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ANNUAL GLOBAL ISSUE

ASIA

Manufacturing Dynamo or Consumer Powerhouse?

2011 GLOBAL LOGISTICS GUIDE

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South Carolina: The Logistics Advantage

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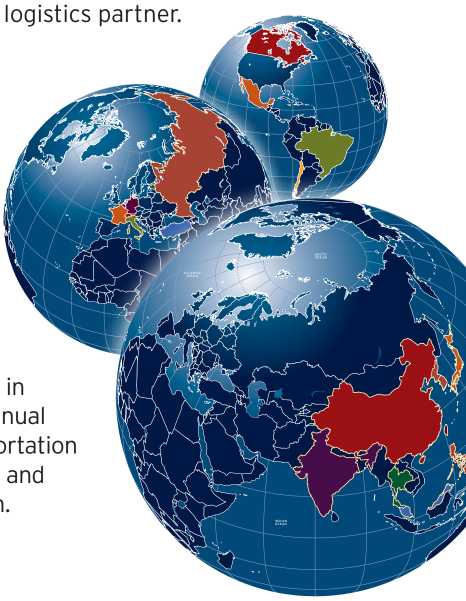


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CHECKINGIN

Felecia Stratton

by Felecia Stratton | **Editor**

Managing Risk in a Chain of Fire

Supply chain dominoes keep falling far and wide. In addition to man-made disruptions such as political instability, piracy, terrorism, and war, natural disasters such as the earthquake and tsunami that struck Japan on March 11, 2011, and the tidal waves that rippled throughout the Pacific ring including Alaska and Hawaii, have rattled the world over the past year. Tremblers in Chile, Haiti, Tibet, and New Zealand, the volcano eruptions in Iceland, and avalanches and flooding in Pakistan have taken their tolls to varying degrees.

From a macro perspective, these extraordinary events have a radiating effect on global supply chains. Businesses with any type of manufacturing operation within, or transportation activity near, the affected regions have to look more closely at sourcing strategies and contingency plans, whether internally or in concert with transportation and logistics partners. Even then, business logistics practitioners need to address country-by-country dynamics to determine whether locations are targets for expansion or aversion–and whether outsourcing strategies are preferable to offshoring.

To help shippers account for these shifting forces, *Inbound Logistics'* seventh-annual *Global Logistics Guide (pg. 43)* offers a layered analysis of regional trends and in-country snapshots that identify strengths and weaknesses, opportunities and risks.

Reacting to supply chain events and exceptions is one measure of managing global logistics complexity. Business leaders must also be proactive in exploring new markets to grow into, in terms of manufacturing, distributing, and selling. On the supply side, proximity and responsiveness to U.S. demand and cheaper transport costs may offset labor differentials. Alternatively, capitalizing on emerging consumer economies promises growth opportunities.

When the U.S. economy tanked and imports dried up, many companies began looking to expand export markets. Asia is no longer simply a place for cheap manufacturing, as you'll read in Lisa Harrington's article, *Asia: Manufacturing Dynamo or Consumer Powerhouse? (pg. 52)*. Asia's middle class is growing by leaps and bounds, and U.S. companies are beginning to tap this explosive demographic. Similar prospects can be found elsewhere around the world. Managing import and export trades between multiple supply and demand points creates additional layers of complexity–or, from a different perspective, affords greater flexibility to manage and circumvent exceptions as necessary.

You can never manage or mitigate all risk, as recent events indicate. But, if you match demand to supply, and operate a flexible and scalable logistics operation, you can absorb and dissipate the forces of natural or man-made upheaval, and put out most supply chain fires before you get burned. ■

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STAFF

PUBLISHER Keith G. Biondo
publisher@inboundlogistics.com

EDITOR Felecia J. Stratton
editor@inboundlogistics.com

ASSOCIATE MANAGING EDITOR Catherine Harden
charden@inboundlogistics.com

SENIOR WRITER Joseph O'Reilly
joseph@inboundlogistics.com

ASSOCIATE EDITOR Perry A. Trunick
ptrunick@inboundlogistics.com

CONTRIBUTING EDITORS
Lisa Harrington • Merrill Douglas
Amy Roach Partridge • Deborah Ruriani

CREATIVE DIRECTOR Michael Murphy
mmurphy@inboundlogistics.com

SENIOR DESIGNER Mary Brennan
mbrennan@inboundlogistics.com

PRINT/WEB PRODUCTION MANAGER Shawn Kelloway
production@inboundlogistics.com

PUBLICATION MANAGER Sonia Casiano
sonia@inboundlogistics.com

CIRCULATION DIRECTOR Carolyn Smolin

SALES OFFICES

PUBLISHER: **Keith Biondo**
(212) 629-1560 • FAX: (212) 629-1565
publisher@inboundlogistics.com

WEST/MIDWEST/SOUTHWEST: **Harold L. Leddy**
(847) 446-8764 • FAX: (847) 305-5890
haroldleddy@inboundlogistics.com

Marshall Leddy
(763) 416-1980 • FAX: (847) 305-5890
marshall@inboundlogistics.com

MIDWEST/ECONOMIC DEVELOPMENT: **Jim Armstrong**
(815) 334-9945 • FAX: (815) 334-1920
jim@inboundlogistics.com

SOUTHEAST: **Gordon H. Harper**
(404) 350-0057 • FAX: (404) 355-2036
south@inboundlogistics.com

MOBILE, AL: **Peter Muller**
(251) 343-9308 • FAX: (251) 343-9308
petermuller@inboundlogistics.com

NORTHEAST: **Rachael Sprinz**
(212) 629-1560 • FAX: (212) 629-1565
rachael@inboundlogistics.com

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Ready to Ride the Rails

The Obama administration recently announced plans to sink $53 billion into developing high-speed rail lines in the United States. As a frequent domestic traveler, particularly in the Northeast region, I have taken advantage of all available public transportation options.

A high-speed rail network would make rail travel a viable option again. Today's railways have lost touch with what travelers need and can afford, and I would welcome updates to the system.

However, as a professional in the logistics and trucking industry, I understand that the nation's road and highway network is literally crumbling.

While working with the Virginia Department of Transportation years ago, I saw bridges and tunnels deteriorating with age and burdened with increasing traffic in over-developed areas. Tragedies such as the 2007 collapse of the I-35 bridge in Minneapolis remind us that our nation's largest investment in mobility, commerce, and defense is a ticking time bomb.

Every day, commuters battle for pavement space with trucks carrying everything it takes for our country to survive. Many companies have shifted freight transport to intermodal options such as rail containers, but those services can be expensive, and cargo security is a concern for many shippers. Trucks remain the most practical solution for moving large loads quickly.

If the government spends money on the railways, it should be with the goal of making the current rail network more efficient. High-speed rail may eventually take some travelers and commuters off the roads and out of airplanes, allowing for more efficient truck transit and airfreight shipping.

Federal spending to improve national infrastructure–widening roads, repairing bridges and tunnels, and repaving highways–will allow the supply chain to flow more freely, reducing cost from source to consumer.

—**Jonathan Pereira**

It's a Name-changer

A few points in the recent article *4PLs Take Control* (January 2011) warrant clarification. The reference to IBM divesting its logistics arm to Geodis Wilson should actually just read Geodis. Geodis Wilson is the 3PL/forwarding division of Geodis. The IBM acquisition evolved into a fifth division for Geodis, named Geodis Supply Chain Optimisation (GSCO).

In addition, since Geodis operates 2PL divisions (Calberson/BM), as well as a 4PL division (GSCO), it may be misleading to refer to Geodis as a French 3PL. Within the Americas region, only Geodis Wilson and GSCO are represented.

As Geodis is a relatively new name, especially in the U.S. market, these details can be confusing or complicated–even internally.

Thanks for all you do, and keep the great articles coming.

—**Brian Bourke,** regional marketing and communications manager, Geodis Wilson Americas

Brevity is the Soul of Wit

Your contest to summarize logistics jobs in five words *(Last Mile, February 2011)* is interesting. I work in Bogota, Colombia, for LOGyCA, a non-profit company that develops best logistics practices in Latin American companies through consultancy, research, and professional education.

My best five-word definition of my company's role is: "We make evident the not-obvious."

—**Rene David Rojas Tovar,** consultor, Fundación LOGyCA

Military Take

For your contest, here is my five-word description of what I do: Receive, Process, Store, Issue, Repeat!

—**Jeffrey J. Johnson,** accountable officer, supply support activity, A Co. 122nd Aviation Support Battalion, U.S. Army


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WORLDWIDE LOGISTICS

10TIPS
STEP-BY-STEP SOLUTIONS

by Deborah Catalano Ruriani

Establishing a Successful Core Carrier Program

It's easy to assume that the "core" in core carrier is synonymous with "one of just a few." But the success of a core carrier program has less to do with the number of carriers than it does with ensuring that each provider selected is equal to the task of meeting your company's needs in the particular lanes or routes it will serve.

"Expand your definition of what core means–or even super-size it–and review all carriers regardless of their size," suggests Charlie Hitt, chief executive officer of Atlanta-based 3PD, Inc. Here are his 10 tips for implementing a successful core carrier program.

1 **Create an ideal.** Cost-cutting is often the underlying reason companies launch core carrier programs. But it is performance, rather than price, that tends to separate long-term successes from short-term experiments.

Before sending your Request for Proposal (RFP), take the time to construct a detailed profile of what the ideal core carrier or carriers would look like for your company, paying careful attention to service issues or opportunities that have arisen in the past. The portrait that emerges will serve as an excellent starting point for identifying, selecting, and screening the best players for your company.

2 **Don't overstate volumes.** The number of shipments your company promises to award in its core carrier RFP is directly associated with the carrier quote. Don't inflate the size of your business volume in hopes of getting a more competitive price. This can backfire and the core carriers won't be willing to work with you for long.

3 **Give soft skills their due.** Your core carriers' drivers and driver teams are often the only representatives of your company that your customers ever meet. Make professional appearance and interpersonal skills of potential core carrier drivers a high priority in your selection criteria.

In addition, be sure that the potential carrier's drivers can perform any extra non-driving functions. Any shortcomings drivers have in these areas will begin to feel considerably more pronounced–and problematic–as time goes by.

4 **Watch your back with thorough background checks.** Ask carriers if they have checked the motor vehicle records and driving history of any drivers they'll be using to carry your freight. Verify that they've conducted a 50-state criminal background check on drivers, too, especially if they are making last-mile deliveries to customers' homes. Don't assume that the carrier's safety record meets or exceeds the industry standard until you've received and reviewed its OSHA and Department of Transportation safety numbers.

5 **Make it a policy to get educated on the carrier's insurance coverage.** There's a big difference between a carrier that's insured and one that's adequately insured. Make sure your core carriers are the former rather than the latter. Require them to provide Certificates of Insurance and know how much coverage they carry. (It may turn out that lower coverage is a key reason why some carriers are quoting you lower rates than others.) Require all of your core carriers to name your company as an "additional insured" on their policies.

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CONTINUED FROM PAGE 10

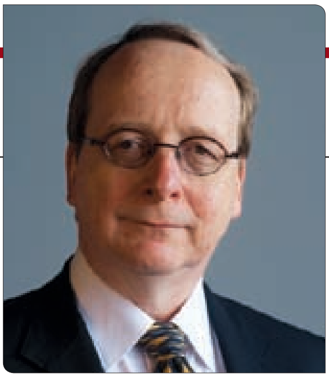
6 Make inadequate technology a deal-breaker. Your core carriers are a key connection in your supply chain–which is why it's essential that you be connected to them via some form of visibility tool. If they're unwilling to use or provide those tools, be wary. It could be a sign that they don't truly have the capacity or commitment to meet your service objectives.

7 Consider evergreen contracts. Having contracts that are automatically renewed is an excellent way to breed trust, inspire loyalty, and save the administrative fees associated with drawing up new agreements every year. It also allows your core carriers to stay focused on providing you with excellent service rather than having to worry about re-winning and re-negotiating your business. Make sure you include a 30-, 60-, or 90-day-out clause that you can activate if service declines.

8 Don't just set Key Performance Indicators (KPIs)–monitor them. Whether your company uses signatures from delivery confirmations to measure on-time deliveries or administers post-delivery surveys asking customers to rate their experience, it's important to confirm that you chose the right carriers for your program by frequently collecting and evaluating their performance data against the KPIs you established. At the very least, your company should be doing it weekly.

9 Share the results–and the love. Seek out ways to facilitate open communication among carriers via tools such as meetings, newsletters, or Webcasts, because often the efficiencies one carrier discovers for your company may be just as applicable for another. Share performance results across the network so carriers can see how their services stack up. Reward performances that go above and beyond, and consider establishing an annual awards program or building gain-sharing arrangements into your contracts.

10 Recognize that every core carrier may not deserve an encore. A core carrier program thrives on stability. That doesn't mean its "membership" should be written in stone. If a carrier's performance doesn't meet your expectations within a certain time frame, begin looking for another carrier. By the same token, if your core carrier program becomes a revolving door, look at your company's inability to partner and foster lasting relationships. ■



[INPERSPECTIVE]

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

Consuming Confidence

America is consuming again. More importantly, it also appears to be producing.

Some consumer confidence is certainly behind the latest uptick in manufacturing orders and production. One indicator of growing consumer confidence is that inventories are shrinking. So, while some manufacturing activity is likely moving into inventory, it is to replenish, not merely build, stocks.

Customer inventories took a dive in 2009 and have since tracked below the 50-percent mark, indicating growth, according to Institute of Supply Management (ISM) figures. Inventories bottomed out in early 2010, then exhibited a slight spike, though still hovering below the "overstock" level. They quickly returned to their low level, then started a slow, steady climb as caution dictated conservative replenishment strategies.

As inventories bumped along at a slowly increasing level into late 2010, back-orders dropped below the 50-percent "growth" mark, reflecting corporate strategies to keep inventories lean, but meet demand until year's end.

Back-orders then popped up over the growth line, and stand at 59 percent in ISM's recent report, indicating that at least in some industries, orders are outstripping inventory replenishment.

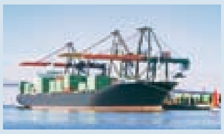
Another good piece of news drawn from the recent ISM figures is that exports have continued to rise, and at a faster pace. That trend, says ISM, is 20 months old. Meanwhile, imports are still growing, but have leveled for at least the last two reporting periods. So, more U.S. production is serving overseas customers along with the rise in domestic demand.

Looking at the broader economy, Ben Bernanke, chairman of the Federal Reserve, noted, "Following the stabilization of economic activity in mid-2009, the U.S. economy is now in its seventh quarter of growth." Testifying before the U.S. Congress, he said, "Last quarter, for the first time in this expansion, our nation's real gross domestic product matched its pre-crisis peak."

One problem that remains the focus of attention, and could limit consumer confidence, is the continued high unemployment rate. The improving economy appears to be producing everything but jobs.

Another wild card is the instability in the Middle East. The Egyptian protests have quieted as the regime change protesters sought plays out. But in neighboring Libya, the situation remains volatile – so volatile that Hugo Chavez has offered to broker a settlement. Some may view that offer as adding fuel to the flames, but Chavez, who received a human rights award in 2004 from a group founded by and named for Libya's Muammar al-Gaddafi, may have one thing Western governments do not: access. And, as many economists and political analysts observe, one factor that could put the fragile U.S. recovery in jeopardy is volatile oil prices.

As long as the struggle in Libya and other oil-rich Middle Eastern countries continues, the risk remains for higher oil prices to consume some of the fragile confidence that has been building slowly with each incremental quarterly gain. ■




READER PROFILE

by Merrill Douglas

Brian Hatfield's Supply Chain Stylings

Looking to add some fresh style to your life? Brian Hatfield's your man. As vice president of supply chain at KPSS Inc. in suburban Baltimore, Hatfield oversees the network that brings the company's hair color and hair care products to salons across North America.

A subsidiary of Tokyo-based Kao Corp., KPSS is a small firm with a broad reach, selling to distributors and salons in about 60 countries. On the distribution side, it's a high-volume, piece-picking operation. "We ship 4,000 to 6,000 orders globally per day, and our distributors handle about the same volume," Hatfield says.

Sold under the Goldwell brand, about 80 percent of the company's product is hair color, with shampoos, conditioners, and styling products making up the rest. KPSS and its distributors sell to salons, where stylists use Goldwell products in-house and sell them to customers. In North America, KPSS manufactures in the Baltimore area, supplying distributors through its larger distribution centers (DCs) and using smaller regional warehouses to ship direct to salons.

Hatfield is responsible for demand and production planning; warehousing and distribution, including kitting; transportation; and procuring printed matter, accessories, and other U.S.-made promotional goods.

When he arrived at KPSS in 2006, Hatfield was charged with improving service to customers, gaining better control over inventory levels, and reducing costs. He spent the first six months

THE HIGHLIGHTS

NAME: **Brian Hatfield**

TITLE: Vice president of supply chain

COMPANY: KPSS Inc., Linthicum, Md., since 2006

PREVIOUS EXPERIENCE: Production supervisor, The Dial Corp.; logistics manager, Sealright/Hutemaki; general manager, Lake River Corp.; regional logistics manager, director of supply chain, Alcoa Corp.

EDUCATION: BS, finance and production management, Illinois State University, 1985; MBA, Keller Graduate School of Management, DeVry University, 1993; certificate, logistics network management, DePaul University, 1996

The Big Questions

What do you do when you're not at work?
I hang out with my family, and I'm involved in my three children's sports activities. I cook, play tennis and golf, and work out.

Ideal dinner companion?
John F. Kennedy, Ronald Reagan, and Barack Obama. I'd like to gather them all at one table and interview them about their political, economic, and social views.

What's in your laptop bag?
Inbound Logistics and other trade magazines. I also keep my performance reviews with me, so I can refer to my objectives for the year.

If you didn't work in supply chain management, what would be your dream job?
Small business owner of a restaurant or construction company.

increasing fill rates on orders. "We had to build an organization, hire new team members, restructure, and ensure that employees with the right skill levels were in the right positions," he says.

Next, Hatfield tackled inventory. He gave the forecasting team new tools and adjusted batch sizes with fillers, the third-party companies contracted to package KPSS's product. He also coordinated with the product development, marketing, and sales departments to better match production with promotions and customer demand.

Finally, Hatfield and his team renegotiated contracts with fillers, carriers, and third-party warehouses to gain better terms. One successful initiative, a "pain-gain" program, gave warehouse operators an incentive to reduce costs.

"As long as they hit the standard key performance indicators–shipping accuracy, on-time, and inventory accuracy, for example–and they reduced costs, they would share in that cost reduction," Hatfield says. Each year, KPSS adjusts the cost baseline, so the service provider has a new goal to meet.

Hatfield and his team also introduced pick-to-voice technology. After installing systems in the company's California and Toronto DCs, the U.S. team helped with an implementation in the United Kingdom. In the future, it will send employees to assist in other countries.

"We're applying what we've learned to create a template and an approach, and implementing it in different regional warehouses," Hatfield says.

Other changes on the horizon include Kao Corp.'s initiative to consolidate operations among subsidiaries to gain synergies in transportation, sourcing, and other areas.

"This year, we're migrating all internal departments to the same enterprise resource planning system," Hatfield says. "That's a huge project." ■

Global Air Service That Inspires Customer Confidence

When you buy global air transportation services, what you are really buying is confidence. That's because when you send freight by air—and when your customer is anxiously waiting for that shipment to meet production schedules or avoid penalties—no one can afford uncertainty. The freight has to be there on time, period, no matter how many languages, customs requirements, and currencies are involved along the way.

This complexity, combined with the air carriers' specialization in specific lanes and the inability of carriers to work directly with shippers, makes global air a very demanding transportation service. When there is virtually no room for error, choosing the right freight forwarder—one with strong account management skills, carrier relationships, and space agreements—can greatly boost the success of your global air program.

But how can you be sure that your global air service provider is up to the challenge?

The good news is, there are questions you can ask to narrow the field to only the most qualified global air service companies. Ask:

1. How does the provider know they can provide consistent execution? Providing consistent service depends on the strength of the freight forwarder's relationships with carriers in multiple modes and their capabilities in specific countries. Look for providers that have already secured block space agreements (BSA) or committed purchase agreements (CPA). Also, the greater the provider's connection to each leg of the transit—picking up at origin, transporting the shipment airport to airport, handling customs, and making the delivery—the greater degree of success you will have. Other indicators of consistent execution include years of experience handling challenging shipments and the ability to track shipments in transit, resolve problems quickly and efficiently, and confirm final delivery.

2. What options are available? The urgency of shipping by air and delivering on time requires fast, smart decisions, because once the shipment is in motion, it's difficult to change direction. It's crucial to know whether your supply chain really needs next flight out, second day, third day, or other air service, and to understand the cost differentials associated with those services. Making sure the shipment is on the right carrier and mode from the beginning provides the best chance of success. Identify providers that not only provide multiple shipping and pricing options, but also help you determine the best plan of action for each shipment. Asking about options will reveal the strength of the provider's network of resources and how readily they can provide good alternatives that won't compromise service.

3. How will the provider communicate with you and your customer? Communication problems can cause service disruptions as freight is crossing borders. Your provider should have EDI connectivity with carriers for transit information. They should offer global visibility and user-friendly technology. And they should be able to explain how their systems and technology make it easier for all parties to communicate about all the details of your shipments so that everyone understands the progress of the freight.

4. Does the provider offer account management? If you have problems with a shipment, the last thing you want is to be shunted to a customer service representative without the skills or training to help you. Expect a good provider to tell you how they recommend problem-solving alternatives that can keep the freight moving and meet the delivery deadlines. Listen for evidence that they also offer other services to support problem resolution, such as rescue shipments, claims management, tracking and tracing, and post-delivery follow-up.

5. Where is the provider located, and who runs their global air shipment operations? At times, agents or subcontractors can satisfactorily handle the various legs of the air shipping process. But when planes are grounded by security issues, or shipments are delayed and must be moved from plane to ground to keep the freight moving, there's no substitute for having someone you know physically present who can put their hands on the freight and handle any necessary paperwork. Choose a provider that has offices and employees on the ground at major ports and airports around the world to mitigate any potential issues on your behalf.

