of Mexico, Port Corpus Christi is the sixth-largest port in the United States in total tonnage. With a straight, 45-foot deep channel, the port provides quick access to the Gulf, the U.S. inland waterway system, and the world beyond. The port delivers outstanding access to overland transportation with on-site and direct connections to three Class I railroads, and uncongested interstate and state highways. With outstanding management and operations staff, Port Corpus Christi is clearly "More Than You Can Sea."

SITE SELECTION

Hoosier Energy • www.hepn.com

Hoosier Energy is a generation and transmission cooperative providing electric power to 17 member electric distribution cooperatives in central and southern Indiana and one member cooperative in Illinois. Based in Bloomington, Ind., Hoosier Energy operates coal, natural gas, and renewable energy power plants and delivers power through a 1,450-mile transmission network. Hoosier Energy is a Touchstone Energy Cooperative, one member of a nationwide alliance of electric co-ops providing high standards of service according to four core values: integrity, accountability, innovation, and commitment to community.

IN THIS SECTION:

TMS – Wind Power Logistics

TMS

Greatwide Logistics Services • www.greatwide.com

Greatwide has the people, processes and technology to make freight transportation more efficient and cost-effective. Greatwide offers customers an integrated service platform including dedicated, irregular route truckload, full-service truckload brokerage, warehouse-based logistics, and managed transportation services.

TRANSPORTATION

Greatwide Logistics Services • www.greatwide.com

Greatwide has the people, processes and technology to make freight transportation more efficient and cost-effective. Greatwide offers customers an integrated service platform including dedicated, irregular route truckload, full-service truckload brokerage, warehouse-based logistics, and managed transportation services.

TRUCKING

Greatwide Logistics Services • www.greatwide.com

Greatwide has the people, processes and technology to make freight transportation more efficient and cost-effective. Greatwide offers customers an integrated service platform including dedicated, irregular route truckload, full-service truckload brokerage, warehouse-based logistics, and managed transportation services.

WIND POWER LOGISTICS

Atlantic Container Line (ACL) • www.aclcargo.com

Publicly-held Atlantic Container Line is a North Atlantic ocean carrier operating since 1967. Five identical vessels, each with a 3,100-TEU container, car, and RO/RO capacity, make 50 calls weekly. Line slot exchanges enable ACL to offer six transatlantic services weekly. ACL also offers relay services between North America, the Mediterranean, Black Sea, Middle East, and Africa.

Geodis Wilson • www.geodiswilson.com

With 5,500 people and a global network, Geodis Wilson is one of the world's largest freight management companies, serving customers with integrated supply chain solutions that deliver cargo by sea and air. The company's expertise, value-added services, and e-services enable you to streamline the flow of goods. We also make your supply chain more transparent and easier to manage. A self-reliant network of offices, and air and ocean hubs in more than 50 countries, ensures that your cargo flows efficiently and consistently across the world.

Georgia Ports Authority • www.gaports.com

The Georgia Ports Authority (GPA) includes the Port of Savannah, the Port of Brunswick, the Bainbridge Inland Barge Terminal, and the Columbus Inland Barge Terminal. Its home page offers history and background about the Ports Authority, a port directory, shipping directory, GPA statistics, maps, photos, and more.

Hackman Capital Partners • www.hackmanlogisticsproperties.com

Follow the leader. Let Hackman Capital help you navigate through a sea of cost-effective real estate solutions, and recommend, from our portfolio, just the right facility in a location ideal for supply chain management.

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.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▲ **Materials Handling: Hyster**

A new series of lift trucks in the 55,000- to 70,000-pound capacity range is suited for loading general cargo at warehouses and sea ports, or moving and stacking loaded and unloaded containers. The lift trucks feature a new cooling system design that allows full performance in ambient temperatures up to 110 degrees.

www.hyster.com | 800-HYSTER-1

3PLs

TTS Logistics

A new shipping solution for trade show exhibitors transports exhibit items requiring climate control to and from trade shows nationwide.

www.tshow.com | 877-744-7887

BDP Project Logistics

To service the needs of U.K. project logistics shippers such as the North Sea oil and gas industry, BDP Project Logistics opened an office in Aberdeen, Scotland. It offers a full range of ocean, air, charter and road freight services; third-party warehousing; domestic and international distribution; on- and off-site packing and crating; customs consulting; and legal documentation assistance.

www.bdpprojects.com | 281-233-4777

Hanson Logistics

The company is expanding its temperature-controlled Chicago Consolidation Center in Hobart, Ind., to help accommodate growth of its Velocities multi-vendor consolidation program, launched in 2008. Scheduled to open in July 2010, the expanded facility will offer short-term storage, 7,800 pallet positions, and staging and dock space for frozen and refrigerated food.