6. In addition to global air service, what customs services does the provider offer? If you can obtain both the air services and customs clearance for your shipments through the same provider, you'll have fewer people to keep track of and more cost-effective, streamlined shipments.

It pays to do the due diligence on your global air service provider because ultimately, no matter where your freight is headed, it is you, not the provider, who must answer to the customer for a late delivery. That's why your choice of a provider is so crucial to your business if you ship around the world. By choosing the right provider, both you and your customer can trust that time-sensitive inventory will arrive on schedule, as promised.

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NOTED

THE SUPPLY CHAIN IN BRIEF

SEALED DEALS

Executives from Manchester United and DHL exchange gifts to seal their partnership.

▲ **DHL** is now the official logistics partner of **Manchester United**, one of the most popular "football" clubs in the world. Under the three-year agreement, the global expediter will undertake a range of logistics services on behalf of the Red Devils' franchise.

Starbucks signed a supply chain agreement with **Courtesy Products' CV1** one-cup brewers to provide ground coffee for use in upscale U.S. hotel rooms. Starbucks has also negotiated with Green Mountain Coffee Roasters to sell its coffee for the Keurig brewer.

RR Donnelley & Sons Company has been awarded a new multi-year agreement by clothing and outdoor equipment provider **L.L. Bean**. Under the agreement, RR Donnelley will produce L.L. Bean's full-line and specialty catalogs, including its outdoors/sporting and home titles, as well as package inserts that ship with ordered products. The solutions provider will also handle list processing and co-binding, and draw on its logistics resources to deliver co-mail services.

recognition

John Martin, CEO of Martin Brothers Distributing Co. Inc., Cedar Falls, Iowa, received the **IFDA Cornerstone Award** to acknowledge his exceptional leadership and contributions to foodservice. The award recognizes Martin's work through the International Foodservice Distributors Association (IFDA), including serving as a member of the IFDA board of directors for the past 11 years.

Union Pacific Railroad (UP) received Toyota Canada's **Logistics Partner Award** for its on-time performance and customer service efforts. UP and Toyota's business relationship spans more than 20 years. Since 2009, the railroad has safely handled more than 1,000 carloads of the automaker's Canadian-bound motor vehicles.

Internet solutions provider Cisco named **Ryder System Inc.** its **2010 Supplier of the Year** in the innovation and distribution/warehousing categories of its vendor recognition program. Ryder operates a global distribution center for Cisco in Roanoke, Texas.

GREEN SEEDS

KSS Architects recently completed a new $15-million, 200,000-square-foot distribution center and warehouse for **Somerset Tire Service** in Bridgewater, N.J. By retasking an environmentally contaminated site for productive use, the project exemplifies a successful model for sustainable industrial development.

UP THE CHAIN

Pirelli Tire North America promoted **John Godfrey**, formerly director of logistics, to director of logistics and purchasing, with responsibility for purchasing in North America. Before joining Pirelli in 2002, Godfrey began his career as a field geologist and environmental engineer, spending three years in Italy working for the country's largest energy supplier.

The Volkswagen Group named **John Chacko** managing director, Volkswagen India. Chacko began his career with the company as an engineer in logistics planning. As technical project leader for Volkswagen's Project India, he played a key role in setting up a production base in the country. His new responsibility is growing Volkswagen's manufacturing presence in India.

Coca-Cola tapped **Guy Wollaert** to be the company's newest senior vice president. Wollaert previously worked as general manager of Coca-Cola's Global Juice Center, where he managed the supply chain, business development, finance, and marketing. As chief technical officer, he is responsible for leading the company's research and development, global quality, and product integrity offices.


Supply Chain Challenges?
Customs Brokerage
Outsourced Logistics
Technology Enabled Solutions
Global Transportation Service
Local Support
Specialized Services
Supply Chain Management
SEKO®
Air Freight
Vendor Compliance Capabilities
Time Definite Solutions
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TRENDS

SHAPING THE FUTURE OF LOGISTICS

Texas Holds 'em, Amazon Folds

by Joseph O'Reilly

In 2005, Amazon.com announced plans to build a new distribution center in Irving, Texas, near the Dallas/Fort Worth International Airport. The city council cleared the way for the facility by approving an economic development incentive package that provided tax rebates to the company for six years, with options to extend the agreement another decade.

The arrangement wasn't harmonious for long. In fact, Texas Comptroller Susan Combs and her office have been after the e-commerce company since 2008 to pay uncollected taxes on transactions in the state. The problem is that neither party can agree on what constitutes a physical distribution presence–and, therefore, whether Amazon is liable for payments past due, plus penalties and interest, from 2005 through 2009.

Amazon has run into problems with states and sales tax before. The company does all of its business through the U.S. Postal Service, with physical properties in Kansas, Kentucky, North Dakota, and Washington, according to Aaron Kelly, an attorney with Scottsdale, Ariz.-based The Kelly Law Firm. Amazon only pays sales taxes in these locations–as well as in New York, which passed a law in 2008 holding out-of-state sellers compliant.

The company believes it is compliant with state laws, and that its DCs, operating under a separate subsidiary, should not be required to pay sales taxes. Texas estimates that it loses $600 million each year from untaxed online sales–a figure that far eclipses what Amazon owes.

In September 2010, Texas asserted its position and asked Amazon to remit $269 million. Four months later, the e-tailer sued the state's comptroller to release audit information regarding the payment. On Feb. 10, 2011, Amazon announced it was closing its Irving facility.

Responding to a request for comment, Mary Osako, a spokesperson for Amazon, shared an internal email that was communicated to employees:

"Because of the unfavorable regulatory climate created by the Texas Comptroller's office, we are making the difficult decision to close our Dallas/Ft. Worth fulfillment center on April 12, 2011. Despite much hard work and the support of other Texas officials, we've been unable to come to a resolution with the Texas Comptroller's office," wrote Dave Clark, vice president, North American operations. "Closing this fulfillment center is clearly not our preferred outcome. We were previously planning to build additional facilities and expand in Texas, bringing more than 1,000 new jobs and tens of millions of investment dollars to the state, and we regret the need to reverse course."

BUSINESS MAGNET OR MALAISE?

Amazon isn't the only party that regrets the recent turn of events. The state of Texas is losing one of its biggest economic development endorsements.

"We'll work with lawmakers to make sure we can avoid this outcome in the future," says Katherine Cesinger, press secretary for Texas Governor Rick Perry's office. "The Governor hoped to see a different outcome. He's not sure he would have made the same decision if he were in that position.

"That said, this is the purview of the Comptroller. If there is any uncertainty regarding the law in Texas, Governor Perry is committed to seeing that it changes to ensure we can strengthen the reliability of our tax system for employers who not only bring jobs to our state, but also help create wealth in our state," she adds.

Cesinger's comments are rife with political nuance, but the reaction from the Governor's cabinet was visceral. There were hints, but Amazon's swift decision came as a surprise.

Over the past few years, Governor Perry's office has encouraged Amazon to expand its business in Texas. The state was aware of the company's ongoing conversations with the Comptroller's office. But clearly, no one was ever on the same page. And now, as consumer and business reactions saturate the media, opinions are scattering.

Small businesses are lambasting Amazon for not playing by the same rules that others have to abide by. For some, it's a sad indictment of brick-and-mortar retailing, where customer service and brand affinity have been eclipsed by online buying selectivity and economy. Smaller companies now feel increasing pressure to shift online, and make their presence and profit via e-commerce channels.

Some blogosphere commentators have argued that where or how a sale is processed is irrelevant. Instead, the buyer's state should serve as the taxing entity. Amazon is killing jobs, they say, because it doesn't want to fulfill an obligation. States such as Texas would likely agree. But it's easy to think and say one thing, then shop online and pay nothing–in terms of sales tax.

The current impasse raises other questions. If the state neglects going after businesses for unpaid revenue during an economic downturn–when education and other social services are being cut–wouldn't the public also raise the alarm? And if Amazon files a lawsuit and feels confident in its case, why suddenly pack up and move? The company's modus operandi is becoming increasingly familiar, and it has no qualms about absorbing the direct loss of closing a distribution center and the higher cost of in-state fulfillment from out of state.

LINE IN THE DUST

Contrarians see Amazon's posturing as a natural order of selection. The simple fact is that Texas consumers don't walk into an Irving fulfillment center and place orders. There is a definitive line drawn in the dust between where products are purchased and where SKUs are accumulated and distributed.

Amazon's business model is predicated on serving smaller businesses that leverage the company's marketing and distribution clout to amplify their own sales operations. What began as an online book brokerage is now a multi-billion-dollar global consumer goods fulfillment conglomerate that empowers everything it touches–apart from Texas.

The bigger argument against the state is that competition for economic development investment will always favor business and consumers. If Texas isn't willing to let sales taxes slide, another state will use abatements as a lure.

State governments are flummoxed by in-state business and sales that don't deliver revenue

or compete with homegrown companies that directly cater to consumers and pay sales tax. That's certainly the case with Amazon and Texas.

"In addition to there not being any retail sales tax collected to benefit either the City of Irving or State of Texas, there is also very little ad valorem property tax on business personal property to the city," says Jeff Mues, director of marketing and communications, Greater Irving-Las Colinas Chamber of Commerce. "The bulk of Amazon's inventory qualifies for 'freeport' exemption. Most of all, in-state fulfillment centers in Texas qualify for the same benefit and pay very little business personal property tax on their inventory to their respective cities."

AMAZON'S QUILL TO STAND ON

The crux of the problem lies in defining physical presence, and whether a DC or fulfillment center falls within these parameters. States such as Texas contend that any center where goods are stockpiled is a principal part of the order-processing cycle–regardless of where sales and orders are consummated.

Current legalese adds to the ambiguity. If a distribution center creates nexus–casual connection–it should be considered "physical presence."

The Texas Comptroller's office argues that federal law allows states to impose sales tax obligations on out-of-state retailers maintaining a "physical presence" in their state–defined as anything from a store, warehouse, or distribution center to a sales agent or delivery truck.

> The crux of the **Amazon vs. Texas debate** lies in defining **'physical presence'** and whether a DC or fulfillment center falls **within these parameters**.

In the debate building around Amazon and Texas, legal observers cite the 1992 U.S. Supreme Court ruling *Quill Corp. v. North Dakota*. The state charged that Quill, an out-of-state mail-order office equipment retailer, should pay a use tax on merchandise used within the state–even though the company had no physical presence in North Dakota.

Quill's only contact with the state came through mailing promotional catalogs to recipients in North Dakota, shipping orders via common carriers, and owning a few floppy disks in the state. The Supreme Court ruled eight to one in the company's favor.

Kelly agrees that *Quill Corp. v. North Dakota* is the closest and most authoritative case comparable to Amazon's predicament. But he believes we could be looking at a new legal ruling.

"That case only sets the test for when a state may tax a business–the courts will have to decide whether a business such as Amazon meets the test for taxation," he says. "It's likely that at some point an Amazon case, against Texas or another state, will be appealed by one of the parties all the way to the Supreme Court and set a precedent countrywide."

All along, Amazon has contended that its Irving operation is a fulfillment facility, not a distribution warehouse–suggesting that inventory is moving, not static, and therefore part of the order cycle. It remains to be seen whether this position is defensible.

CLEARING THE DUST

The Texas and Amazon quarrel raises important issues that will likely linger. For the time being, the immediate question is whether there's a common ground where states and e-commerce businesses can come to an agreement.

"The best thing that a state can do is to understand that more taxation on any business, whether it be in-state or out-of-state, is detrimental to its economy," says Kelly. "Even if Texas wins its fight against Amazon and determines that it is permissible to tax Amazon whenever it has a physical presence in Texas, what does that accomplish? All it does is ensure that the price of goods for Texans rises.


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Warehouses and fulfillment centers are on the front lines in the tax battle between Amazon and Texas.

"If Amazon simply stops doing business with Texans altogether due to the increased cost, then it won't be an issue of higher prices through Amazon, but of completely removing the most competitive, price-lowering business in the world from the Texas market," he adds.

Ideally, there shouldn't even be a court case, Kelly says. The legislature should simply decide on its own that taxing out-of-state businesses doesn't make sense.

But common business sense and government legislating don't have a good record. Michigan enterprises know this well. In 2007, businesses went to bat against the state over a bill that charged an additional six percent on warehousing and logistics activities. The legislation was eventually repealed thanks to private sector input and outrage.

As the Michigan and Texas examples suggest, a major communication gap often separates the public and private sectors, especially in terms of planning. Then when trouble begins to stir, the parties are incapable of negotiating resolutions until after the fact.

With regards to the Amazon situation, many insiders remain incredulous that sales tax wrinkles weren't ironed out from the beginning and that the Governor's office and the state Comptroller weren't communicating.

In the court of public opinion, Texas will bear the blame for Amazon's decision. The company says it is defending online retailers from the onslaught of states desperate for new revenue streams. But when faced with legal action, it simply moves elsewhere. Whether other states will take a hard position, follow New York's example and rewrite the books to account for e-commerce, or use sales tax exemptions as a business development incentive, remains to be seen. Online resellers, emboldened by Amazon's gambit, may force the issue.

As the dust settles, it's unlikely we've heard the last on this Texas showdown.

Red, White, Blue... and Green

The U.S. General Services Administration (GSA) launched the GreenGov Supply Chain Partnership and Small Business Pilot, a voluntary collaboration between the federal government and its suppliers to create a greener, more efficient supply chain.

The initiative aims to promote clean energy and cut waste and pollution by using greenhouse gas emissions as a measurement. Federal suppliers in the partnership agree to voluntarily measure and report their organization's greenhouse gas emissions. Participating companies will share their experiences to help GSA develop a phased, incentive-based approach to developing contracting advantages for companies that track and disclose their greenhouse gas emissions.

The Small Business Pilot program will explore the benefits and challenges of measuring greenhouse gas emissions among smaller companies.

"The federal government is the largest energy consumer in the U.S. economy and purchases more than $500 billion in goods and services annually," says White House Council on Environmental Quality Chair Nancy Sutley. "It is our responsibility to lead by example to improve efficiency, eliminate waste, and promote clean energy in our supply chain."

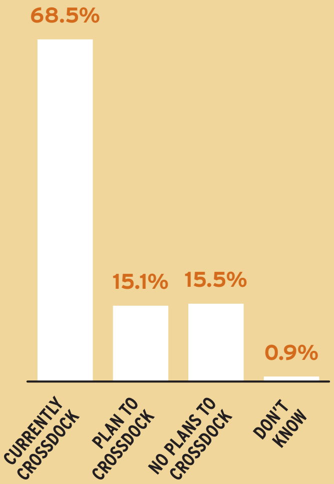
On the Dock

Crossdocking is on the rise, according to Saddle Creek Corporation's *2011 Crossdocking Trends Report*. More companies are finding value in using the warehouse tactic to remove costs from the system, manage inventory levels, increase efficiencies, and accommodate unpredictable customer demand, according to the 3PL's research.

During the past three years, crossdocking has increased significantly. More than two-thirds of survey respondents (68.5 percent) currently crossdock–up from 52 percent in 2008 (*see chart below, left*).

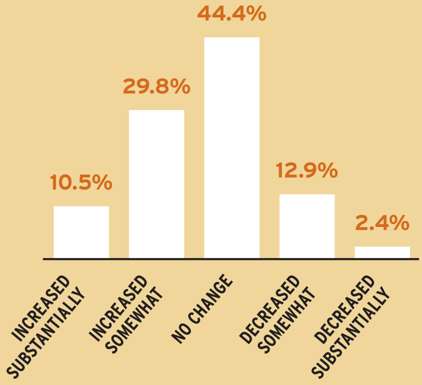
Companies identify crossdocking as a viable strategy for adapting to challenging market conditions. Of those who have been employing the tactic for four or more years, 40 percent report that challenging economic circumstances have prompted them to increase crossdocking either somewhat or substantially (*see chart below, right*).

Percentage of Companies Using Crossdocking



Impact of Economic Conditions on Crossdock Operations

Source: Saddle Creek 2011 *Crossdocking Trends Report*



The biggest benefits of crossdocking are improving service levels (38 percent), reducing transportation costs (32 percent) and consolidating shipments to destination (32 percent), according to the report. And more companies are recognizing the value of outsourcing this distribution function. A significantly larger percentage of crossdock practitioners (40 percent) use a 3PL either exclusively or in addition to in-house resources than in 2008, when just 32 percent of respondents who crossdocked reported using a third party.

Saddle Creek's report is based on survey responses from more than 200 logistics decision-makers. Respondents represent a cross-section of logistics, with backgrounds in warehousing, distribution, and transportation.

Regulating Food Safety

Much has changed in the food supply chain since the government passed the Federal Food, Drug, and Cosmetic Act of 1938 – its last major food safety legislation. The Food and Drug Administration's (FDA) Food Safety Modernization Act (FSMA), which was passed in January 2011, was a long time coming.

During recent years, a rash of e. coli, salmonella, salmonellosis, botulism, and listeria contaminations have indicted familiar brands ranging from Taco Bell to Nestle Toll House. Isolating and controlling viral outbreaks, identifying rogue sources, and recalling tainted products are major challenges for the food supply chain and the FDA. Building a regulatory architecture that creates and communicates standards, then enforces compliance across the industry–measures aimed at immunizing the food supply chain from costly epidemics–is equally important.

To gain perspective on how the new legislation will impact the food industry, *Inbound Logistics* caught up with Robert L. Guenther, senior vice president, public policy for United Fresh Produce Association, a leading trade association committed to driving the growth and success of produce companies.

IL: What aspects of the food safety legislation needed to be modernized?

Guenther: The FSMA was largely written to instruct the FDA on how to do a better job. The law needed to be updated to reflect modern food handling and growing practices. In particular, the fact that this law takes a more preventive-control standard to make food safer, versus having the FDA react to outbreaks, is an important improvement.

IL: One media account of the bill reports that some change is better than none. Do you agree?

Guenther: Yes. Consumer confidence about food safety was waning over the past several years, and something had to be done to address the situation. Of course, the devil is in the details. How the FDA implements and enforces this law will be the test of whether our policy makers made the right decision to reform food safety laws.

IL: How does the law affect shippers?

Guenther: Four major points concern shippers. First, the FSMA grants the FDA immediate, mandatory recall authority if a company refuses to voluntarily recall a product that may be adulterated, and consumption of the food will cause illness or death. But companies must get the opportunity to voluntarily recall first.

Also, effective immediately, during an active investigation of a foodborne illness outbreak, the FDA is authorized to direct that a farm identify immediate recipients of the food that is the subject of the investigation.

Second, federal regulations for the safe production of raw fruits and vegetables will be proposed within the next 12 months. The FSMA is relatively silent on the details of the regulations, but does require the produce standards to address growing, harvesting, sorting, packing, and storage operations, through the development of science-based minimum standards related to growing and packaging conditions.

Third, foreign growers will be held to the same federal food safety standards as domestic growers, and importers will be held responsible for providing proof.

And fourth, in addition to publishing regulations for fresh produce food safety, the FSMA requires FDA to issue a notice of proposed rulemaking, within two years, to establish additional recordkeeping requirements for product tracing of foods the FDA defines as 'high-risk.'

IL: Is there a misperception that smaller producers lack the supply chain sophistication and quality control mechanisms used by larger corporations – and therefore 'need' increased regulation and inspection?

Guenther: The misconception is that small producers cannot afford food safety. But basic food safety practices

> The fact that this law takes a more preventive-control standard **to make food safer,** versus having the FDA react to outbreaks, is an important improvement.
>
> **– Robert Guenther,** *United Fresh Produce Association*

should be a fundamental business decision for anyone selling to consumers.

IL: Smaller producers fear increased regulation will hurt their businesses; large corporations fear a lack of visibility and control among smaller growers will expose their liability when food recalls occur. Is there common ground?

Guenther: Yes. United Fresh has supported exemptions, provided there are science- and risk-based factors. We do not want the FDA issuing rules that apply the same for apricot producers as they would to leafy greens farmers. That makes no sense and is a waste of government resources. The federal government needs to focus on commodities that are more susceptible to micro-contamination and develop standards that help alleviate risk of outbreaks.

IL: Should the FDA have full recall authority over contaminated foods?

Guenther: The FDA has plenty of enforcement tools to adequately restrict the movement of food it deems harmful to consumers. Mandatory recall, which is now in the law, is another tool. But we expect it will not be used very aggressively, as the overwhelming majority of food operations in this country work with the FDA to avert a crisis during a recall situation. ■

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

GLOBAL

THE WORLD AT A GLANCE

by Joseph O'Reilly

Egypt's Port of El-Sokhna

A New Suez Crisis?

The 2011 revolution in Egypt and eventual overthrow of President Hosni Mubarek's regime reminded global shippers how quickly political undercurrents can gnarl supply chains. Rumors persist about a closure at the Suez Canal, extended delays at nearby ports, and a shortage of ocean capacity between Asia and Europe as a consequence.

Agility Logistics, which has a strong presence in the region, has been following the situation intently. At the height of civil unrest in early February 2011, and before Mubarek's abdication, Agility reported that the Suez Canal was open and operating at full capacity, while Port Said and Alexandria were both closed and Damietta was operating at lower productivity–largely due to martial law.

Containerships currently account for 55 percent of net tonnage and 38 percent of the total number of vessels transiting the Suez Canal, according to a report by Alphaliner, a global ocean-shipping consultant. The high tonnage share of the containership transit is due to the larger-size container vessels that pass through the Canal compared to other vessel types.

Even with a sense of temporary stability as the Egyptian people, government, and military work out details of the country's future, shippers and ocean liners should consider alternative routings–for example, ships circumnavigating the Cape of Good Hope at a cost of seven additional days of transit time, according to Alphaliner.