www.hansonlogistics.com | 269-982-1390

Choice Logistics

A new regional hub in Dubai serves the Middle East with efficient and cost-effective access to service parts. Acting as Importer of Record for clients shipping

CONTINUED FROM PAGE 107

to and from the hub, Choice coordinates fulfillment and shipment of high-tech spares. The site allows parts to be shipped into surrounding countries such as Saudi Arabia in two days, as opposed to 25 days when shipped from Europe.

www.choicelogistics.com	800-593-2108

AIR

American Airlines Cargo

The relocated American Airlines Cargo terminal at Los Angeles International Airport offers enhanced handling capability, including a 3,000-square-foot cooler for perishables, expanded areas for courier cargo and mail processing, and a designated holding area for live animals.

www.aacargo.com	800-CARGO-AA

MATERIALS HANDLING

Cat Lift Trucks

Five new electric counterbalanced and internal combustion pneumatic lift truck models feature extended battery life, low emissions, and capacities ranging from 2,500 pounds to 12,000 pounds.

www.catlifttrucks.com	800-CAT-LIFT

Paylode Cargo Protection Systems

HDPE Lateral Void Fillers are reusable plastic dunnage components designed to be used between rows of pallets in rail cars, trucks, and intermodal transportation. Engineered to withstand 2,500 pounds of force, the components prevent pallets from leaning, shifting, and damaging packaged goods. They offer service life of seven or more years of harsh use, come in two sizes, and can interlock to fit any load plan. The lightweight components, made from 100-percent recyclable materials, have hand holds for fast loading, nest for compact storage, and can be stored outdoors.

www.paylode.com	877-421-2914

SECURITY

FreightWatch International

The Authorized Intelligence Partnership Program provides shippers access to reports on regional cargo theft activity and environmental risks, and permits them to distribute this information to suppliers, trading partners, and customers to raise awareness of relevant security issues.

www.freightwatchintl.com	512-225-6490

FINANCIAL SERVICES

Dun & Bradstreet

D&B Supplier Risk Manager combines financial and operational data on private and public companies with predictive technology to help companies see supplier instability and take action before it can cause a problem.

www.dnb.com 800-234-3867

SOFTWARE

Descartes

The *Visibility and Compliance* solution provides line-item visibility across multiple transportation modes by enabling trading partners to share data such as purchase orders, shipment status messages, and customs filing details. The solution reduces

▲ **Trucking: Con-way Freight**

A major network re-engineering cut transit times by one day to 460 U.S. destinations, while decreasing the company's carbon footprint. The initiative will also lead to reduced re-handling and fewer service exceptions, improved on-time delivery, and a more efficient operation. Major lanes affected include those between southern Texas and the Northeast, Chicago and southern Florida, and Chicago and southern Texas.

www.con-way.com 800-755-2728

CONTINUED FROM PAGE 109

shipment variability and costs associated with obsolete inventories, and accelerates border crossings and customs processes.

www.descartes.com 800-419-8495

Cadre Technologies

The *LogiView Supply Chain Management Solution* aggregates information from disparate systems to simplify inventory operations for receiving, shipping, and activity reporting. The tool provides supply chain managers, sales teams, and multiple office locations visibility to accommodate fulfillment needs and manage sales and inventory for online stores.

www.logiview.com 888-599-5868

Accellos

The new release of the *Accellos One Warehouse* warehouse management system integrates with leading enterprise resource planning systems and includes features such as labor standards for picking, receiving, materials handling, and cycle counts; enhanced key performance indicators; and extended slotting capabilities.

www.accellos.com 719-433-7000

NGC

A module for NGC's product lifecycle management and global sourcing solutions, the *Vendor Payment Automation* tool validates vendor invoice information and communicates invoice status to suppliers, alerting them when to expect payment.

www.ngcsoftware.com 305-556-9122

EXPEDITED

FedEx Express

Boeing 777 freighter service now connects Shanghai with the FedEx SuperHub in Memphis, Tenn., and provides shippers in Shanghai, Suzhou, and Kunshan with a two-hour improvement in cut-off times in select areas. The world's largest twin-engine cargo aircraft, the 777 freighter features 178,000-pound payload capacity and engine technology that reduces emissions by 18 percent.

www.fedex.com 800-GO-FEDEX

TRUCKING EQUIPMENT

Descal-A-Matic

Designed to improve fuel economy in industrial diesel fuel applications, the FuelSaver fuel-filtering system reduces hydrocarbon emissions and build-up on engine internals.

www.fuelsaver-dam.com 757-858-5593

OCEAN

Panalpina

Two new less-than-containerload (LCL) services provide connections between Belgium and the United States, and between China and Poland. Shipments from Benelux, France, and Switzerland are consolidated at Panalpina's LCL ocean hub in Antwerp, Belgium, for the 18-day trip to Houston, Texas. LCL service on the Far East Westbound trade lane connects Ningbo, China, with Wroclaw, Poland. Transit time is 26 days.