China's Panama Canal

The Panama Canal expansion referendum and current construction has attracted a lot of attention from U.S. ports, logistics companies, and shippers that have stakes in adding capacity and aligning distribution networks to a bigger trade flow between the Pacific and Atlantic oceans. China has an interest, too.

The country has been slowly entering the Latin American market–Brazil and Venezuela, notably–to source raw materials and create supply lines for its domestic construction boom. Now China is considering a new transportation connection that could compete with the Panama Canal.

Beijing officials have engaged in talks with Colombian President Juan Manuel Santos to discuss the feasibility of building a rail link from Cartagena in the Caribbean to the country's Pacific coast 280 miles away.

The railway would facilitate the export of raw materials such as coal, as well as open the way for Chinese imports. Early reports suggest that

(continues on page 34)

(continued from page 33)

China is serious about the initiative, and that investment would be justified by the ease of moving freight in and out of Colombia and Latin America.

China is no stranger to executing big infrastructure projects. The Three Gorges hydroelectric dam, completed in 2006, was finished on time and under budget–without the bureaucracy and red tape that had many international observers questioning the social, cultural, and environmental implications of such an undertaking. China had control over that. Colombia will likely demand few concessions from a country that is willing to invest significant capital in transportation infrastructure that benefits both.

Whether or not a dry canal comes to pass, Colombia is using this project as leverage to press the United States into ratifying a free trade agreement that has been swimming in uncertainty for years. Colombia has its own human rights, safety, and security issues. But this recent development–with a heavy lift from China–might push the United States to a decision.

In his 2011 State of the Union address, President Obama specifically mentioned pursuing a free trade agreement with Colombia: "Before I took office, I made it clear that we would enforce our trade agreements, and that I would only sign deals that keep faith with American workers and promote American jobs," he said. "That's what we did with Korea and that's what I intend to do as we pursue agreements with Panama and Colombia, and continue our Asia Pacific and global trade talks."

Athens Greases Intermodal Wheels

Athens International Airport (AIA) and COSCO-owned Piraeus Container Terminal recently agreed to establish a link between the Port of Piraeus and the airport, and to develop future cargo flows. The airport benefits from working agreements with both port terminal operators. A bridge between the port and the airport is already operated by direct truck-shuttle service.

AIA is one of a few European airports that have developed such specific multi-modal traffic, incorporating faster simplified Customs procedures and handling processes. The new agreement opens the door to steady flows of inbound air and sea traffic. Much of this cargo is destined for the United States, but the airport is also expanding traffic flows into Balkan countries where airports are often too small to accept cargo flights.

Athens International Airport is committed to improving trade and transportation flows.

Mexico Grows E-commerce

Internet sales in Latin America have grown at a compounded rate of 30 to 40 percent for the last five years, says Francisco Ceballos, country manager at MercadoLibre Mexico, a Brazilian e-commerce and auction Web site. With more affordable Web-browsing options, consumers are becoming more sophisticated online shoppers–and this progression is shaping a new retail experience, especially in Mexico.

Mexico's e-commerce market, valued at about $2.7 billion, is up 30 percent since 2009 and currently comprises about 1.5 percent of the country's overall retail sales. But with fast-growing Internet access, improved payment methods, and better logistics services, this number will approach 10 percent within the next few years–on par with the United States and Europe, Ceballos says. To ensure growth, retailers in the region must focus on improving the online shopping experience.

U.S. and Netherlands Go Dutch

Cultural and economic ties between the United States and the Netherlands date back to the early 1600s and the foundation of New Amsterdam (New York)–and they continue to pay dividends in terms of exports, imports, and job creation in both countries, according to a recent report by the Dutch Embassy.

The Dutch are the third-largest investors ($237.9 billion) in the United States; and the Netherlands is the number-one destination for U.S. investments worldwide ($471.5 billion).

Investment from and trade with the Netherlands supports more than 700,000 American jobs today. What is most striking? The top three states benefiting are Texas, California, and Massachusetts. Where is New York?

While New York ranks fifth for jobs supported by Dutch industry and exports to the Netherlands, New York City ranks first among the top 20 cities that trade with the Netherlands.

UAE Heeds Call For Free Duties

The United Arab Emirates (UAE) will soon start accepting and issuing ATA Carnets, making the federation the 69th country to join the worldwide system for duty-free, tax-free temporary imports, according to the United States Council for International Business.

ATA Carnets are merchandise passports that permit tariff-exempt exports. In 2009, more than 150,000 Carnets were issued, covering product worth more than $17 billion.

The UAE will begin accepting goods for trade shows and fairs–an important first step in linking UAE businesses to a wider global marketplace. With 200 trade shows annually in Dubai, the country's acceptance of Carnets will likely be a boon for U.S. companies from all industries. [ ]

Mongolia On the Move

With China's explosive growth and ongoing discussions about building overland infrastructure between Asia and Europe to support trade demand, Mongolia falls squarely in the middle. Move One Logistics, a Dubai-based 3PL, recently expanded services in Mongolia by opening a warehouse in Ulaanbaatar. The warehouse has the capacity to provide 24/7 access to road freight, with additional services including storage, packaging, crating, shrink-wrapping, labeling, proof counting of purchase orders, and materials handling.

Mining company SouthGobi taps Mongolia's natural resources.

China's success is having a similar impact on Mongolia's own economic prospects. The country is rich with natural resources, home to some of the world's largest untapped copper, gold, coal, and uranium reserves. Mongolia has already attracted investment from foreign mining companies such as Australian giant Rio Tinto and Canadian-based SouthGobi Resources.

John Haber is executive vice president
of transportation, NPI.
404-591-7611 • *jhaber@npifinancial.com*

VIEWPOINT

by John Haber

Five Market Concerns Driving Shipper Cost Increases

It has never been more expensive or frustrating to be a shipper. Rates are up, capacity is down, and, while Wall Street analysts are bullish on the transportation sector, many businesses are still struggling. It's a disparity that contributes to billions of dollars of shipper overspending each year.

The following market concerns will have the biggest impact on shippers' spending in the coming months:

1. Collusion. Accusations of pricing collusion are nothing new to ocean freight and small parcel carriers. But, for the first time, UPS and FedEx are facing serious legal action. These accusations are part of a larger lawsuit against the carriers' decision to prevent customers from using third-party negotiation services. If UPS and FedEx win this lawsuit, many companies will have no recourse when carriers unjustifiably raise rates in lockstep with one another.

2. Capacity. Capacity is down and continues to drop. There is a dangerous lack of transparency around this issue, however. Carriers continue to under-utilize their infrastructure to manipulate supply/demand ratios–and, thus, pricing. Carriers will quietly increase capacity to handle higher volumes for the Chinese New Year, for example, then cut capacity to ensure maximum profit levels.

3. Staffing. The shipping industry now faces a serious staffing shortage, to be made worse by the implementation of the federal government's Comprehensive Safety Analysis (CSA) program. Under this program, as much as eight percent of the current workforce may be unemployable due to safety records, increasing cost pressures on carriers.

4. Terrorism. Last year, Yemen Al-Qaeda operatives attempted to ship bombs to two Chicago synagogues, exposing the vulnerabilities within cargo inspection. As a result, many authorities are tightening inspection and manifest requirements. For example, a new Advanced Manifest rule for European Union (EU) customs requires an Entry Summary Declaration to be submitted at least 24 hours before cargo arrives in the EU. To cover the costs of enforcing this rule, many carriers are implementing Cargo Data Declaration Fees per bill of lading for all cargo bound for the EU.

5. Price per barrel. As the price of oil rises, carriers will pass the increase on to shippers. Air surcharges stand to double within months and some truckload and less-than-truckload carriers may go out of business, driving more price competition out of the market.

These factors all combine to create higher costs for shippers. Among small parcel carriers, several rate increases are of serious concern. Delivery area surcharges, for example, are up six to 10 percent over last year, while ground address corrections increased 10 percent.

Ocean carrier rates are up 30 to 40 percent over 2010. To top it off, the way that ocean contracts are negotiated has changed tremendously. In the past, ocean rates were negotiated in April and the rates were applicable throughout the entire year (excluding peak season).

Today, pricing is done almost on a spot quote basis, introducing a threatening variable into transportation spending. To conserve fuel, many carriers will continue to slow speeds, which will cause longer arrival times, less capacity in and out of U.S. ports, and higher shipper costs as expediting increases.

Rate increases across shipping modes have turned the complacent hum of shipper protest into a roar. The positive news is that there seems to be real opportunity for change in the way carriers price and contract with shippers. Understanding the rate increases that most impact their spending–and whether or not they are appropriately justified–may help shippers sing a different tune in 2012. ■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Jim Bengier is global retail executive, Sterling Commerce.
617-908-9720 • *jim_bengier@stercomm.com*

ITMATTERS

by Jim Bengier

Retail Recovery Depends on an Integrated Supply Chain Strategy

Although retail sales have shown some increase in early 2011, many economists caution that spending will remain modest as long as wages stay flat and job creation weak. Even as consumers begin to loosen their purse strings, it is essential for retailers to remain cautious and operate at the most efficient levels possible to ensure a speedy economic recovery.

The success of online retailers over the past few years has encouraged catalog retailers and department stores to focus their energy on e-commerce, providing a broad range of products online. Not only do these retailers have to focus on providing customer service and garnering shopper loyalty, but they must also handle the challenges of cross-channel retailing and multi-brand management.

The downfall of multi-brand selling, as well as multi-channel selling, is that retailers may be inclined to run their operations as though they are managing several independent businesses, with separate warehouses and, most importantly, separate logistics and fulfillment processes. This is by no means an ideal retail strategy.

To successfully manage multi-brand and multi-channel selling, retailers need to optimize customer order fulfillment across all brands and channels. This is only possible if they break down silos and have inventory visibility and third-party supplier management.

BEDEVILING DETAILS

The devil is in the details, and the details required are independent inventory allocation and fulfillment per customer order line item. To do this, retailers need full visibility of their warehouse management systems to determine just how much stock they have left to shift.

They also need a reliable tracking system for their products all the way through to proof of delivery of their supplier's "drop ship" supply chain–the primary method of offering an expanded product assortment online.

In addition, retailers need to ensure that they are not sending out a delivery fleet for multiple orders from one consumer across their different brands. They cannot achieve this knowledge unless they have clear cross-channel order visibility.

Without inventory visibility and management across all brands and channels, delays and cancellations may occur due to out-of-stock goods and the inability to obtain stock in a timely manner from suppliers. Profitability may also be damaged if retailers are forced to retain too much stock to compensate for inadequate inventory management.

Ultimately, these shortcomings can affect customer satisfaction, leading consumers to shop elsewhere. And with the wealth of online shopping options available, it is unlikely they will return to a retailer that failed to satisfy them.

RISING TO THE CHALLENGE

Making the first move toward a fully integrated multi-channel, multi-brand environment can be challenging. Ultimately, the decision comes down to the retailer's management style and the strategies it adopts to take advantage of greater consumer confidence and increased spending.

In most cases, however, successful retailers who have managed to achieve growth, or stay well afloat during the recession, will have deployed a single integrated cross-channel, multi-brand strategy across their business and have integrated supply chain processes to support that strategy. ■

Christopher Chung is CEO of the Missouri Partnership.
877-725-0949 • *chris@missouripartnership.com*

by Christopher Chung

Efficient Use of State Resources Keeps Transportation Flowing

States have fewer dollars to spend on transportation these days, but that does not mean that highways and roads are destined to fall into disrepair. How can transport departments ensure the smooth, safe travel of goods and people in cash-strapped times? The Show-Me State's answer: Change the way business is done.

Missouri, on track to reduce transport costs by more than $200 million in the next five years, shows that wise investment of limited resources can result in efficient transportation that does not compromise safety or customer satisfaction.

Despite a leaner budget, the Missouri Department of Transportation (MoDOT) has ramped up its commitment to transportation. Missouri holds the fourth-best ranking in the nation for rail and highway accessibility, and MoDOT recently received several awards for its efforts.

In addition, MoDOT interim director Kevin Keith earned the American Association of State Highway and Transportation Officials' 2010 President's Transportation Award for implementing "practical design," a cost-saving strategy of "building many good roads and bridges rather than just a few great ones." MoDOT saved about $500 million the first year it implemented practical design, and the strategy is now MoDOT's standard way of doing business.

SHOW-ME STATE SHOWS HOW

Missouri lies within 600 miles of more than half of all U.S. manufacturing plants. If manufacturing or distribution is part of your business, it's worth learning what the state with the seventh-largest highway system has done to ensure efficient access to markets while maintaining some of the least congested roadways in the nation.

First, the state improved its major interstates. Until recently, I-64 (U.S. Route 40) was the oldest highway in St. Louis and included a 10-mile span of deteriorated roadway, 30 bridges needing replacement, and an outdated interstate-to-interstate connection between I-64 and I-170. The reconstruction project–the largest in MoDOT history–would require closing two five-mile sections of I-64 for one year each.

Anticipating public concern over the impending closure of this heavily trafficked east-west corridor, MoDOT began public outreach campaigns to help motorists prepare for and navigate around the construction project.

It also improved many of the region's roads to accommodate extra traffic volume. For example, Interstates 70 and 44 were re-striped with an extra lane in each direction, then resurfaced and striped back to their original configurations when the project was completed.

I-64 reopened in December 2009, nearly one month early and $11 million under the $535-million budget. The project earned a 95-percent public approval rating, according to a survey taken after construction was completed.

Missouri has given considerable thought to improvements for I-70, the only freeway connecting its largest cities, Kansas City and St. Louis. The Federal Highway Administration has approved plans to rebuild and widen the interstate to a minimum of six lanes, three in each direction, between the two cities.

Second, Missouri stays mindful of minor roads. Like most states, Missouri has more highway miles than interstate miles. Among the projects that have enhanced freight movement on minor roads in Missouri:

- U.S. Highway 36 recently underwent $74 million in improvements that doubled one of the state's north central corridors from two to four lanes.

■ Old U.S. 50 in mid-Missouri benefited from a $55-million rebuild, which included reconstructing 11 miles of four-lane highway.

■ U.S. Highway 71, located between I-435 in Kansas City and I-44 near Joplin, will see a $65-million upgrade. The project involves replacing 12 at-grade crossings along the route with overpasses or interchanges. Upon completion in 2012, the route will be designated as an interstate and renamed I-49.

Third, Missouri keeps its bridges safe and sound. In August, MoDOT completed the 200th bridge in its Safe and Sound Bridge Improvement Program. The program, slated to improve 802 bridges in five years, opens a new bridge every 2.5 days and is on schedule for completion in 2013. For the two-phase program, 248 bridges were identified for rehabilitation; nearly half were completed in 2009. The remaining 554 bridges are scheduled for replacement and have been packaged in a single design-build contract.

Transportation infrastructure is more than roads and bridges. It includes aviation, rail, and waterways. With the confluence of the two largest river systems in North America, Missouri provides efficient trade and distribution channels through its 1,000 miles of navigable waterways, which move an average of $4.1 billion in cargo annually. In August 2010, the U.S. DOT selected the Missouri and Mississippi Rivers for America's Marine Highway Program. The Missouri River, from Kansas City to St. Louis, and the Mississippi, using St. Louis as a hub that can reach 29 industrial centers by barge, will carry more cargo on the water to lessen motor freight transport and reduce emissions.

The Show-Me State's measurable progress sends a green light to carriers that a Missouri route can offer many advantages and benefits. ■

2011 Global Logistics Guide

Last year's global trend ticker read like a crash course in risk management and contingency planning: volcanic eruptions, earthquakes, wild fires, unseasonable snowstorms, flooding, and landslides. Hardship and strife touched Haiti, Chile, Pakistan, China, Russia, Greece, Israel, Europe, and the United States. In 2011, New Zealand and Japan became ground zero for disaster. Ongoing political unrest, terrorism, piracy, war, and the lingering effects of a world recession created a perfect storm for U.S. supply chains to navigate.

Global volatility challenges American businesses to reconsider their global footprints; to explore strategic locations and partnerships that build flexibility into the supply chain; and to identify new manufacturing and export markets. Secondary and tertiary sourcing strategies, nearshoring, and business expansion – especially with total logistics costs and demand responsiveness in mind – bring peripheral targets into focus and cast old directions in new lights.

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

IL identifies global hotspots as excelling in three key areas:

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

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

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

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

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

METHODOLOGY:

Countries are ranked on three criteria: Transportation Infrastructure (1 to 4 points), IT Competency (1 to 3 points), and Business Culture (1 to 3 points). Points are totaled for all categories—taking into consideration X-Factor +/- points—to determine final ranking: 10 is highest, 3 is lowest.

Sources: U.S. Department of State; ***World Port Rankings***, American Association of Port Authorities (AAPA); Airports Council International; World Economic Forum's ***Growth Competitiveness Index***; World Economic Forum's ***Global Information Technology Report***; Central Intelligence Agency's ***World Fact Book***; Bureau of Economic Analysis, ***U.S. Direct Investment Abroad***; ***2011 Index of Economic Freedom***, ***The Wall Street Journal*** and The Heritage Foundation.

The Americas

U.S. businesses manufacturing close to home diversify supply chain touchpoints, create contingencies, allay risks, and target new countries to grow and sell into. In North America, Canada will always serve as a back-door distribution portal for moving freight in and out of the United States. But the door is wide open, and intermodal connections linking Prince Rupert, Vancouver, Montreal, and Halifax to the U.S. heartland are expanding.

Farther south, the "Mexico question" remains fluid. Infrastructure limitations and cross-border security concerns give U.S. interests pause, but proximity to U.S. markets, consumer growth, and maquila manufacturing legacy are difficult to overlook. Such trepidation has created greater incentive for companies to explore trade opportunities in South America. Brazil has an established port and airport network, and coastal infrastructure, but inland transportation connectivity to potential manufacturing hotspots is nebulous. Colombia, which is courting Chinese investment in a "dry canal" to rival Panama's, is using this interest to leverage a free-trade agreement with the United States. Meanwhile, Chile—South America's most technology-ready country—continues to aggressively push economic reform with new trade agreements.

Canada

SCORE **9**

T	I	B	X
3	3	3	0

GDP: $1,564
EXPORTS: $407
IMPORTS: $406
FDI 2009: $260

Port infrastructure in Prince Rupert, Vancouver, Montreal, Halifax—and the anticipated Canso super port—is funneling freight directly into the U.S. heartland via an evolving intermodal pipeline.

Mexico

SCORE **5**

T	I	B	X
2	1	2	0

GDP: $1,004
EXPORTS: $303
IMPORTS: $306
FDI 2009: $98

Proximity to the United States and maquila-manufacturing legacy will always draw interest. But the rash of drug violence and crime is holding some businesses at bay.

Chile

SCORE **5**

T	I	B	X
1	2	2	0

GDP: $199
EXPORTS: $64
IMPORTS: $54
FDI 2009: $23

While Colombia has become South America's latest darling, attracting great interest from China, Chile has been quietly liberalizing its trade ties for years. The country signed a free-trade agreement with the United States in 2004 and claims to have more bilateral and regional trade treaties than any other country.

Brazil

SCORE **5**

T	I	B	X
2	1	1	1

GDP: $2,024
EXPORTS: $200
IMPORTS: $188
FDI 2009: $57

X-FACTOR: Natural resources, cheap labor availability, and a strategic location as a nearshoring depot—especially in light of Mexico's problems—are major incentives. Inland infrastructure remains a problem, however, and public/private complacency is a concern.

FDI: U.S. Foreign Direct Investment, 2009
T: Transportation Infrastructure
I: IT Competency
B: Business Culture
X: X-Factor

All amounts in $US billions.


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Europe

As a cultural and technological peer to the United States, Europe's logistics infrastructure and resources are world-class. Transportation networks are dense. What countries lack in freight rail capacity they make up for with short-sea shipping and inland intermodal services. Congestion and cohesion remain recurring challenges for a fractured union of countries that are highly industrialized, urbanized, and nationalistic.

Ireland and Greece's financial failures, and the European Union's respective bailouts, raised concerns among some member countries about the trading bloc and its leadership, socialistic tendencies and welfare nets, currency valuations and fluctuations, and the future of free-market capitalism.

The Netherlands, Germany, and Switzerland are the continent's top targets for U.S. FDI, reflecting their stability and pro-business tax structures. France's labor unions and Italy's political corruption are red flags for foreign investment. Turkey and Eastern Europe present new opportunities for expansion by virtue of their respective locations and untapped potential. Russia remains a great unknown for U.S. businesses, and Eastern Europe's place as a competitive manufacturing location has yet to materialize.

FDI: U.S. Foreign Direct Investment, 2009
T: Transportation Infrastructure
I: IT Competency
B: Business Culture
X: X-Factor

All amounts in $US billions.

Belgium

GDP: $461
EXPORTS: $279
IMPORTS: $282
FDI 2009: $70

SCORE **8**

T	I	B	X
4	2	2	0

Transportation capabilities–via air, road, and water–are among the finest in Europe, which is necessary given the country's reliance on trade to drive the economy.

France

GDP: $2,555
EXPORTS: $509
IMPORTS: $578
FDI 2009: $86

SCORE **7**

T	I	B	X
3	3	2	-1

X-FACTOR: It has all the assets–top-50 ports in Marseille and Le Havre, an airport in Paris–and the tools and talent to place among Europe's logistics elite. But labor inflexibility and union leverage make it a very tough sell. U.S. FDI in France is pedestrian compared to its neighbors.

Switzerland

GDP: $522
EXPORTS: $235
IMPORTS: $220
FDI 2009: $148

SCORE **7**

T	I	B	X
1	3	3	0

What the country lacks in major freight hubs, it more than makes up for in location and friendly business environment. The countdown is on for the AlpTransit Gotthard project, which is expected to be complete in 2015.

Estonia

SCORE **5**

T	I	B	X
1	2	2	0

GDP:	$19
EXPORTS:	$11
IMPORTS:	$12
FDI 2009:	$0.31

The market-based EU economy is the Baltic region's shining star. It has a strong banking sector and a wealth of natural resources. It's also ideally located as a flow-through point between Russia and Europe.

Netherlands

SCORE **10**

T	I	B	X
4	3	3	0

GDP:	$770
EXPORTS:	$451
IMPORTS:	$408
FDI 2009:	$472

Never a manufacturing power like Germany, the Netherlands relies on its services industry and wealth of transportation resources and expertise. The country remains the world's number-one target for U.S. FDI.

Russia

SCORE **5**

T	I	B	X
2	1	1	1

GDP:	$1,477
EXPORTS:	$377
IMPORTS:	$237
FDI 2009:	$21

X-FACTOR: Economic prospects are still largely dependent on volatile oil exports. But signs of progress are emerging, especially as Eurasian shippers look to build an overland intermodal route linking China to Europe.

Germany

SCORE **10**

T	I	B	X
4	3	3	0

GDP:	$3,306
EXPORTS:	$1,337
IMPORTS:	$1,120
FDI 2009:	$117

Manufacturing pedigree enabled Germany to produce its way through the global economic downturn. It continues to develop solid traction in Asian export markets—especially China.

Turkey

SCORE **4**

T	I	B	X
2	1	1	0

GDP:	$729
EXPORTS:	$117
IMPORTS:	$166
FDI 2009:	$6

As a close ally to the United States, the country is looking to establish itself as a leader in the Middle East, open up new foreign export markets, and attract greater FDI. Istanbul is an emerging air cargo hub and pivot point in the Eurasian trade.

Italy

SCORE **4**

T	I	B	X
2	1	1	0

GDP:	$2,037
EXPORTS:	$458
IMPORTS:	$460
FDI 2009:	$32

Europe's fourth-largest container port is in Gioia Tauro, an emerging logistics portal for Mediterranean trade.

Middle East/ Africa

The Middle East is the nexus for Eurasian commerce and cultural assimilation between East and West, book-ended in time by the original Silk Road and today's Suez trade. Currently, the region is also at a crossroads in terms of social upheaval and revolution. The Middle East is highly volatile both politically and economically, with autocracies and industries largely driven by oil exportation. The Iraq and Afghanistan wars, and U.S. occupation and military logistics deployments, have helped to expedite infrastructure development. But what will happen if and when U.S. troops withdraw?

The United Arab Emirates is the region's transportation and logistics cog. While the global recession has had a deleterious impact on Dubai's construction boom, the country hopes the completion of a global aerotropolis—including Dubai Logistics City and Al Maktoum International Airport—will make the region a multi-modal distribution hub. To what degree and effect an "Arab Spring" in Africa will have on U.S. trade activity in the Middle East remains to be seen.

Egypt is squarely in the middle of the fray, and the Suez Canal is the predominant freight valve connecting Europe with Asia. Africa's north coast has only ever been a peripheral target for U.S. businesses. Given current political circumstances and the promise of diplomatic change, the continent could eventually become a bigger part of the global supply chain.

United Arab Emirates

GDP:	$240
EXPORTS:	$196
IMPORTS:	$159
FDI 2009:	$4

SCORE **7**

T	I	B	X
3	2	2	0

The crown jewel of the Middle East has been beset by a sinking construction industry. Still, The World Bank recently identified the country as the best-performing logistics hotspot in the Gulf.

Egypt

GDP:	$217
EXPORTS:	$25
IMPORTS:	$47
FDI 2009:	$10

SCORE **4**

T	I	B	X
3	1	1	–1

X-FACTOR: In the short term, civil unrest and an uncertain government and future will likely dampen the explosive growth that has been happening around the Suez Canal and Port Said.

FDI: U.S. Foreign Direct Investment, 2009

T: Transportation Infrastructure

I: IT Competency

B: Business Culture

X: X-Factor

All amounts in $US billions.

Southeast Asia

India's manufacturing growth has underscored regional economic development for the past decade—but that tide may be turning. Singapore, Malaysia, Thailand, and the Philippines have well-developed port and airport infrastructure, and governments in the region have been trying to diversify and create stronger domestic industries and export trades to generate more economic stability.

As China's east coast develops, cheap labor pushes inland, adding to total logistics costs. Undeveloped countries such as Vietnam and Thailand present new cheap labor locations and transportation connections for distributing freight out of Asia. Agriculture and textile industries remain the region's strength, while political instability, social welfare concerns, and overland infrastructure are latent obstacles.

China

GDP:	$5,745
EXPORTS:	$1,506
IMPORTS:	$1,307
FDI 2009:	$89

SCORE 7

T	I	B	X
3	2	1	1

X-FACTOR: The government continues to control development while investing in domestic industries and exploring foreign markets to expand supply lines and trade ties. U.S. FDI dipped slightly after four years of explosive growth.

Thailand

GDP:	$313
EXPORTS:	$191
IMPORTS:	$157
FDI 2009:	$10

SCORE 6

T	I	B	X
3	2	1	0

Export growth and private consumption have helped drive the economy. While outstanding concerns regarding political instability and violence remain, the country has a world-class port (Laem Chabang) and airport (Bangkok).

India

GDP:	$1,430
EXPORTS:	$201
IMPORTS:	$327
FDI 2009:	$19

SCORE 5

T	I	B	X
2	1	2	0

For India's size and population, and with a thriving manufacturing industry, it is remarkable that there is only one containerport (Nhava Sheva) among the world's top-50 in TEUs moved. China, by comparison, has 10.

Singapore

GDP:	$217
EXPORTS:	$358
IMPORTS:	$316
FDI 2009:	$77

SCORE 9

T	I	B	X
4	3	2	0

As it continues to diversify its economy and build strong domestic industries, the country is attracting major investments in pharmaceuticals and medical device manufacturing.

Malaysia

GDP:	$219
EXPORTS:	$193
IMPORTS:	$149
FDI 2009:	$14

SCORE 6

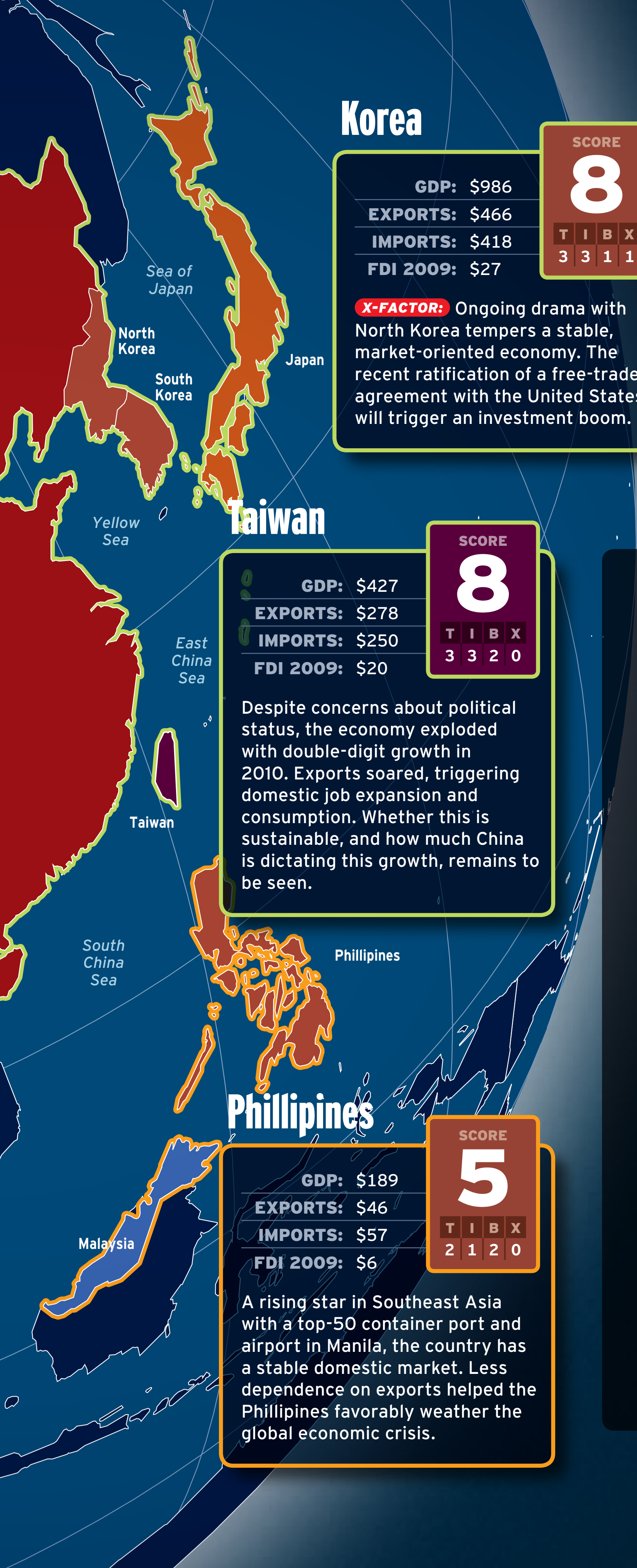
T	I	B	X
3	2	1	0

Port and airport infrastructure has quietly developed into a featured asset complemented by above-average IT connectivity. The government remains committed to growing its still largely undeveloped industrial sector.

FDI: U.S. Foreign Direct Investment, 2009
T: Transportation Infrastructure
I: IT Competency
B: Business Culture
X: X-Factor

All amounts in $US billions.

China
India
Thailand
Malaysia
Singapore
Arabian Sea



Korea

SCORE 8

T	I	B	X
3	3	1	1

GDP:	$986
EXPORTS:	$466
IMPORTS:	$418
FDI 2009:	$27

X-FACTOR: Ongoing drama with North Korea tempers a stable, market-oriented economy. The recent ratification of a free-trade agreement with the United States will trigger an investment boom.

Japan

SCORE 8

T	I	B	X
4	2	2	0

GDP:	$5,391
EXPORTS:	$736
IMPORTS:	$637
FDI 2009:	$104

Its infrastructure density is the best in the Far East. How the earthquake and tsunami will impact operability remains to be seen.

Taiwan

SCORE 8

T	I	B	X
3	3	2	0

GDP:	$427
EXPORTS:	$278
IMPORTS:	$250
FDI 2009:	$20

Despite concerns about political status, the economy exploded with double-digit growth in 2010. Exports soared, triggering domestic job expansion and consumption. Whether this is sustainable, and how much China is dictating this growth, remains to be seen.

Phillipines

SCORE 5

T	I	B	X
2	1	2	0

GDP:	$189
EXPORTS:	$46
IMPORTS:	$57
FDI 2009:	$6

A rising star in Southeast Asia with a top-50 container port and airport in Manila, the country has a stable domestic market. Less dependence on exports helped the Phillipines favorably weather the global economic crisis.

Asia

China will continue to dominate global trade as long as businesses look offshore for cheaper labor. Its transportation infrastructure has grown rapidly, and China has been aggressively seeking out new markets in Africa and Latin America to source raw materials and grow trade relations. Among top-50 ports in the world, China has 10 and the United States has five—a clear indication of freight origins and infrastructure expansion. China's air cargo industry is the next area primed for growth, especially as domestic middle-class consumption and manufacturing activity matures.

Despite—or perhaps thanks to—diplomatic uncertainty and a neighborly hand, Taiwan remains a hot target for high-tech manufacturing. Korea's free-trade agreement with the United States will likely grow business interests even as military posturing to the north divides attention.

As to Japan, it remains Asia's logistics leader in terms of sophistication and transportation connectivity. However, the March 2011 earthquake and tsunami, and resulting devastation to infrastructure, will likely have far-reaching repercussions.

A

SIA

Manufacturing Dynamo or Consumer Powerhouse?

Asia today is not just about manufacturing; it's also emerging as a consumer powerhouse. To seize the opportunity, manufacturers and retailers alike are rewiring their global supply chain strategies. By Lisa H. Harrington

Asia is no longer simply the seat of cheap production capacity. In 2008, Asian consumers spent $4.3 trillion, representing about one-third of consumption expenditures of the Organisation for Economic Cooperation and Development's 34 member countries. By 2030, consumer spending in Asia is likely to reach $32 trillion–or about 43 percent of worldwide consumption, according to Asian Development Bank (ADB), a Manila-based financial institution.

These statistics signify Asia's emergence as a consumption powerhouse, prompting global manufacturers and retailers to re-think their supply chains to address both the challenges and opportunities of serving Asian markets.

A closer look at the region's economic demographics tells the story. Asia's middle class–defined by ADB as earning $2 to $20 per person per day–is growing dramatically relative to other regions of the world. Some 56 percent of developing Asia's population was considered middle class in 2008, compared to just 21 percent in 1990 (*see chart*). Those consumers accounted for more than 75 percent of the region's aggregate annual expenditure and income.

The sheer size of Asia as a developing mega market for both products and services offers new and huge growth potential for retailers and manufacturers alike. Multinational companies, for example, expect more than 50 percent of their revenue growth over the next 10 years to come from developing economies. And in 2009, China surpassed the United States for the first time as the world's largest market for new vehicles, according to global management consulting firm The Boston Consulting Group.

"Multinational companies must learn to support mature markets such as Europe and the United States, while serving diverse emerging markets in Asia and other parts of the world," says Danny Goh, vice president, North Asia Region for APL Logistics, a global third-party logistics (3PL) provider with U.S. headquarters in Scottsdale, Ariz.

Indeed, rapidly escalating development in Asia is reconfiguring global trade patterns. Supply chain flows used to move almost entirely east to west. Not anymore.

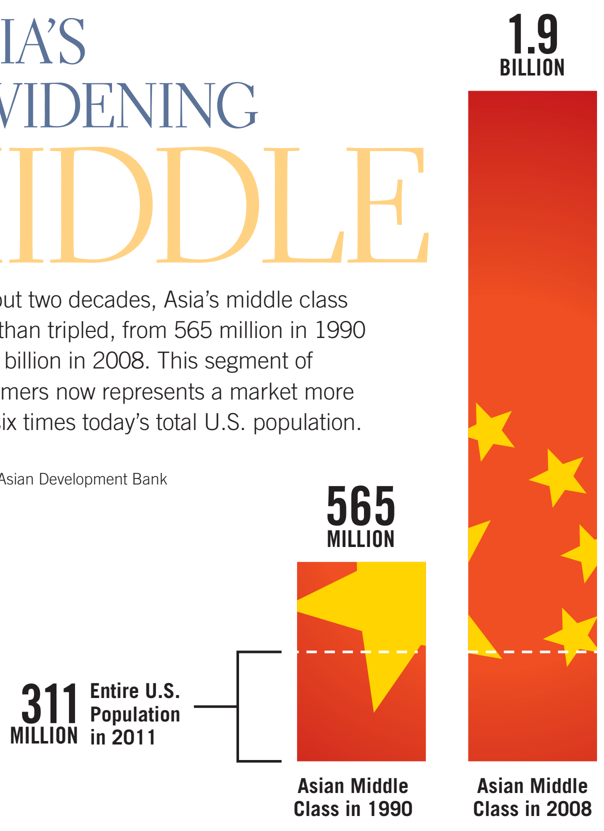
"Growth in Asia is shifting the demand center from west to east," says Carlos Alvarenga, managing director for global management consulting firm Accenture Supply Chain and Procurement Services. "BMW and Ferrari, for example, will sell more cars in China than in the United States in 2011."

These shifting trade patterns represent a significant change for shippers. "During the period of manufacturing offshoring, companies focused on bringing mass quantities of goods from Asia to Europe and the United States," says Christopher Logan, chief strategy and marketing officer in Asia for global 3PL Agility. "Today, shippers must deal with a complex supply and demand point network within and outside Asia. The global supply chain has become a web rather than a linear east-west flow."

ASIA'S WIDENING MIDDLE

In about two decades, Asia's middle class more than tripled, from 565 million in 1990 to 1.9 billion in 2008. This segment of consumers now represents a market more than six times today's total U.S. population.

Source: Asian Development Bank



LOGISTICS INFRASTRUCTURE

Capitalizing on emerging Asian markets is not always easy. "Within populous countries such as China and India, selecting the right distribution facilities and hubs can be challenging," notes Goh. "This is particularly true as companies start to move away from more established cities–for example, from China's coastal regions to the interior, where production costs are lower. And it doesn't help when, in many of these markets, the effective reach offered by organized and reliable transportation providers does not typically exceed 13 percent of total volumes."

These challenges elevate the need to factor logistics infrastructure development into operational strategy. Logistics service providers continue to build hubs and logistics parks in Asia

to handle current and future trade volumes. China leads as the largest investment market for logistics companies, according to the *2011 Emerging Market Logistics Index*, a study conducted by Transport Intelligence, a European market research firm, and sponsored by Agility. The study takes a country-by-country look at logistics development trends and capabilities, comparing the major emerging markets on a number of metrics that identify the key attributes attracting logistics providers, air carriers, shipping lines, and freight forwarders.

From a manufacturing perspective, survey respondents consider western China the next low-cost region of opportunity. This location has benefited from cost increases in China's coastal areas, which have driven some manufacturers to move farther inland. Poor infrastructure, particularly roads, has impeded western China's growth potential, however. Development of new roads and airports is underway to link this region with eastern China, but it is too early to determine how effective these infrastructure investments will be, says the Transport Intelligence report.

MIGRATING MANAGEMENT

Logistics infrastructure issues aren't the only constraints impacting supply chain capability in Asian markets. Rapid development has significant implications for the human capital side of the supply chain, as well. As the demand center shifts from west to east, so, too, will the design and innovation center. Qualified employees with analytical skills such as forecasting are moving east to Asia.

"When trade was focused on the West, it was natural to operate management hubs there," says Alvarenga. "Today, however, Singapore and Geneva are emerging as neutral zones for locating management activities such as supply chain and procurement. There has been a shift in where global supply chains are managed, and where products are

THE TAO OF DOW

One Shipper's Philosophy on Optimizing Asian Operations

Dow Chemical boasts a long history of doing business in Asia, and has learned many valuable supply chain lessons in the process. "Asia is a complicated region because it lacks a single homogenous environment or culture," says Lawrence Cresci, senior director of global supply chain operations for the global chemical company.

Dow Chemical began doing business in Asia in the 1930s. Today, the company operates in 13 Asia Pacific (APAC) countries, including China, India, and Japan. Here are some lessons the company has learned through its Asia operation.

- **CHALLENGES OF INLAND CHINA.** Despite China's extensive coastal development, moving product to western regions still presents a challenge. "There are no pan-Asia carriers, so finding reliable suppliers to move goods to inland China is tough," Cresci says. Even one of China's largest integrated transportation and logistics companies and a state-owned enterprise subs out volume to other carriers across China. That makes it difficult to manage the inland China supply chain, particularly when moving hazardous materials.

"We have to find carriers who will invest in the right equipment, people, and processes to move our product safely," says Cresci. "Developing those service provider relationships is difficult, and often involves many false starts."

- **LOCAL EXPERTISE REQUIRED.** Managing an effective and safe supply chain in APAC is a hands-on endeavor; it's not a matter of simply turning over your business to the large logistics service providers (LSPs). "While they do business all over the world, LSPs operate variable levels of local management," Cresci says. "You have to visit in person to assess their capabilities in each country or region, and work with them to establish your requirements and standards, and ensure they have processes in place to meet them."

To accomplish this task, Dow operates an extensive logistics organization in Asia, with regional leaders monitoring and managing the entire region. "We maintain a logistics key person and office in each country," Cresci explains. "Their job is to understand the market, know the providers, and look for companies that can meet our quality and safety standards.

"The key is getting our feet on the

Shipments received at coastal ports and trucked to China's interior may be impeded by the western region's poor infrastructure.

manufactured and consumed."

As a result, Asia is sprouting a new generation of highly trained supply chain professionals. "A few years ago, a generation of supply chain executive expats were working in Asia," Alvarenga says. "These professionals are being replaced by local managers trained by Western corporations. As these managers rise through the corporate ranks, they push for local employees to play a bigger role. This push will accelerate the movement of supply chain and other managerial jobs to Asia."

As Asia develops, however, costs increase–and this is just as true for human capital as for any resource.

"The cost differential between Louisiana or Texarkana and the most expensive locations in China or India is narrowing," Alvarenga notes. "In a traditional low-cost sourcing location such as Bangalore, management salary costs are increasing 15 to 20 percent per year. A senior manager at a large U.S. consulting company earns between $150,000 and $200,000. In India, that same position breaks the $100,000 barrier.

"In the United States, however, salary increases are flat, averaging two to three percent annually, while India's workers receive 20-percent annual increases," he

ground and making sure we know what is happening," Cresci adds. "You cannot assume anything. You have to have a local presence, and build local relationships where they are willing."

SAFETY STANDARDS. Safety is Dow Chemical's top priority when managing its global supply chain, and the company looks to its service providers to raise the safety bar. "It is important to forge the strongest Dow/LSP relationships, with common safety and sustainability goals in each country, to ensure our safety standards are met," Cresci says.

While transportation safety standards are fully developed and implemented in mature economies, APAC's emerging economies are another matter. In fact, local standards for transportation safety and quality vary tremendously, particularly for hazardous materials.

From a regulatory perspective, Dow Chemical advocates implementing the right transportation/distribution safety standard levels so the entire APAC chemical industry raises its capability. Dow also helps local logistics/transportation service providers elevate their safety capabilities.

In India, for example, Dow Chemical found local service providers willing to invest in European-standard trucking equipment. The companies agreed to adopt operating standards that meet Dow's requirements–with the strategy of investing in Dow's business and, in return, potentially increasing their business as the company grows.

"If we get the right people and the right growth mindset, it is a win-win situation for us and the carrier," Cresci notes.

"Safety gets a receptive ear, no matter what country you operate in," he continues. "The last thing anyone wants is an incident involving hazardous chemicals. Developing these partnerships is just a matter of time, momentum, and energy."

INFRASTRUCTURE DEVELOPMENT. Infrastructure constraints are a constant issue for Dow Chemical in developing APAC countries. Port congestion, for example, is a critical problem in most of Asia Pacific. Some containerports experience two- to three-week backlogs on processing exports due to a lack of infrastructure capacity.