www.panalpina.com 973-683-9000

Intermarine

Using vessels with up to 550-ton gear capacity, Intermarine's new heavylift service between Europe and the Atlantic

▲ Hardware: Psion Teklogix

Suitable for use in manufacturing, retail, warehouse, and delivery applications, the Workabout Pro 3 mobile computer features four keyboard layout options for efficient data entry, a display suited to a variety of lighting conditions, and a durable case designed to withstand dust, water, and extreme temperatures. The modular platform allows companies to customize the device to meet specific needs.

www.psionteklogix.com 800-322-3437

Coast of South America targets the needs of South America's oil and gas, power generation, mining, and infrastructure development projects.

www.intermarineusa.com	800-229-8701

WAREHOUSE EQUIPMENT

Serco

The Energy Guard seal assembly blocks the sides and rear hinge of loading dock levelers to keep out dirt, debris, and insects, and prevent energy loss. It installs under the dock leveler or on the pit floor, and eliminates the need for access-blocking fabric or curtains, allowing unrestricted access for pit cleaning and dock leveler inspection.

www.sercocompany.com	877-933-4384

▲ Software: Paragon Software Systems

Paragon Territory Optimizer **ensures that all vehicles and drivers can be assigned to compact optimized delivery zones that reduce road miles and have achievable daily workloads. It determines territories using accurate travel calculations and allows for time spent at each customer site.**

us.paragonrouting.com	972-934-6755

April 7-10, 2010, Transportation Intermediaries Association Convention, Tucson, Ariz. Highlights include sessions on military freight, emergency preparedness, and the Federal Motor Carrier Safety Administration's Comprehensive Safety Analysis 2010 initiative.

703-299-5700
www.tianet.org

April 19-21, 2010, Education for Transportation Professionals, San Diego, Calif. The annual conference of the Transportation & Logistics Council and the Transportation Loss Prevention & Security Association features presentations on freight claims, transportation law, and contracting.

631-549-8984
www.tlcouncil.org

April 25-28, 2010, COSTHA Annual Forum and Expo, St. Petersburg, Fla. This year's Council on Safe Transportation of Hazardous Articles forum, *Beyond the Basics of Dangerous Goods Compliance*, includes sessions on new and emerging technologies and regulatory requirements. In-depth seminars cover topics such as Canada trans-border compliance; European road regulations; and safe, compliant battery transportation.

703-451-4031
www.costha.com

April 25-28, 2010, NASSTRAC Logistics Conference and Expo, Orlando, Fla. Attendees at the National Shippers Strategic Transportation Council's annual conference get updates on the economy's impact on operations, service levels, and capacity from top executives at leading trucking, expedited, intermodal, and maritime providers.

952-442-8850
www.nasstrac.org

May 4-7, 2010, World-Class Inventory Planning and Management, Atlanta, Ga. This program, presented by the Georgia Tech Supply Chain and Logistics Institute, addresses inventory terms, management performance measures, and activity profiling and data mining; forecasting best practices and systems; procurement and purchasing; deployment strategies; and inventory organization requirements and management system alternatives.

404-385-3501
www.scl.gatech.edu

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Yellow

THE LAST MILE

Electric Orange

Bright Yellow

Golden Nugget

Calypso Orange

Club Orange

Transportation and logistics companies are particular about their color brand because it builds customer affinity, illuminates cultural values, and ultimately differentiates one from the "other." Take, for example, the color orange.

It's a familiar sight for **Yellow Transportation** (now YRC). As legend goes, founder A.J. Harrell and a group of DuPont chemists came up with Swamp Holly Orange because it was visible from a distance. Unnaturally, Yellow's tractors became orange.

The Holly shrub's vibrant berries captivated James Ryder, too. He painted his first **Ryder** trucks with the same color. Years later, when the company switched to yellow, he turned red.

If there is one company synonymous with orange, it's **Schneider National**. The TL carrier is pumpkin to the core—so much so that in truck driver slang, orange highway construction barrels are called Schneider Eggs. As in: "Rubber Ducky, got yer ears on? Back it down. I just scrambled some Schneider Eggs."

Even **FedEx** has orange in its signature logo—as well as white and purple–a scheme meant to mimic the U.S tricolor. Why? The "Federal" express carrier had early aspirations of securing a contract with the Federal Reserve Bank. Today, FedEx is the title sponsor of college football's Orange Bowl. Coincidence?

Then there is **UPS**. That's right. Brown is a derivative of orange in the color spectrum. The two colors go together like sweet potato pie. Brown is associated with dependability—and it hides dirt—which is why way back when UPS ditched yellow for a Pullman tone.

Orange is appealing because it screams visibility—the kind of clarity that attracts companies to demand-driven logistics.

Banana Yellow

Sundance

Swamp Holly Orange


success \sək-'ses\
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