In most Asian growth markets, "economic growth continues to outpace logistics infrastructure development, thus posing significant challenges to the logistics community trying to meet the market's expectation for on-time delivery and turnaround time," says Cresci. "It's important that we continue to work with industry councils, regulators, and our strategic logistics service providers to influence infrastructure and regulatory development in these markets."

Dow Chemical works with APAC country governments to advocate for more logistics infrastructure development, and to foster more reliable and safe transportation as a result of that development.

"We get involved in the debate through government organizations or business associations," Cresci says. "Unfortunately, there is no pan-Asian industry organization in the chemical sector. So for issues such as development and safety standards, we have to work with the governmental authority in each country.

"Emerging economies in Asia are challenging," Cresci concludes. "But it's an important region for sustainable growth for Dow Chemical–and for any company."

adds. "So in five years, U.S. and India managers will be paid the same salary."

One factor driving supply chain salaries up in emerging Asian markets is the relative scarcity of management talent in emerging markets such as China and India.

"While the lower level workforce is abundant, options may be limited if you want to hire English-speaking employees with five or more years of management experience," says Hans von Lewinski, managing director of Accenture's Asia Pacific Electronics and High Tech industry group.

TO MOVE OR NOT TO MOVE?

Significant wage increases at all levels–from management to factory worker–in China and elsewhere, together with quality concerns, the weakening U.S. dollar, rising fuel costs, and the risks inherent in longer supply chains are driving many companies to re-examine their Asia sourcing strategies.

"Certain sectors have already started insourcing back to the United States," Alvarenga notes. "Companies are moving service jobs back because of the recession, increased costs, and high turnover. When you consider cultural issues, the cost differential is not a factor."

Is it time for manufacturers to retrench? Not if you want to stay in the game, according to Joe Manget and Pierre Mercier of The Boston Consulting Group. They insist the market opportunities are just too great, given the growth in consumer population and income across Asia.

To capitalize on this tremendous potential market opportunity, companies are better off producing in Asia. "Companies understand markets better when they live in them," observes von Lewinski. "They design products well-suited to local preferences, so items sell more easily. They can get the right product to market faster to capture share, and they can sense demand better. That's worth a lot of money, particularly with the tremendous promise of Asia's emerging middle class.

"The bottom line is, companies should think twice before moving out of Asia," he says.

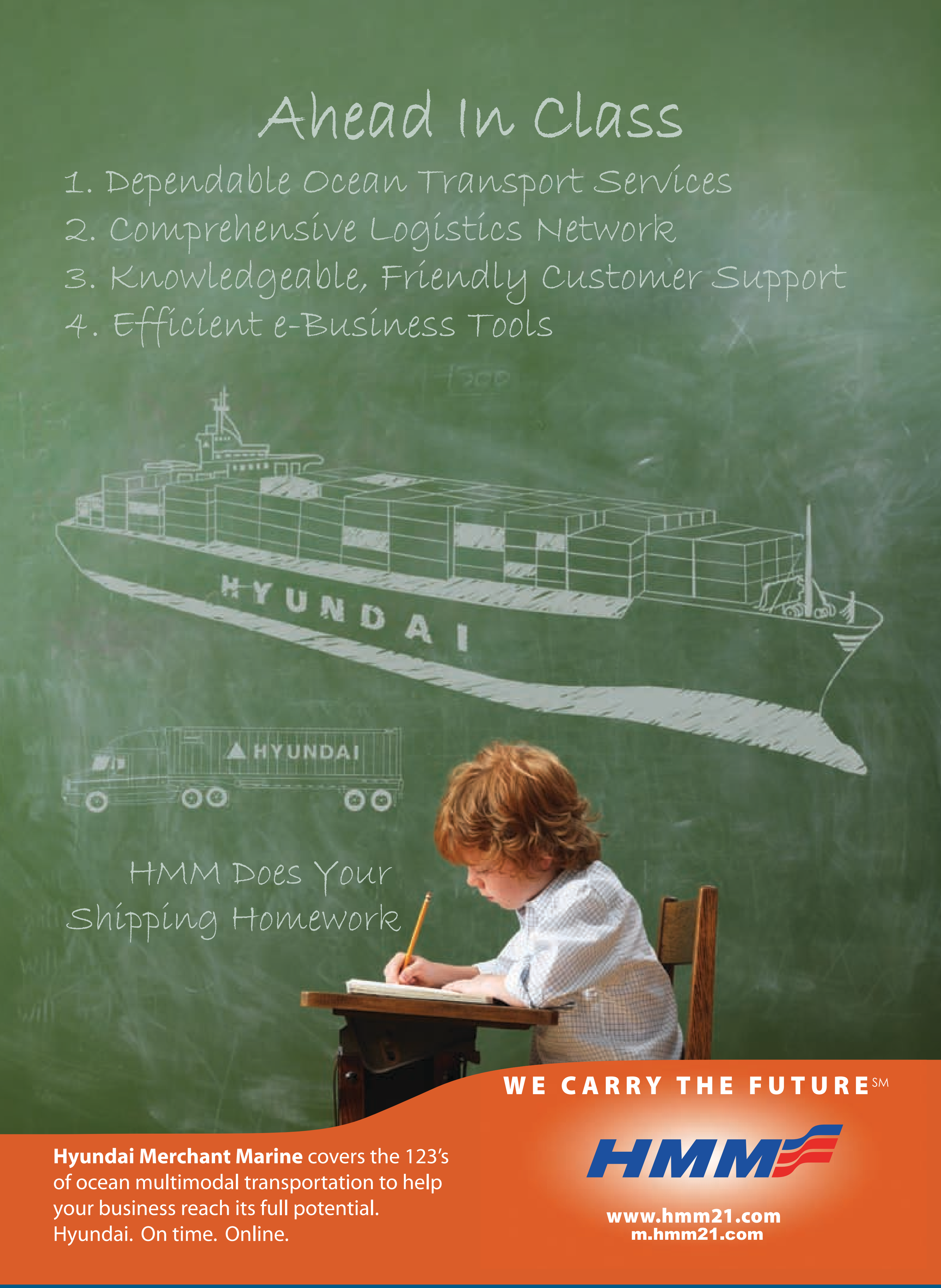
Managing a supply chain in developing Asia clearly poses significant challenges and risks for companies. Rather than be daunted by and/or withdraw from these challenges, however, companies can be smart about addressing them. Doing your homework, researching the constraints and bottlenecks, and choosing partners or practices that can best assist you may avoid costly mistakes.

To this end, Manget and Mercier offer the following advice:

- **LOOK BEYOND COST.** Cost arbitrage isn't a strategy; it can't sustain a competitive edge over the long haul. Forward-looking companies see outsourcing and offshoring as tools to achieve strategic objectives such as scale, flexibility, and access to talent, resources, and new markets–not just to reduce costs.
- **DIVERSIFY SOURCING.** Given the risks and uncertainty around rising costs, labor shortages, currency volatility, and growing protectionism, companies should adopt a more diversified approach to global sourcing. This means maintaining a portfolio of supply sources in different regions to mitigate risk.
- **STAY FLEXIBLE.** An enterprise with a truly global strategy can make, buy, or sell wherever the customers, talent, or resources are, and wherever it makes the most sense from a cost, quality, or efficiency standpoint. Conditions, customers, and costs all change over time, so the "best" locations will also change. Supply chains must stay flexible and ready to adapt.

Companies that maintain an in-house logistics staff in their Asian operations tend to face fewer quality and safety issues than those who outsource logistics labor.

The keys to succeeding in Asia are simple: first, make sure you understand the degree of logistics difficulty before going into a country. Then build a supply chain network based on local talent and partners, and tailored to each country or region.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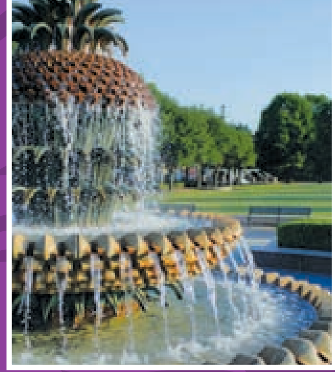

The Logistics Advantage

South Carolina

Boasting proximity to major U.S. markets and a wealth of transportation resources, the Palmetto State leads the Southeast in serving the nation's distribution needs.

Dubbed the "economic engine of South Carolina," the Port of Charleston has the deepest channel in the Southeast region.

South Carolina residents like to boast that they have it all: mountains, foothills, coastal plains, beaches, tropical sea islands, and beautiful weather. The state's appeal becomes even clearer when you factor in its logistics advantages.

South Carolina lives by the golden rule of real estate – location, location, location. "The state is well-positioned from a logistics point of view," notes South Carolina Secretary of Commerce Robert M. Hitt III.

Located halfway between New York City and Miami, the state boasts close proximity to major U.S. markets. South Carolina connects to the rest of the country through the following modal resources:

- Five interstates, enhanced by another 41,000 miles of state-maintained highways.
- Five primary airports and many others put any location in the state within about one hour of a commercial airport.
- The Port of Charleston, one of the busiest containerports along the Southeast and Gulf Coasts.
- CSX Transportation, Norfolk Southern, and seven affiliated and combined rail lines, offering daily service in every metro area.

Toss in an outstanding workforce, a business climate that is the envy of the nation, low power costs, and a state government committed to ongoing investment and continuous improvement, and it is little wonder that a litany of the biggest and best names in American commerce have chosen South Carolina for their logistics hubs. They recognize that when it comes to logistics, the advantage belongs to South Carolina.

"The state has more highway miles per capita than any state in the nation, and the deepest harbor in the South Atlantic region," notes Donald P. Reed, vice president of business development for South Carolina Power Team, the economic development alliance of the state-owned electric


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and water utility, Santee Cooper, and the state's 20 electric cooperatives. "And 130 million people – about half the U.S. population – live within one day's drive."

"South Carolina is small and compact," says Hitt. "In a short day, you can drive across the state."

Hitt cites the state's extensive highway system as one of its greatest strategic assets. Interstate highways I-85, I-26, I-77, I-95, and I-20 crisscross the state. These thoroughfares, along with state-maintained highways, offer excellent access in every direction.

"South Carolina's north-east-south-west capability puts us in a great place geographically," says G. Clifton Parker, president of G&P Trucking. "We can deliver product anywhere east of the Mississippi River within one day."

G&P, now celebrating its 75th year of operation, provides truckload freight and services including intermodal shipping, expedited delivery, dedicated routes, warehousing, transloading, third-party logistics (3PL), and brokerage. Headquartered in Columbia, S.C., the company operates three additional locations in the state, along with locations in five other states.

On the Road in South Carolina

Thanks to South Carolina's extensive highway system, shippers can quickly get product on the road to just about anywhere. Five major interstates – I-85, I-26, I-77, I-95, and I-20 – traverse the state, providing easy access to the many warehousing and distribution hubs operated there.

EASY OUTBOUND THROW

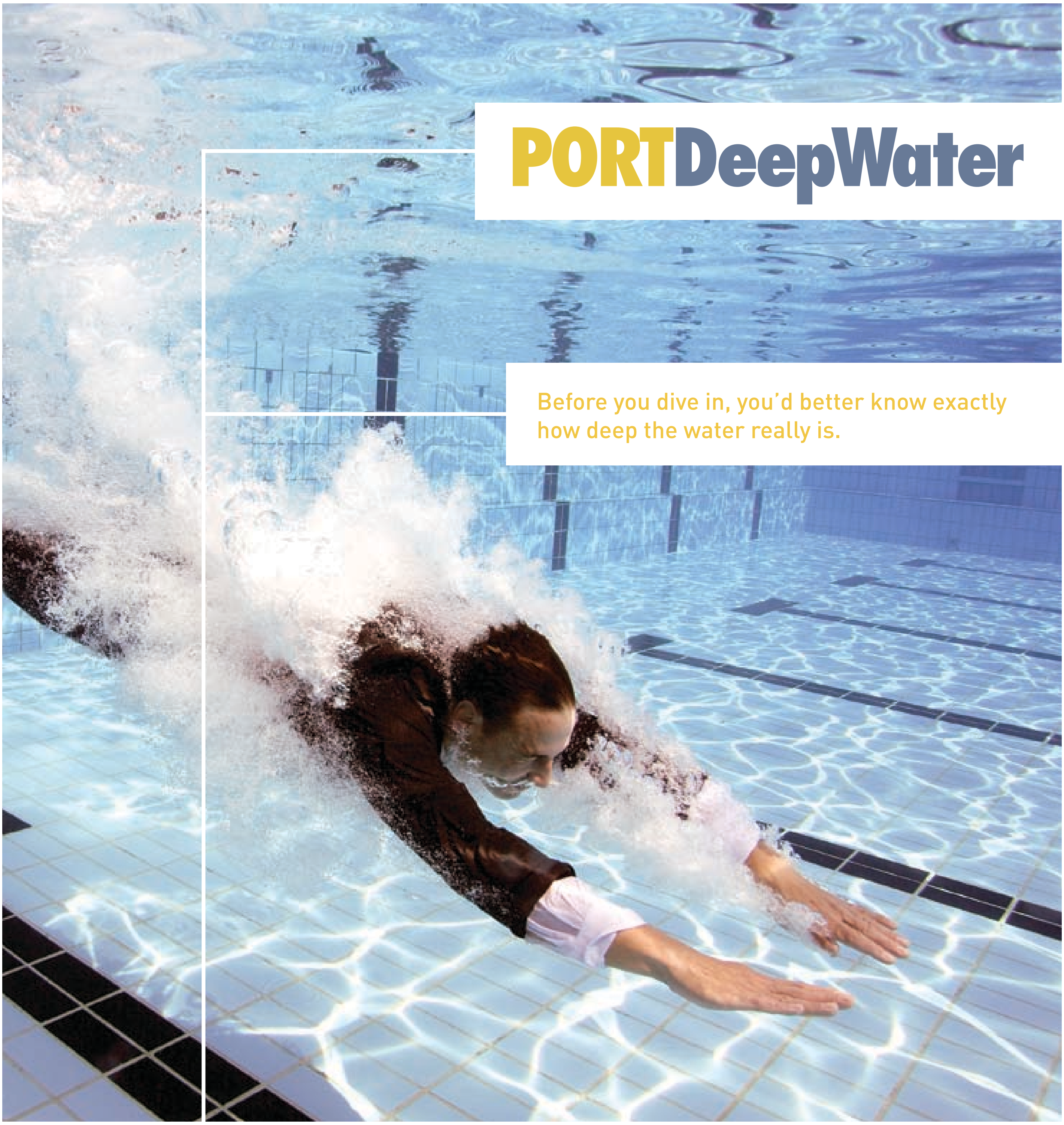
ADS Logistic Services, a 3PL headquartered in Edison, N.J., operates a facility in Gaffney, S.C., because of the state's proximity to U.S. population centers. "Our South Carolina facility sits in the middle of the eastern seaboard," says Bruce Mantz, executive vice president, ADS Logistic Services. "This location gives us considerable 'outbound throw' in every direction."

South Carolina's location is ideal for supply chain planners and distribution networks, with easy access to major population centers on the East Coast and the growing population in the South. The state also offers available industrial and warehouse sites and buildings with close proximity to interstate highways. Such advantages serve as powerful catalysts for growth.

Much of that growth is taking place in Charleston. "We could have established our North American headquarters in any number of cities," says Mark Darley-Usmar, CEO of UK-based Synergy Logistics. "For our company, delivering modern software solutions is global. Charleston represents the new breed of cities working hard to move from traditional industries to a global business hub."

Synergy offers *Snapfulfil*, a warehouse management system using Web technologies and a business model called Software as a Service (SaaS).

"We serve companies ranging from mid-sized businesses with a single warehouse to large enterprises with many warehouses and plants around the globe," says Darley-Usmar. "While we considered other cities with high concentrations of logistics technology resources, such as Atlanta, Chicago,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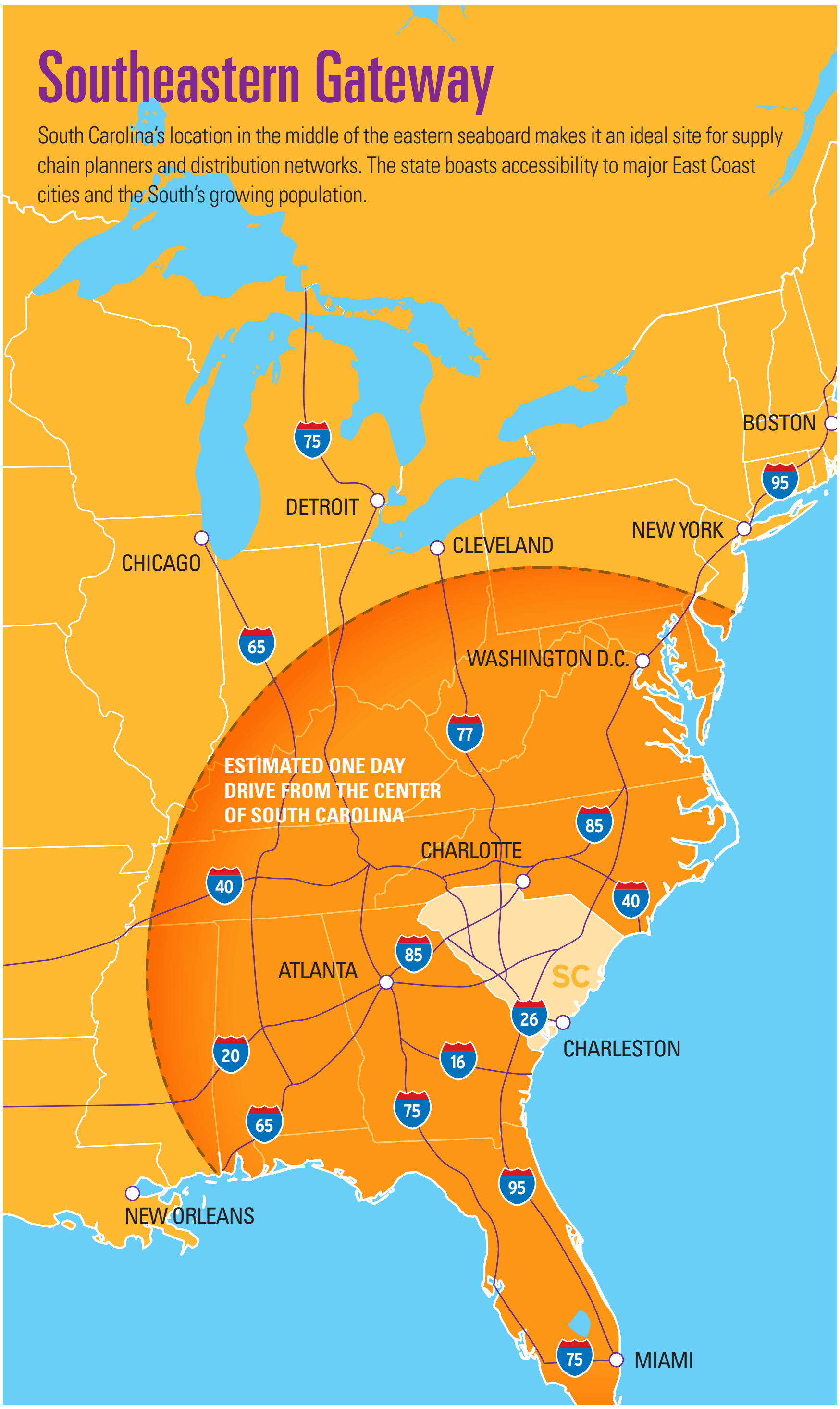

and Los Angeles, we chose Charleston because it offers our employees a better quality of life. We believe Charleston will give Synergy North America an edge to attract and retain talent."

Because of *Snapfulfil*'s enthusiastic reception in the European market – Synergy added 20 *Snapfulfil* clients in the middle of the global financial crisis – the company moved forward and established Synergy North America in Charleston in 2010.

South Carolina appeals to many growth-oriented businesses. "Our goal is to double our company's size over the next five years, and Southeast hubs are a key component of our plan," says Cliff Katab, president of Performance Team, a Santa Fe Springs, Calif.-based 3PL. "The Southeast represents one of our biggest growth areas."

Performance Team has more than 350 trucks and more than two million square feet of warehouse space in eight states, including a 250,000-square-foot warehouse in Charleston. "We've been in Charleston for about six years now," says Katab, "and that hub continues to be an aggressive growth location for us."

Performance Team plans to expand its Charleston location, which includes transload and full pick-and-pack operations, by about 100,000 square feet this year.

PORT PRIORITIES

Shippers seeking a convenient port in the Southeast will find much to appreciate at the Port of Charleston. Numerous ocean carriers and service providers operate at or near the port.

"Charleston is the right market for us," says Garry Neeves, vice president of Fife, Wash.-based 3PL Regal Logistics. In 2010, Regal expanded its operations to Charleston with 351,000 square feet of warehouse space designed for high-volume, quick-turnaround shipping. The new facility is centrally located three miles from I-526,

four miles from the Port of Charleston's main Wando Welch Terminal, and offers foreign trade zone and drayage zone status for less-expensive transportation to ports.

"Regal's expansion in the U.S. Southeast is in direct response to demand from manufacturers, importers, and exporters for an ideal East Coast shipping point to satisfy retailers such as Walmart," says Neeves. "Regal's facility is already attracting new business to the area in the form of manufacturers and importers shipping product through the Port of Charleston for distribution to major retailers in the East."

Dubbed the "economic engine of South Carolina," the Port of Charleston already has the deepest water in the Southeast region: 47 feet of water at mean low water (MLW) in the entrance channel, and 45 feet MLW all the way to the dock. Using the tides – up to six feet are gained during a high tide – Charleston currently handles ships drafting up to 48 feet of water.

Efforts are underway to give the Port of Charleston even deeper channels – up to 50 feet – to accommodate larger ships that already are arriving in advance of 2014, the scheduled opening date of the expanded Panama Canal.

"The larger ships put tremendous focus on channel depth," says Byron Miller, director of marketing for the South Carolina Ports Authority. Shippers are already considering where they can place their business to be ready for the opening of the new locks, he adds.

"Charleston is the only port on the South Atlantic Coast that currently can accommodate those ships, but it's tight," says Reed. "Some dredging and harbor deepening is needed." To date, Charleston has handled more than 300 ships too big for the Panama Canal. Other ports would require considerably more dredging to handle the post-Panamax ships fully loaded.

Regal Logistics' Charleston distribution center offers 351,000 square feet of space designed for high-volume, quick-turnaround shipping.

"The ships will go where they can come in fully loaded," adds Reed. "Ocean carriers do not want to halve their loads because they lack the draft to come in and out of the port."

Performance Team plans to expand its Charleston location, which includes transload and full pick-and-pack operations, by about 100,000 square feet this year.

RECONNAISSANCE PHASE

Efforts are ongoing to gain federal support for the next deepening project. The U.S. Army Corps of Engineers has completed the project's "reconnaissance" phase and determined a federal interest in deepening the port. In fact, the Corps determined that Charleston is the best value for taxpayers, noting: "Preliminary studies at other nearby harbors show that Charleston Harbor would probably be the cheapest South Atlantic harbor to deepen to 50 feet."

The Port of Charleston also offers shippers open access from all its terminals in a maximum of two hours' transit time. To pave the way for trade growth, the port is bringing on significant new capacity and has in place a 10-year, $1.3-billion capital plan for new and existing terminals.


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Charleston is currently building the only permitted new port terminal under construction on the East Coast. Since 2007, site preparation, demolition, and construction activities have been ongoing for the 280-acre facility on the Cooper River. At build-out, the new terminal will boost total port capacity by a full 50 percent. Additional improvements to existing facilities also are boosting capacity, and Charleston is implementing a $17-million new terminal operating system this year.

"There has been tremendous port-related investment in South Carolina," says Miller.

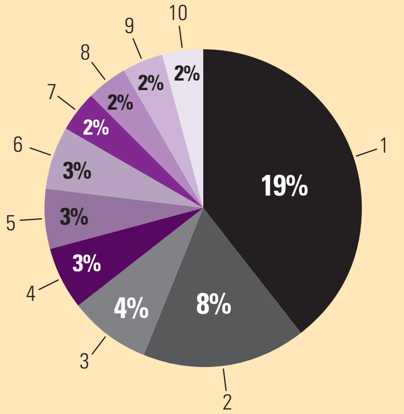
The growth does not show any signs of slowing. "With transportation costs continuing to rise, we are focused on strategies to minimize those expenses for our 3PL clients," says Patrick Moulton, director of new business development-East Coast, for Moulton Logistics Management, Van Nuys, Calif. The 3PL opened its Charleston facility in 2008.

"Adding the Charleston distribution cen-

THE PORT OF CHARLESTON:

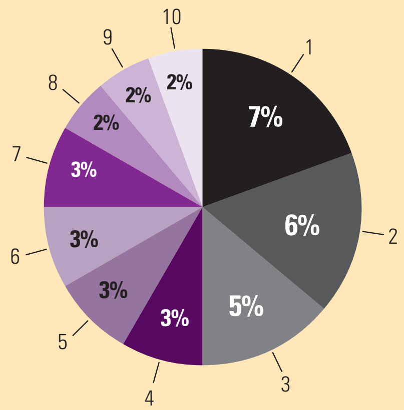
Connecting South Carolina to the World

Cargo Profile: In fiscal 2010, the Port of Charleston handled 1.28 million TEUs, and breakbulk cargo totaled 585,013 tons. Nearly $45 billion worth of cargo moved through the port in 2009. Here's a look at the port's top commodities.



TOP 10 EXPORT COMMODITIES

1. Paper and paperboard, incl. waste
2. Wood pulp
3. Auto parts
4. Logs and lumber
5. Fabrics, incl. raw cotton
6. General cargo
7. Synthetic resins
8. Mixed metal scrap
9. Unclassifiable chemicals
10. Poultry, chiefly fresh and frozen



TOP 10 IMPORT COMMODITIES

1. Furniture
2. Auto parts
3. Sheets, towels, blankets
4. Fabrics, incl. raw cotton
5. Auto and truck tires and tubes
6. General cargo
7. Menswear
8. Miscellaneous apparel
9. Women's and infant's apparel
10. Paper and paperboard

Trade Partners: More than 20 ocean carriers transport cargo between Charleston and more than 150 nations around the world. Here are the United States' top trading partners through the Port of Charleston in 2009.

TRADE LANE % OF TOTAL:

36% North Europe
22% Northeast Asia
12% India
6% South America East Coast
5% South America West Coast
5% Southeast Asia
4% Mediterranean
4% Africa
4% Middle East
2% Central America
1% Caribbean

Source: South Carolina State Ports Authority

> **"Since 2006, 11,000 direct jobs and $1 billion of investment have come through South Carolina's logistics sector."**
> –**Donald Reed,** VP Business Development, South Carolina Power Team

ter has saved many of our clients 20 to 30 percent on their small-parcel shipping by reducing the zones," he says.

"The Port of Charleston also provides access for product being manufactured overseas and shipped by ocean," Moulton adds. "Drayage is minimized by our facility's location only six miles away. With the expansion of the Panama Canal, and with Charleston being the deepest harbor in the South Atlantic, this location is well-positioned to see a significant increase in inbound container share."

In fiscal 2010, the Port of Charleston handled 1.28 million TEUs, and 585,013 tons of breakbulk cargo (see chart, page 70). Shippers from two dozen states use Charleston to access foreign customers and suppliers. The Port of Charleston is one of only a handful of ports to have received the Presidential "E" and "E-Star" awards for excellence in exporting.

South Carolina enjoys the additional advantage of the Port of Georgetown, a dedicated breakbulk and bulk facility. Steel, petroleum coke, and wood briquettes are top cargoes. With four berths, the Port of Georgetown's intermodal breakbulk service lets shippers efficiently consolidate storage, handling, and transit as a single operation.

WORKFORCE STRENGTH

Success in logistics is about people as well as place, of course, and in South Carolina that essential fact is not overlooked. "Since 2006, the state has reported that 11,000 direct jobs and $1 billion of investment have come through the logistics sector," says Reed. To maintain its logistics advantage, the state must offer trained, able, and qualified workers ready to excel.

"Logistics is one area you cannot outsource," says Reed. "If you need a distribution center in South Carolina, you don't have the option of putting it overseas. It has to be in South Carolina."

The equation is borne out in the numbers. Manufacturing accounts for 11.5 percent of the state's nonagricultural workforce. Sectors classified as Advanced Manufacturing, including the chemical, electrical, automotive, and pharmaceutical industries, have grown faster than the national average. Employees in high-tech jobs, meanwhile, number almost 120,000.

"Walgreens has a major facility in Anderson County, and I don't know if there is a forklift in there," Reed says. "It's people sitting at computer terminals. The facility has miles of computerized conveyors. When they want an order to come down to the loading dock, a computer arm takes the toothpaste, aspirin, and other products off the shelf, puts it on the conveyor, and brings it to the loading dock. There are a lot of high-tech jobs involved in distribution."

Likewise, the ADS Logistic Services facility in Gaffney is "highly automated and integrated to elaborate warehouse management and warehouse control systems," says Mantz. The facility, opened about six years ago, is situated on a 77-acre site, with more

A skilled workforce trained in advanced manufacturing and technical processes represents an asset for businesses siting operations in South Carolina.

"One of the state's greatest advantages is the ability to provide a quality workforce. Very complex manufacturing is done here at a premium level."

–**Robert M. Hitt,** Secretary of Commerce, South Carolina

than a half-million square feet of logistics processing area.

Mantz is a cheerleader both for the state and its workforce. "People in South Carolina have a strong work ethic," he notes. "They go to work every day and do their jobs with very little trouble in between." In particular, he cites above-average attendance rates, low turnover, and pride in the end product.

To help ensure that the needs of employers are met at all levels, South Carolina offers an innovative technical training program. Under the moniker readySC, the South Carolina Technical College System program provides training to new and expanding industries in South Carolina. The tech system was founded on the premise that the state would be well-served by providing a way to train its citizens and employ them with jobs that the state helped to create.

"While the South Carolina Technical College System is designed to help alleviate unemployment, it also reaches out to the underemployed," says Reed. "The technical colleges offer classes at night. They are looking for people who want to upgrade their jobs or get jobs with health benefits."

Tracing its roots to 1961, readySC is one of the oldest and most experienced workforce training programs in the United States. More than a quarter-million workers have been trained for almost 2,000 companies since the program's inception. Among other services, readySC helps companies start new facilities, expand existing facilities, and determine needed skills. The program designs customized training solutions and provides world-class training and project management.

"The South Carolina technical school programs have partnered with industry to bring us the skill sets and technical advantages we need to compete," says Parker, who notes that the University of South Carolina hosts one of the country's best business schools. Over the past decade, South Carolina has boasted the 10th-fastest-growing labor force nationwide, and many colleges in South Carolina offer degrees or specializations in logistics or transportation management.

The College of Charleston's supply chain management program offers students a rich global logistics education.

"We are producing some very bright young talent to help us compete internationally," Parker says.

"One of the state's greatest advantages is the ability to provide a quality workforce," adds Commerce Secretary Hitt. "Very complex manufacturing is done here at a premium level."

Another benefit South Carolina businesses enjoy is savings on energy costs and corporate taxes. "One reason for the state's low power costs is that it operates on about 52 percent nuclear power," says Hitt. "And at five percent, South Carolina has one of the lowest corporate income tax rates in the Southeast."

Indeed, the size and number of utilities and the mix of electric generation fuels, including nuclear, coal, and hydro, have led to some of the region's most affordable power costs. Industrial power rates in the state average 5.67 cents per kilowatt-hour, among the lowest rates in the nation (about 17 percent less than the national average). Two interstate pipeline systems and intrastate pipelines also provide abundant supplies of natural gas to South Carolina's manufacturers.

In addition to its low corporate tax rates, South Carolina offers numerous business incentives, such as corporate

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tax credits for creating jobs, establishing or adding to corporate headquarters, investing in research and development facilities, producing ethanol or biodiesel, and setting up commercial biomass production.

Additional discretionary incentives include the following provisions:

- **The Job Development Credit** rebates a portion of new employees' withholding taxes to be used by a company for certain approved expenses such as real property costs, training, or infrastructure.
- **The Port Volume Increase Credit** is available to manufacturers, warehousers, and distributors that use South Carolina port facilities and increase base port cargo volume by five percent over base-year totals.
- **The Corporate Income Tax Moratorium** is available for a period of either 10 or 15 years to companies creating new jobs in certain counties.

Other incentives include the Textile Revitalization Credit, Negotiated Fee in Lieu of Property Taxes, and sales tax exemptions on certain equipment and materials. Depending on the type of business establishment, number of jobs, capital investment, project location, and other factors, additional incentives may be available from either the state or local government.

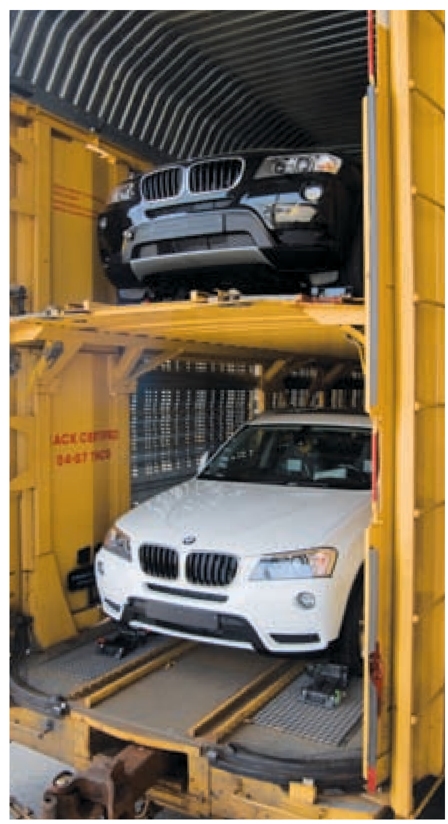
"Different companies have different needs, and South Carolina offers an array of tools to help them," says Hitt. "The state values manufacturing, and employs a group of specialists who work with companies to customize packages to meet their objectives."

"South Carolina is business friendly," says Parker. "Its operating costs are among the lowest anywhere, and it has one of the lowest fuel taxes in the country. South Carolina continually does more to be attractive to businesses internationally."

THE HOME FIELD

South Carolina's cost advantages extend from business to life at home. Residents enjoy a cost of living below the national average and some of the most affordable housing in the nation. The median home sales price in South Carolina in 2009 was $141,000.

"I've established many friends and colleagues in the logistics sector over the past



BMW's Spartanburg manufacturing plant exported passenger vehicles totaling $4.42 billion in export value through the Port of Charleston in 2010.

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The MWV Commercial and Industrial Development Group has unparalleled knowledge of the history and upside potential of each one of our properties, and takes great care to maintain strong relationships with local governments, state agencies and economic development organizations. Our commercial and industrial parks are attracting a host of multinational companies to South Carolina, helping to build our state's economy.

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15 years who live and work in various cities around the country," says Lori Kesten, vice president of sales, Synergy North America. "I wouldn't trade places with any of them, yet I believe a great many of them would trade with me in a heartbeat."

"South Carolina is a great place to live, work, and play. Employers such as Boeing and BMW have chosen to locate or expand operations here," says James H. Hill, vice president, community development and land management, MeadWestvaco Corporation (MWV), a Richmond, Va.-based company with packaging solutions, community development, and specialty chemicals divisions.

MWV has more than 700,000 acres

Charleston attracts residents with its access to top-quality higher education, diverse cultural events, and outdoor recreation.

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RECEIVE FREE NO OBLIGATION GUIDANCE AND ADVICE www.inboundlogistics.com/3pl of property, with about 375,000 acres in South Carolina. In addition to highly productive timber property, MWV has undertaken the development of the most commercially viable tracts into master-planned communities and commerce parks.

"The state's business-friendly climate attracts employers, and their employees appreciate the top-quality higher education, diverse cultural events, and outdoor recreation," Hill continues. "In short, businesses succeed, and employees can live the lifestyle they choose."

ON A ROLL

Many leading companies – including Dollar General, Home Depot, QVC, Target, Walgreens, and Walmart – have found South Carolina an ideal location for distribution operations. And the list of firms choosing South Carolina continues to grow. One case in point: Amazon recently announced it will employ more than 1,000 people in Lexington County.

"This is an exciting time in South Carolina," says Hitt. He cites the state's "energetic and enthusiastic governor," Nikki Haley, as well as South Carolina's leadership in the country's emergence from the economic downturn of the past few years.

Hitt notes with particular pride the recent announcement by BMW Manufacturing that the export value of its passenger vehicles through the Port of Charleston in 2010 totaled $4.42 billion. Prior to being appointed his commerce post by Gov. Haley in January 2011, Hitt was manager of corporate affairs at BMW in Spartanburg.

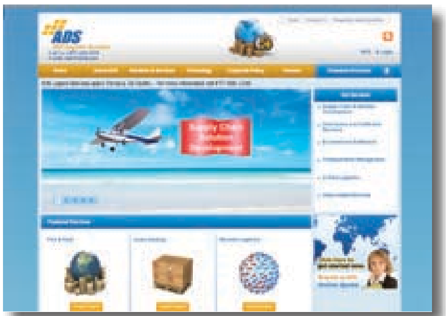
The value of BMW exports confirms the company's Spartanburg facility as the largest vehicle exporter from the United States to non-NAFTA countries, according to U.S. Department of Commerce data. In 2010, more than 110,000 vehicles were exported from BMW's South Carolina plant.

"Three-quarters of those cars never touch American soil," notes Reed. "They ship from the Port of Charleston to Europe, South America, and all over the world."

Clearly, leaders in South Carolina are pleased with both the number and the performance of the companies that have recognized South Carolina's advantage. But the state is not resting on its laurels.

Says Hitt: "We have plenty of room for others that want to join us."

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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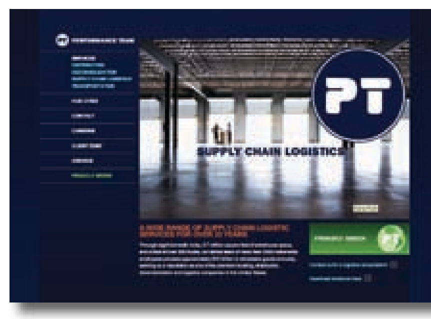
ADS is an award-winning, full-service 3PL provider offering public and contract warehousing, distribution, and fulfillment services designed to move your product with maximum speed, accuracy, and cost efficiency. ADS operates a fully automated facility in upstate South Carolina, just one mile from 1-85 with easy access to Charlotte, Atlanta, and the ports of Charleston and Savannah.

G&P Trucking Company • www.gptruck.com
With headquarters in Columbia, S.C., G&P Trucking Company's core competency is truckload freight. But the carrier goes beyond the basics, offering intermodal shipping, expedited delivery, dedicated routes, warehousing, transloading, third-party logistics, brokerage, and more. To see how G&P can meet your shipping needs, check out www.gptruck.com

Kontane Logistics • www.kontanelogistics.com
Kontane Logistics has the assets, certification, experience, and flexibility to develop client-aligned supply chain solutions. Operating one of the only active Foreign Trade Zones in the Port of Charleston, Kontane provides clients numerous financial and logistical benefits through integrated services and cloud-based technology to build logical, customer-attuned logistics platforms.

Moulton Logistics • www.moultonlogistics.com
Moulton Logistics is the premiere 3PL for direct-to-consumer marketers. It provides turnkey solutions for businesses that want to sell directly to consumers, but do not have the infrastructure in place to manage payment processing, drop shipping, customer service, returns and discounts on small parcel shipping. As a full-service 3PL, Moulton also provides Web-based software for managing direct response campaigns, and can feed that data back into your company's ERP system. Find out why we are the leading fulfillment provider to the "As Seen on TV" industry.

MWV Community Development and Land Management Group • www.mwv.com
One of MWV's most important land holdings in South Carolina is 78,600 acres of land in East Edisto, about 20 minutes from the Charleston peninsula. For almost 300 years, East Edisto has been used for farming. Recent technological improvements allow MWV to grow more wood on fewer acres, so it can look at East Edisto in a new way: as an opportunity to be part of a planning process that helps manage the Charleston region's growth, while creating new sustainable communities that remain true to the beauty and character of the Lowcountry. See more about this plan on the MWV site.

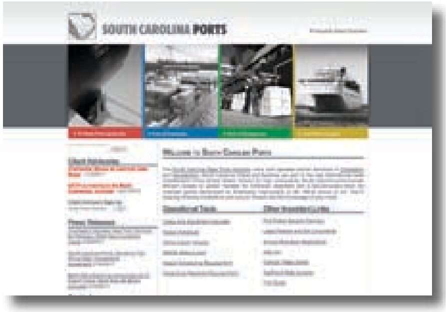


Performance Team • www.ptgt.net
For nearly 25 years, Performance Team has been offering its expertise to the retail and manufacturing industries with a broad range of supply chain services including: trucking, distribution, logistics, and fulfillment. The company's Charleston, S.C., hub is strategically located on the eastern seaboard to service the north-to-south East Coast region, and its 250,000-square-foot warehouse extends its full range of distribution and consolidation services.

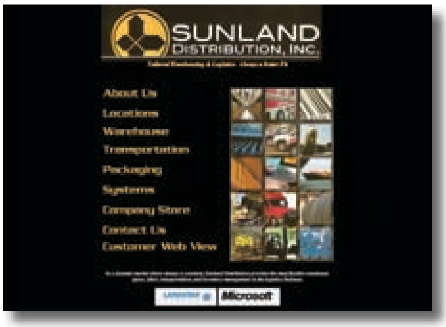
Regal Logistics • www.regallogistics.com
Regal Logistics' new Charleston, S.C., distribution center offers 351,000 square feet of public warehouse designed for high-volume, quick turnaround, retail-compliant shipping. It features supply chain management, competitive rates, a central location near major pier, rail, and highway access, simplified pricing and terms, no minimum storage requirements, and a real-time inventory and shipment dashboard.

South Carolina Department of Commerce • www.sccommerce.com
South Carolina's unparalleled transportation opportunities make reaching any market an easy task. The state's central U.S. East Coast location, advanced communications network, integrated transportation system of highways, airports, seaports, and railways ensures that any company can easily reach every one of their markets, and efficiently send and receive shipments around the world. When considering market accessibility, telecommunications capabilities, or logistical advantages, South Carolina provides a clear benefit to companies who are locating or expanding in the Palmetto State.

South Carolina Power Team • www.scpowerteam.com
The South Carolina Power Team is the economic development alliance of the state-owned electric utility Santee Cooper, and the state's 20 electric cooperatives. Together, they provide power to more than two million South Carolinians. With industrial electricity costs 20 to 30 percent lower than the national average, the South Carolina Power Team has been a part of attracting billions of dollars in capital investment and thousands of jobs to South Carolina.

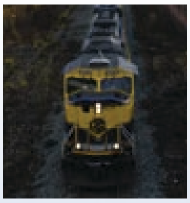


South Carolina State Ports Authority • www.port-of-charleston.com
The South Carolina State Ports Authority owns and operates marine terminals in Charleston and Georgetown, S.C. These port facilities are part of the United States' vital international trade infrastructure. Known for high productivity, South Carolina ports provide efficient access to global markets for American exporters and a secure supply chain for imported goods demanded by Americans' high quality of life.



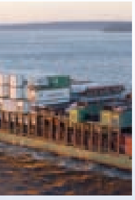
Sunland Distribution, Inc. • www.sunlanddistribution.com
One of the largest third-party logistics companies in the Southeast, Sunland Distribution provides warehouse, Landstar Logistics transportation management, Sunstaff contract labor, packaging, and full supply chain consulting services. We serve many business sectors, including automotive, chemicals, and retail. Sunland is your total solution for warehousing, packaging, inventory, and shipping.

Synergy North America • www.snapfulfil.com
Synergy Logistics, established in 1972, is a UK based software company that focuses on developing effective Warehouse Management Systems for clients, ranging from global organizations to SMBs. The company serves North America from its Charleston, S.C., office. Its latest solution, Snapfulfil, is breaking new ground with a unique combination of technological sophistication, class-leading user interface, and simple but cost-effective SaaS business model.



NORTHERN

Intermodal transportation stitches together Alaska's 663,268 square miles of rugged terrain, presenting challenges and opportunities for intrepid shippers.



EXPOSURE

Navigating the Alaskan Supply Chain

Famed naturalist John Muir first approached Alaska's inside passage by steamship in 1879, weaving his way through the ribbons of water and land that bound the state's southeast tail feather. In his memoirs, he vividly describes "zig-zags of cascades," "crowded spires of spruce and hemlock," and the "silvery plashing of upspringing salmon." Muir had a knack for detail.

Anyone who has had the opportunity to traverse the state's barren interior and watery southeast labyrinths knows how consuming details can be. Alaska is one-fifth the size of the contiguous 48 states. Its scale is difficult to grasp.

Alaskan shippers face the challenge of transporting freight across an expansive and often remote supply chain. Mode neutrality is a given. Common household goods fly, barges ferry rail cars, and flatbed trucks transport cargo over gravel and ice passing for roads. It's not uncommon for shipments to travel via all modes. With each additional touch, complexity grows.

Muir's Alaska was purely aesthetic–and the state's beauty remains. But today, to great lengths, Alaska is also a paradise for logisticians. It's the home of intermodalism at its best.

For Alaskan shipments, truck transport often represents just one leg of an intermodal journey.

Alaska has always been a transportation nexus, serving as a landbridge for human migration more than 10,000 years ago and today as an air bridge for global trade. Anchorage is an important intersection for the airfreight industry, a fueling and transshipment depot located nine hours on the fly to 95 percent of the world's industrial population. Ted Stevens Anchorage International Airport historically ranks among the top cargo tonnage airports in the world. UPS, FedEx, and the U.S. military operate important bases in Anchorage.

While air connects Alaska to the world, intermodal stitches together 663,268 square miles of rugged terrain, linking urban to Inupiat, and coastal whitecaps to mountain snowcaps. Multimodal options afford shippers greater accessibility and reach, as well as opportunities to drive economy–a foremost challenge when transporting freight in, out, and through Alaska.

Compared to the contiguous United States–the Lower 48–Alaska's intermodal model is inverted, explains Joe Samudovsky, Alaska Air Cargo's director of cargo sales. "Generally in air intermodal transport, truck is the final leg," he says. "But in Alaska, surface infrastructure isn't very good, so barge to air and truck to air are required." Often, air transport is the final mile.

To say Alaska's overland capabilities are below average may be an overstatement. In many areas, infrastructure is non-existent. As a consequence, shippers and their transportation and logistics providers work together across modes to fill in gaps.

Lynden and its group of companies–which comprise 16 separate operating units that canvas land, marine, rail, air freight, and logistics–define Alaska's transportation dynamic.

"We're designed around intermodalism," says Alex McKallor, executive vice president of operations for Seattle-headquartered Lynden. "We provide that touchpoint, and help shippers meet their challenges."

Challenges are many. Intermodal presents difficulties for shippers even in the best circumstances. Whenever there are transitions between modes, visibility throughout the entire supply chain is compromised. In Alaska, conditions are often extreme, costs are always high, and time is precious. Given the state's geographic breadth, fickle weather, and the cost of transporting freight across great distances, ensuring seamless transportation handoffs is a necessity.

MODE À LA CARTE

Complying with regulatory mandates is challenging enough for U.S. shippers tackling interstate truckload moves. In Alaska, the rules are amplified.

"If you're shipping pharmaceuticals from California to Nome, each connection presents challenges," says McKallor. "Our job is to simplify them."

Stringent and specific government requirements apply to every shipment type and mode, whether it's the U.S. Coast Guard, Transportation Security Administration (TSA), or Department of Transportation (DOT). Anchorage-headquartered Carlile Transportation Systems, which provides trucking and logistics services in Alaska, moves a lot of heavy equipment to the oil fields on the North Slope. Oversized project cargo presents unique problems.

"When we're trucking tubular drilling components, we tie them down to meet U.S. DOT specs," says Tom Hendrix, manager of new business development at Carlile Transportation. "But the marine

lines require more rigorous measures. That's the nature of doing business in Alaska."

Lynden faces similar challenges. "We have to secure over-the-road flatbed materials per Federal Motor Carrier Safety Administration standards that comply with marine requirements," says McKallor. "Often, highway loads transshipped to barge require dunnage corrections."

A great deal of time and expense is lost transshipping freight between modes. Apart from regulatory considerations, even common consumer goods shipped in traditional containers create problems for companies.

"One of our retail customers was operating a crossdock facility with an 'Alaska staging area.' They were breaking down pallets in order to position freight into containers, and expending a great deal of labor," says McKallor. "To facilitate loading, we designed containers that are bigger and taller than a regular box–making containers more like trailers."

BEST OF BOTH WORLDS

Lynden works with shippers to maximize payloads and efficiencies. Multimodal allows it to use trucking and marine expertise to get the best of both worlds. Southeast Alaska's supply chain, for example, is far different from the mainland's. The marine highway replaces overland transport as the main transportation artery.

Alaska's mining, construction, and oil refining industries often require bulk rail shipments.

Lynden's Alaska Marine Lines has developed tactics to optimize cube and weight capacity on weekly strings between Whittier and Seattle. Its barges are set up to accommodate eight tracks of rail cars. The company has developed a racking system that allows it to position containers on top of rail cars to increase stowage.

On the air side of intermodal, the stakes are even higher. During times of the year when ice freezes over, air freight is the only option for shipping to the Arctic or Southwest Alaska. The bush supply chain is equally different.

"We take for granted how lumber, cement, sheet rock, and lettuce can move," says Samudovsky. "What may fit nicely on a barge or in a freight container may not fit as well in an aircraft."

Beyond the road system, most day-to-day freight moves in the summer. Year-round, the U.S. Postal Service's bypass mail program works with air carriers to deliver shipments to Alaskan outposts. "Lynden's Hercules aircraft run scheduled routes as part of that system," notes McKallor.

TSA requirements restrict certain cargo types. Some can't fly as freight on passenger aircraft; others have to move via freighter. There are regulatory reasons, but in Alaska, freight sometimes dictates, too.

For example, shippers moving heavy machinery bound for the North Slope must ensure sharp protruding pieces of metal are properly padded to prevent damage to an aircraft's skin. Alaska Air Cargo and the TSA impose stringent requirements on cargo, and the airline works with shippers to educate them on what is permissible and how shipments need to be packaged.

Although intermodal logistics offers advantages that provide greater accessibility and help shippers manage overall cost efficiency, users should conduct a total-cost analysis when managing their supply chains, explains Samudovsky. "Air freight's speed and dependability can help mitigate other costs, such as warehousing and inventory," he says.

MANAGING A CARGO PIPELINE

Shippers look to transportation providers such as Lynden, Alaska Air Cargo, and Carlile to make Alaska as much like the Lower 48 as possible. It's no small task. But what makes logistics extreme and challenging also creates opportunity. Mode access and neutrality, and the great distances freight moves in, out, or within Alaska, allow shippers and carriers greater flexibility in responding to demand.

For example, Lynden's dynamic routing solution utilizes trucks, ships, barge, ferry, and aircraft in any combination to offer shippers door-to-door speed, dependability, and economy to any point in Alaska–regardless of shipment type or size. It allows shippers to slow down shipments if they are moving too fast or expedite if they are running late.

"It gives us the flexibility to manage the supply chain flow and helps shippers save money over the entire move," says McKallor. As a complement, Lynden has opened an Anchorage warehouse facility

to position forward inventory; pick, pack, and pull goods from the DC; and enable customers to meet rapid-delivery needs.

Normal container shipments are one thing. Complexity builds when shippers tackle project cargo logistics, which is common in Alaska's mining, construction, and oil refining industries. When multiple vendors are involved, and consignees require just-in-time shipments so that on-site operations and labor remain active, managing mode and demand responsiveness is key.

Lynden often acts as a third-party logistics (3PL) provider for complex oil field projects that require multimodal combinations within compressed construction schedules.

Carlile, which handles a high volume of bulk freight truck shipments bound for the North Slope, uses intermodal in four ways: rail cars that roll on and off barges, common for drilling equipment that moves through Whittier; direct to barge through Anchorage, Seward, and Valdez; container ships such as Horizon Lines in Anchorage; and roll on/roll off (RoRo) service with Totem Ocean Trailer Express (TOTE), also in Anchorage.

TOTE operates two cargo ships between Tacoma and Anchorage, and provides overland highway and intermodal connections throughout greater Alaska, the Lower 48 states, and Canada. Its ships can handle 550 forty-foot equivalents (FEUs) and 250 vehicles, depending on cargo mix. Transit time between Anchorage and Tacoma is about three days.

TOTE vessels carry an assortment of product ranging from consumables in containers to automobiles and heavy equipment. About 95 percent of freight moving via water into the Alaskan interior moves with either TOTE or Horizon Lines.

One challenge for TOTE and other transporters is that Alaskan inbound shipments dominate the trade. Minimum volume moves southbound–mostly fresh, frozen, and canned fish, household goods, and cars, says Bill Crawford, a sales manager for TOTE.

Using TOTE's RoRo fleet allows shippers and other transportation service providers to drive just about any type of freight–whether it's a bulldozer or a trailerload of household goods–onto a ship.

FROM RAIL TO SHIP TO ROAD

For companies such as Carlile, and their customers, this type of modal altruism is business as usual in the Alaskan trade. And it helps all parties involved manage supply chain flows and demand responsiveness.

"The drill pipe industry moves a lot of heavy bulk by rail–from Houston to Seattle, for example–then rail on barge to Whittier, rail north to Fairbanks, then by truck to Prudhoe Bay," says Hendrix. "Railcars can carry 200,000-pound loads."

For Carlile, bulk product shipments moving in and out of Alaska by rail are transferred via the Alaska Railroad system. Rail barge service in Whittier marks the entry or departure point, and shipments are then transferred to highway at Carlile's transfer facility in Fairbanks.

Because distances are so vast, shippers moving

Containers transition from rail to barge in Whittier.

product into and within Alaska can make business and cost decisions by mode on the fly.

"If an oil field module is bound for the North Slope and the schedule improves, Carlile can put it on a truck and get it to Fairbanks in 56 hours using a sleeper team," Hendrix says. "Alternatively, it can steam from Seattle to Anchorage, which can take anywhere from five to seven days."

Between Houston and Prudhoe Bay, Seattle becomes a supply chain pivot; modes and routings can be tweaked accordingly, depending on time and cost requirements.

"If an oil company changes the design of a well and needs components right away, Carlile can truck it 4,600 miles from Houston to Prudhoe Bay," Hendrix explains. "By comparison, a steamship line would take 45 days, with rail and truck connections in Whittier and Fairbanks, respectively."

But if a pipeline shuts down and it's gushing money, surface transport doesn't cut it, explains Samudovsky. "That's why Carlile is our customer."

FORGING A TRANSPORTATION FRATERNITY

The visage that awed John Muir more than one century ago hasn't changed much–apart from the strings of passing Alaska Marine Line barges laden with assorted railroad cars, automobiles, camper vans, containers, and out-of-the-box project cargo. Or the sound of bush planes buzzing above.

For a state as vast and remote as Alaska, where even the capital is only accessible by air and water, community is the common denominator that links places such as Petersburg, Skagway, Seward, Homer, and Prudhoe Bay to Anchorage and Fairbanks, Seattle, and the rest of the world.

Because of the rich connectivity between modes, Alaska's transportation and logistics sector is an exclusive fraternity with a unified goal.

"Customers and residents rely on an efficient means of transportation to move goods," says Samudovsky. "We recognize our unique place in the Alaska community and the role and services we provide." ■

HARNESSING THE WINDS OF CHANGE

The wind power industry blows gusts of opportunity for project sites, equipment manufacturers, and specialty transportation providers.

In five years, the landscape surrounding Dumas, Texas, will be completely transformed by hundreds of towering wind turbines, predicts Mike Running, executive director of the Dumas Economic Development Corporation. Jutting up from the flat expanse of this Texas Panhandle locale, the wind farms currently being developed and planned in the region could generate several thousand megawatts of power upon completion. "Dumas is in the heart of some of the best wind in the world," boasts Running.

The city is not alone. Throughout the Wind Corridor–loosely defined as the states of Nebraska, Kansas, Oklahoma, Missouri, Arkansas, Louisiana, Texas, and New Mexico–and even in surprising places such as New York and Maine, wind turbines are spinning the country into a new phase of energy generation.

The United States had 35,159 megawatts (MW) of installed wind power generation as of January 2010, according to the U.S. Department of Energy's Wind and Water Power Program–enough to serve more than nine million homes. "Greater use of the nation's abundant wind and water resources for electric power generation will help stabilize energy costs, enhance energy security, and improve our environment," the agency notes.

The wind power industry is growing quickly, with an estimated 40 percent of all new generation capacity added to the U.S. electric grid in the last few years coming from wind power projects, according to the American Wind Energy Association. Electric utilities across the country are increasingly adding wind energy to their power supply portfolios as a clean, inexhaustible, and domestic source of electric generation, the association says.

Utilizing Wind Energy

One of those forward-thinking utilities is Nebraska Public Power District (NPPD), the state's largest electric utility, which delivers power to about one million Nebraskans. While NPPD leverages a diverse mix of energy sources–including coal, nuclear, gas and oil, hydro, and wind–to service its customers, it is enhancing its focus on renewable energy sources.

"NPPD's board of directors has set a goal to produce 10 percent of our energy with renewable resources by 2020," says Dennis Hall, NPPD's manager of economic development. A large chunk of that will come from wind power projects.

NPPD has invested about $100 million in wind generation throughout Nebraska since 1995. (This value does not include $250 million of capital investment by others in operating wind farms with which NPPD has made long-term agreements to purchase output.) It owns and operates a 60-megawatt facility with 36 wind turbines near Ainsworth, Neb., as well as a smaller facility outside Springview, Neb. The Springview site, erected in 1997 as the state's first wind facility, is currently being revamped and will be operational again later this year.

NPPD also purchases wind power from three Nebraska wind farms: the 81-megawatt Elkhorn Ridge Wind Facility in Bloomfield, Neb., near the South Dakota border; a 54-turbine, 81-megawatt facility near Petersburg, Neb.; and an 80-megawatt wind farm located in central Nebraska near the city of Broken Bow.

"There has been a significant amount of development and interest in the wind industry in Nebraska, so we are

Wind power equipment manufacturer Katana Summit produces tubular wind towers in its Columbus, Neb., facility.


GEODIS
wilson

expecting more development as time goes on," says Hall, noting that the state has made good progress toward its goal of meeting the 10-percent-by-2020 mandate for renewable energy use.

Embracing wind energy is also helping the state lure wind power equipment companies, such as Katana Summit, which is now manufacturing tubular wind towers in Columbus, Neb. The company's facility covers 75 acres and more than 250,000 square feet of building space, and represents the largest wind-related manufacturing investment in Nebraska to date.

"Katana Summit and other companies locating here can take advantage of Nebraska's location, which is close to the significant wind resources in the Northern Great Plains and Great Plains states," says Hall.

"This area offers a great workforce adept at fabricated metals, and has an amazing transportation and logistics system: two Class I railroads–BNSF and Union Pacific (UP)–and a number of shortline railroads that make it easy for wind equipment manufacturers to transport their goods," he adds.

In addition, Nebraska offers significant tax incentives to companies that locate manufacturing plants and create jobs in the state.

Ahead of the Curve in Joplin

Another area with an ahead-of-the-game utility company is Joplin, Mo. "Empire District Electric Company serves the Joplin region, and it has been ahead of the curve for investor-owned utilities in the country," explains Rob O'Brian, president of the Joplin Area Chamber of Commerce. "It is already meeting Missouri's standard for deriving 15 percent of energy from renewable sources by 2015."

The utility's commitment to renewable resources has helped the regional economic development partnership formed by the Chamber pitch the region as a great location for a variety of wind energy businesses. With a solid base of local companies operating in the logistics realm, O'Brian sees the Joplin region, which also includes part of southeast Kansas, as an ideal supply chain hub for the industry.

"We've been talking with many wind equipment manufacturers about the area's great supplier base and easy transportation access," he explains.

Truck and Rail Connections

That transportation access includes U.S. 71, a north-south connector highway that runs from Canada to the Gulf of Mexico, and Interstate 44, which connects the Midwest to the Southwest. The Joplin region also boasts several local trucking firms that specialize in overweight and oversize products, as well as multiple Class I and shortline railroads. The area's highways and shortlines also provide access to the Port of Catoosa in Tulsa, Okla.–an inland port that handles barge traffic to the Mississippi River and Gulf Coast ports.

Existing Joplin companies such as Able Manufacturing & Assembly, which makes components for wind turbines; and FAG Bearings, a subsidiary of Schaeffler Group USA, which produces precision bearings for wind turbines and gear boxes, are already taking advantage of the central location to service the wind industry.

"In addition, some of the area's smaller precision machining and electronics companies are gaining activity in the wind business," O'Brian notes.

Adding to the Joplin region's list of wind energy-friendly assets is the Missouri Alternative and Renewable Energy Technology Center (MARET) at Crowder College in nearby Neosho, Mo., which offers training programs dedicated to producing and maintaining wind turbines. Also, the Kansas Technology Center in Pittsburg, Kansas, offers training in applied manufacturing engineering, including electronics and metal fabrication.

Supporting Wind Energy — Onshore and Off

Delaware's Port of Wilmington is located in the middle of the largest U.S. energy-consuming population, and its terminal gates lie one-quarter mile from I-95 and connections to the rest of the nation. It also sits alongside the Atlantic Ocean, where offshore wind energy development is planned. Clearly, the port is well-positioned to serve the growing wind power industry.

"The Mid-Atlantic region is ripe for development of wind turbine farms," says Tom Keefer, deputy executive director for the Port of Wilmington. "Some 2,500 megawatts of offshore wind energy projects are planned along the coasts of New Jersey, Delaware, and Maryland. Our port is uniquely positioned to provide logistics support for developers of these projects."

The port first began receiving shipments of wind energy components in 2001. Since then, it has handled hundreds of shipments of wind turbine blades, managing the process by which the blades are discharged from the ships, taken to a staging location, then loaded on either specially configured trailers or rail cars that take the blades to the ultimate project sites.

The Port of Wilmington provides a convenient transfer point for equipment shipping to both onshore and offshore wind farms.

"We make sure this is done efficiently and safely so there is no damage to the costly wind turbine blades," Keefer notes.

"The port offers six berths capable of handling these components; more than 30 acres of land to store components; specialized cargo handling equipment to unload the ships and load the trucks; as well as labor that is experienced in handling these fragile, oversized, and expensive components," he adds. "Plus, two Class I rails serve the port."

For shipments bound for onshore wind farms, the port's location provides another advantage: the State of Delaware offers quick and adept handling of the necessary permitting and escorts that must accompany truck shipments of oversized wind energy components. The quick turnarounds are especially helpful because many wind farm projects operate on a just-in-time philosophy, so timely delivery of the components is key. "The ease, efficiency, and cost-effectiveness of moving these goods from the port to the ultimate project site is critical," Keefer says.

Keefer also sees the port as an important logistics partner for developing offshore wind farm projects. "These developers need a logistics hub that is close to the project locations; where they can receive components coming in from overseas as well as from domestic manufacturing sites; where they can store and stage components, then easily load them on special vessels that transport the components to the offshore development sites," he explains. "We can offer the whole package to serve as the logistics hub to support these offshore projects."

In addition, Missouri Southern State University recently opened the Missouri Center for Advanced Power Systems Research in Joplin. The center, in concert with Eagle Picher Technologies, will research power storage issues that could help the renewable energy industry.

"Having capacity to store wind energy to meet demand when the wind is not blowing is critical," O'Brian explains.

Of course, utilities have not cornered the market when it comes to attracting wind development. A variety of cities and states in the Wind Corridor and surrounding areas have rolled out the welcome mat to companies involved in the wind energy industry.

For instance, Dumas – which was recently named by *Expansion Solutions* magazine as one of the top five U.S. locations for the wind industry – is rapidly becoming a destination for companies servicing the wind sector.

The Texas city has attracted three wind-related companies over the past few years: an engineering firm that does environmental work for area wind farms; Iowa-based Anamometry Specialists, which gathers the measurement data required to develop wind farms; and an industrial paint company that applies seal coating on wind towers to prevent corrosion.

Investing in Wind

In addition to the city's proximity to several wind farms – the Little Pringle, Exelon, and Valero Sunray wind farms are all located within a short drive – Dumas offers several strong assets for companies interested in servicing the wind energy sector. "Our city invested $69,000 to develop a wind and renewable energy technical training program at the local two-year college," Running notes. "The program produces workers trained to install, maintain, and service wind power equipment."

The city is also constructing a new 20,000-square-foot speculative business center to help locate some of these

wind energy-servicing companies, and plans to install a wind training tower in the business park. In addition, Dumas is working with nearby Amarillo College to add to the business park a 30,000-square-foot technical training center for renewable energy businesses.

Checking the Transmission

The state of Texas has also invested in several electric transmission programs that will help the Panhandle and South Plains areas attract wind-related business activity. (Electric transmission lines are needed to move the wind power produced by the wind farms into the power grid and out to electricity consumers.)

These projects will improve Levelland, Texas' ability to position itself as a supply chain and logistics area for the wind energy sector, says Dave Quinn, executive director of the Levelland Economic Development Corp. "We see a future where companies transport wind energy-related products via rail into Levelland and distribute throughout the region from this area via truck," he says.

"As each of these electric transmission lines come online and more wind farms open, it will be increasingly important for companies supplying the raw materials that go into wind farm production–everything from steel rebar to gears and components for the turbines–to have a place they can easily ship to and from," he adds. "Levelland can be that place."

The newly completed, $8.6-million Levelland Industrial Rail Park offers more than four miles of track to entice companies seeking immediate access to the large rail shipments typical of the wind sector. In addition, Levelland is well-positioned for truck transportation: U.S. 385 and Highway 114 both run through the city, providing easy access to larger markets such as Amarillo and Midland-Odessa, Texas.

"Also, wind sector firms can use a Levelland location to service major wind farm development to the north, south, and east," Quinn says. "If you draw a 500-mile radius around Levelland, you capture the wind industry growing in both Texas and New Mexico."

Another reason Levelland attracts wind-related firms is the region's skilled labor. With its strong base of traditional energy-sector jobs, the area boasts plenty of machinists, welders, and mechanics familiar with the energy business.

"Their skills are easily transferred into the renewable energy sector," Quinn notes.




Oklahoma's Windy Future

With more than 700 megawatts currently in operation, and a projected 38,000 megawatts by 2030, the National Renewable Energy Laboratory projects Oklahoma will be the nation's second-largest wind power generator. It's not surprising that Ardmore, Okla., in south central Oklahoma, is seeking to lure wind energy-related manufacturing activity. The city is touting its assets to potential wind energy businesses that could capitalize on its location and proximity to both wind farm development and major business markets.

"Ardmore is located on Interstate 35, approximately 90 miles from both Dallas and Oklahoma City, and has a population of about seven million people," says Brien Thorstenberg, vice president, development for the Ardmore Development Authority. "The area offers a great location and workforce for wind power equipment manufacturers."

One wind tower manufacturer has already located about 30 miles from Ardmore, and Thorstenberg believes others will soon follow. A firm manufacturing wind components in Ardmore would be able to easily transport those goods to the wind farms because of the city's location on the Interstate, he notes. "Also, because of Oklahoma's incentives and tax structures, many companies have found it more cost-effective to reach the Dallas-Fort Worth market by locating in south Oklahoma," he adds.

The city's other logistics and transportation assets for wind power equipment manufacturers include four industrial parks owned by the Ardmore Development Authority, and the Ardmore Municipal Airport, which boasts a 9,000-foot runway capable of handling fully loaded cargo planes. "The airport also has three rail spurs," Thorstenberg notes.

Ardmore is also home to the Samuel Roberts Noble Foundation, a non-profit foundation devoted to research in agriculture, plant biology, and forage improvement. The organization employs more than 100 PhDs and some 400 workers, notes Thorstenberg. "The area's labor base has advanced skills that could be valuable for wind turbine, tower, or blade manufacturers," he says.

Taming Transport Challenges

While there seems to be no shortage of cities and regions willing to play host to the wind energy sector and its related businesses, the list of companies that can adequately meet the industry's transportation needs is considerably shorter. The components that go into wind turbines are often big, heavy, wide, delicate, and high-tech–all qualities that create specialized transportation demands.

The American Dream Alive and Well in Levelland

The epitome of the American dream, David Duffee founded Levelland, Texas-based Independent Electric out of the back of his pickup truck. For inventory storage, he stacked boxes of electrical parts in his mobile home.

David & Janet Duffee with the Independent Electric Crew at Grand Opening

Fourteen years later in late 2010, Duffee completed a 25,000-square-foot facility to house the thriving company's offices, warehouse, and training space to institute local trade courses. Located in Levelland's new industrial rail park—the city's hotspot for development—Duffee is on track to continue his company's success and give back to the community that's been integral in establishing his business.

From the Ground Up

Duffee entered the electrical industry in 1976 as a 16-year-old apprentice in Dallas. Spurred by a strong construction industry and lagging oilfield, in 1994, Duffee founded Independent Electric, a company that provides electrical services for commercial and institutional buildings, including restaurants, motels, schools, and hospitals. What started as a company of one now has 18 employees, including Duffee's wife, Janet.

When Duffee secured his first architectural contract for $13,000 of electrical work, he was elated. (It felt like $13 million, he says.) Now, Independent Electric is regularly completing multiple jobs that range from $1 to $2 million, and he works for clients—including McDonald's, Harley Davidson, and Levelland's new Mallet Event Center—across a 300-mile radius around Levelland.

Capitalizing on the company's success, in December 2009, Independent Electric broke ground on the $800,000 state-of-the-art, multipurpose facility at Levelland's $8.6 million, 300-acre industrial rail park. The Duffees contributed a private capital investment of approximately $750,000, and Levelland Economic Development Corporation (LEDC) gave $45,000 toward the new build. "LEDC and their money was the catalyst for the project," Duffee says. "Without them, we might not have moved forward with the facility. We definitely would have waited, and we wouldn't have built to the scale that we did."

The community's willingness to invest in future growth boosted the Duffees' confidence in their personal outlay to expand the business. "The town knows that sometimes it has to spend a little money to get businesses started, but they know it's an investment. LEDC and city officials are pro-business. They want businesses to succeed, and it shows," Duffee says.

Primed for Success

The facility's railway location will allow Independent Electric easy access to large loads of equipment and will provide a place for the company to store heavy equipment. Duffee is also excited to be in close proximity to the rail park's other businesses. "We have some really good businesses there to work with. It's the place to be right now. When other good businesses are around, it helps us all," Duffee notes. "Success breeds success," adds Dave Quinn, executive director of LEDC. "David and Janet Duffee exemplify the type of success we strive for in Levelland. The business activity they will create in the new rail park will prime the pump for future development. You can't help but be impressed by their facility. They are the kind of neighbors others want to build around."

Because of the Duffees' expansion, Quinn is starting to see a chain reaction. "The investment made by Independent Electric raises the confidence level of other Levelland businesses. These local companies have watched the Duffees' progress and have begun to initiate capital investment projects as well," he says. "David is a prime example of someone who is successful because he loves what he does. He follows the mantra that givers gain. He understands that hard work is necessary to be successful, yet he finds balance by giving back to the community," Quinn continues.

You can read more about Levelland at GoLevelland.com/Blog and you can follow them at Twitter.com/Levellandedc

HARNESSING THE WINDS OF CHANGE

Going Where the Wind (Project) Goes

With experience serving the wind power industry since 1997, international logistics and freight management company Geodis Wilson is a veteran at providing a full menu of services to wind power OEMs and suppliers. "We provide international freight management of expedited and cost-sensitive air and ocean freight; project cargo services; a buyer's consolidation program; customs clearance; and EDI to interface with our wind power shippers' transportation management systems," says Henrik Funk, global manager, wind energy projects at Geodis Wilson.

The company's network of worldwide locations makes it a natural to serve the global wind power industry. Geodis Wilson works to coordinate flows between OEMs, suppliers, and wind power project sites within and between regions in Asia,

Geodis Wilson coordinates equipment flow among manufacturers, suppliers, and wind power project sites worldwide.

the Americas, Europe, the Middle East, and Africa. As such, Geodis Wilson's wind-related shipments have run the gamut from temperature-controlled epoxies used for equipment fabrication to shipping completed wind turbine blades to installation sites; sending equipment and machinery to production lines; and consolidating shipments from multiple suppliers into ocean containers to supply factories producing nacelles.

This diversity of services has led to some interesting transportation arrangements. "We recently chartered an Antonov Airline AN-225 to fly a set of prototype windmill blades that measured 138 feet long," Funk notes. "This was one part of a complete turnkey operation that Geodis Wilson executed from a manufacturing site in China to a test site in Europe."

Wind power OEMs and suppliers often turn to Geodis Wilson for its depth of experience solving the industry's unique transportation challenges. "We know how to meet the challenges of moving the sector's finished components for production in a just-in-time operation," Funk says. "We do this through our personnel, many of whom we've recruited directly from the wind power industry."

A single section of a wind tower can span 200 feet long and weigh 225,000 pounds; a nacelle–which houses all the wind turbine's generating components–often weighs about 150,000 pounds.

"Transporting wind tower components via truck requires investment in specialized, expensive equipment, which can be a barrier to entry for many carriers," says John Collins, executive vice president, specialized freight services for Landstar, a carrier that offers transportation and supply chain services to the wind energy sector.

Landstar provides over-the-road transportation for a variety of wind energy manufacturing companies, shipping bulk components including wind towers, blades, nacelles, and other components from their origin at a port or supplier's location all the way to the wind farm sites. The company has been involved since the industry's inception.

"Landstar has a broad network of agents and capacity that was already involved in transporting over-dimensional goods and superloads, so the wind industry was a natural fit," Collins explains.

The company's expertise comes in handy for shippers trying to navigate the myriad restrictions involved in transporting wind power equipment by truck. Because of the loads' size, weight, and dimensions, Landstar must submit route surveys in advance to obtain permits from the areas the shipments travel through.

"Every truck needs a unique issued permit, and some trips require separate permits from cities, counties, and states," Collins notes. "You may need three permits for just one mile of road."

The trucks also have to be escorted by pull cars, often both in front and back, and are restricted as to when they can travel: only during daylight hours, and not on holidays. Frost laws also come into play for some shipments. Because of the shipments' weight and potential damage to the highways, these trucks cannot drive on certain roads until frost laws are lifted.

"These restrictions are tough because trying to park a 200-foot trailer can be a challenge," Collins says.

Conditions during wind component transportation's last mile also make it crucial to work with an experienced carrier. "Wind farms are placed in remote locations, so you need drivers who are capable of handling large loads on secondary and gravel roads," Collins says.

These challenges mean a lot of planning goes into every shipment, and lead times are often extensive. This is where Landstar's experience pays off. "Landstar has been doing this for years, so we have a good sense of the routes that are most efficient and that the states will allow," Collins says.

Some shippers in the wind power sector choose to skip the headaches of over-the-road transportation entirely and opt for rail shipping as a cost-effective, environmentally friendly means of transportation, with fewer restrictions and planning concerns.

Turning to Rail

"Wind power components are large, heavy objects that move long distances, so shipping via rail makes sense," says Beth Whited, president of Union Pacific Distribution Services (UPDS), a wholly owned subsidiary of Union Pacific Railroad (UP) that provides a variety of value-added rail logistics services. UP and UPDS have been providing rail transportation and logistics services to the wind power industry since 2007.

"UPDS offers a port-to-door or door-to-door package," Whited explains. "We help shippers manage their equipment and the flow of railcars so they are available when the customer is ready to load; we hire riggers and crane operators to load and unload the components; we monitor the shipments in transit through our proprietary *WindVision* software, which tracks components at a SKU level all the way through the supply chain; and we run distribution centers near the wind farm sites, where we manage the train loads of components that come in, are offloaded, and trucked to the job site."

Because a lot of wind component production takes place offshore in Europe and Asia, many of the shipments UPDS handles come into the country via ocean and must be picked up at port, taken off the ship, and loaded either directly on to rail or a truck destined for a rail location for inland transportation. Domestic production of certain wind components–such as towers and blades–has started to grow, so the company is also handling many shipments that originate at manufacturing plants in the United States.

Either way, the complexities of these heavy and over-dimensional shipments require a transportation provider with specialized experience and equipment. "We use heavy-duty flatcars for the nacelles. Blades are lighter, but they are made of composite materials, have unique dimensions, and require specialized devices to hold them in place," Whited says. "Towers are also transported on customized flatcars, and have to be bolted down in a way that doesn't create stress on the metal during transit."

To ensure all this customized transportation is done correctly, UPDS and UP work with engineering firms that design fixtures for fastening the components to the rail cars.

The company has also begun to work with wind shippers on manufacturing and design concerns that impact transportation. "We are trying to educate shippers to understand that the way they design their components can have significant ramifications for their transportation costs," Whited explains.

The industry's growth does not worry UP. "We have the available capacity, and we're excited to continue providing green and cost-effective services to this growing industry," says Whited.

The Overseas Connection

Because so many wind turbine components are still made overseas, manufacturers and wind developers must determine the best way to transport these components into the United States before they tackle the road-vs.-rail decision for getting them to the wind farm site. Atlantic Container Line (ACL) believes a roll-on/roll-off (RoRo), just-in-time approach is the most reliable and cost-effective option. The carrier, which has served the wind industry for five years, offers weekly just-in-time service from Europe to North America.

ACL's unique strategy is to use RoRo methods and move smaller shipments from the factory to the installation site without the interim accumulation and storage–a just-in-time approach. With this method, wind power components flow seamlessly from the overseas 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.

"RoRo is the safest and most inexpensive way to handle and transport oversized or special project cargo," explains John Fricker, general manager, special project and RoRo Europe for ACL. "The shipments often move as one piece using specialized trailers from origin to port to destination, which requires less physical handling. Also, they are not exposed to water or the elements because the cargo is secured in ACL's garage decks."

Although it sounds like a simple strategy, executing these moves is anything but simple. A recent ACL shipment, for example, included units measuring 31 feet long by 12 feet wide by 13 feet high destined for a U.S. wind farm.

Loading the equipment is no easy task. "At the origin port, the components are loaded onto roll trailers used in our RoRo decks – called mafi trailers – and positioned according to the manufacturer's specifications," Fricker explains. "Some components need to

Garage decks on ACL's RoRo ships protect wind power equipment from the elements during transit.

be angled on the trailer and welded into place. The mafi trailers then roll aboard the vessel and are lashed in place for the journey across the Atlantic."

The nacelles carry an added requirement, Fricker notes: the mechanism must be rotated regularly during transit. "Our 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," he says. "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."

The complex process nets a smooth ride for ACL's shippers – and shows no signs of slowing down. "We see a strong future for the wind power business, based on interest fueled, at least in part, by federal incentives," Fricker notes.

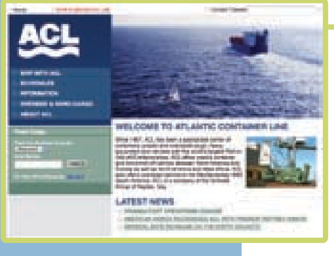
Many in the wind power industry share Fricker's perspective. The focus on sustainable and renewable energy sources at local, state, and federal government levels, combined with educated consumers seeking green solutions, and manufacturers and carriers with the skills to power this growing industry, add up to one conclusion: wind power will continue to blow strong. ■

WIND LOGISTICS WEB_CITE CITY

HARNESSING THE WINDS OF CHANGE

Ardmore Development Authority • www.ardmoredevelopment.com

The Ardmore Development Authority, Okla., has identified the wind industry as a target to attract companies to the area. The wind corridor (an area identified as having the strongest wind in the nation at a height of 50 feet) is located approximately 100 miles to the west of Ardmore. With its centralized U.S. location, immediate proximity to wind projects, and position in the heart of the wind corridor, Ardmore is an ideal site for tower and blade production, turbine component manufacturing, and repair and maintenance operations.

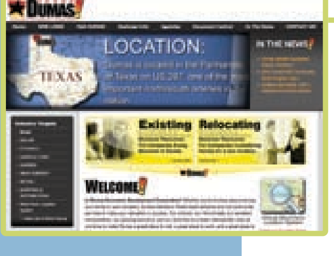


Atlantic Container Line (ACL) • www.aclcargo.com

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 RoRo 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, the Black Sea, Middle East, and Africa.

Delaware Economic Development Office • www.dedo.delaware.gov

The Delaware Economic Development Office (DEDO) attracts new investors and businesses to Delaware, promotes expansion of existing industry, assists small and minority-owned businesses, promotes tourism, and creates new and improved employment opportunities for all Delaware citizens. Focusing on high-growth industries, DEDO believes the offshore wind industry brings near-term jobs and can transform Delaware's economy in the long run, providing good-paying, skilled employment opportunities. Delaware understands the wind industry's needs—from power purchasing, to supply chain, to policies.



Dumas Economic Development Corporation • www.dumasedc.org

Dumas, Texas, is surrounded by six sites for wind energy. Each site has 10 megawatts of power, with eight to 16 turbines. You can see wind turbines from U.S. Highway 152 from Dumas to Borger; U.S. Highway 287 from Dumas; and FM 281 from Etter to Sunray. The sixth site is being erected adjacent to the Valero-McKee Refinery. Wind energy is a big part of the Texas Panhandle, positioning Dumas to work with additional developers in the area on several proposed wind farms.

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.

Joplin Area Chamber of Commerce • www.joplincc.com

Thinking of Joplin, Mo., as the next site for your headquarters or distribution center? Your first stop should be the Joplin Area Chamber of Commerce's Web site. You'll find a complete business profile of Joplin, including population, location, infrastructure, labor, education, real estate, and cost-of-living statistics. The Joplin Area Chamber of Commerce is a private, not-for-profit organization of business and professional people committed to improving the economic prosperity and quality of life in the Joplin area. Member of NASCO.

WIND LOGISTICS WEB_CITE CITY

HARNESSING THE WINDS OF CHANGE

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.

Levelland Economic Development Corporation • www.golevelland.com

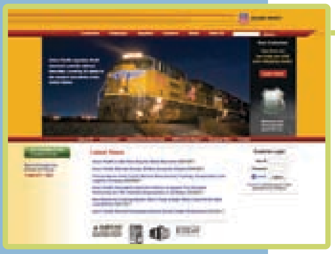
As the search for more environmentally friendly sources of energy continues, the Levelland Economic Development Corporation is leveraging the momentum and investment in wind, solar, and biofuels. Levelland, Texas, is growing its economy by positioning the community as a provider of logistical advantages to companies building the infrastructure needed to deliver green energy to market more efficiently.

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

Nebraska Public Power District's (NPPD) service area, located in the center of the major wind energy resource area in the United States, offers significant advantages to manufacturers of wind energy projects and related industries. NPPD's communities have available industrial sites and buildings providing access to the nation's rapidly growing wind power generation industry, a quality workforce, low-cost power, and a business-friendly environment.

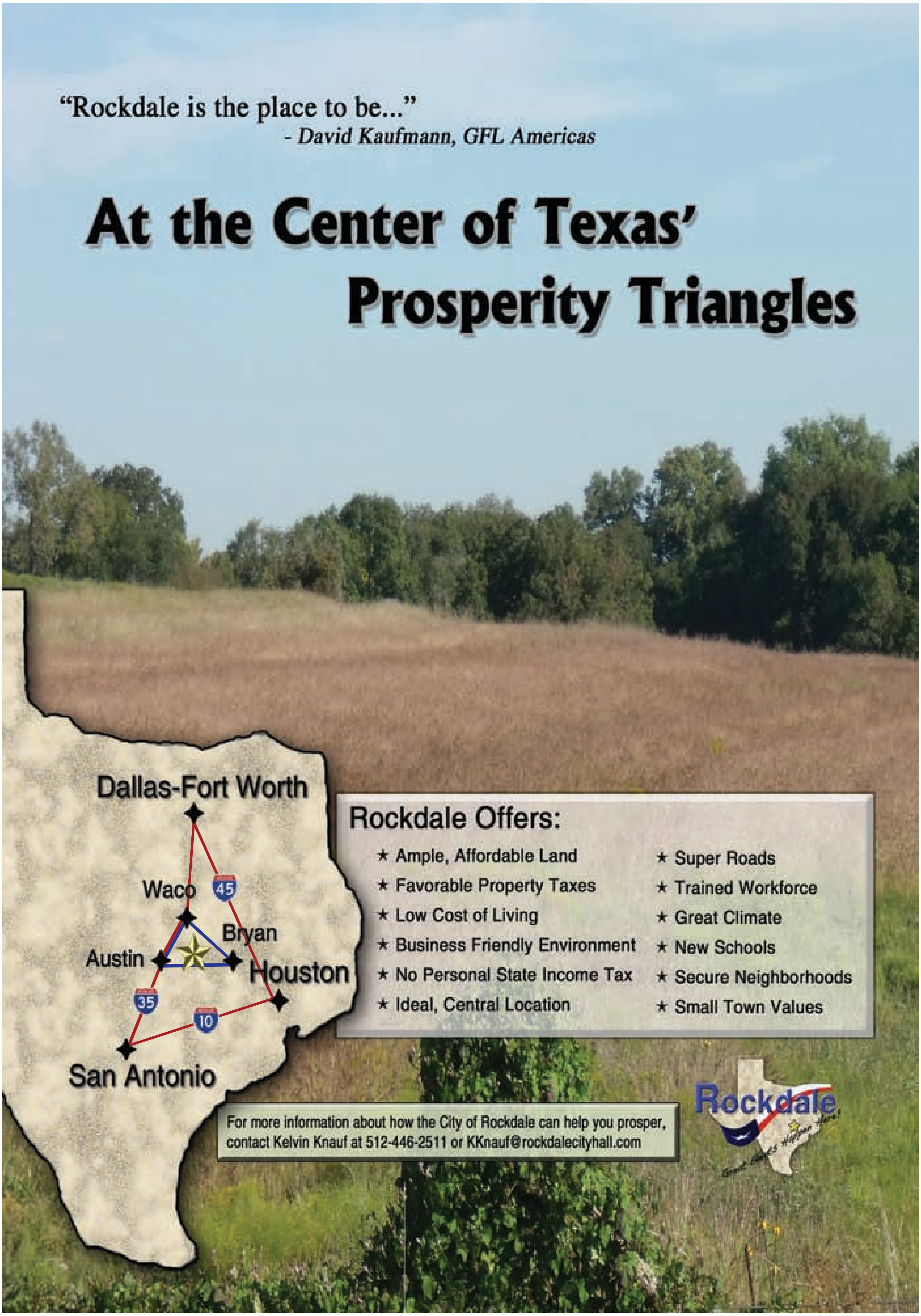
Port of Wilmington, Delaware
www.portofwilmington.com

From supply chain logistics, to special road permitting and escorting, to favorable renewal energy policies and support for relocating businesses, Delaware and its deepwater seaport in Wilmington are ready to serve the needs of Mid-Atlantic land-based and offshore wind energy projects. Delaware's port has extensive experience handling wind energy components, the equipment to load/off-load this fragile and high-value cargo, as well as ample berths for ship discharge, and terminal land for staging, storing, and distribution.



Union Pacific • www.up.com

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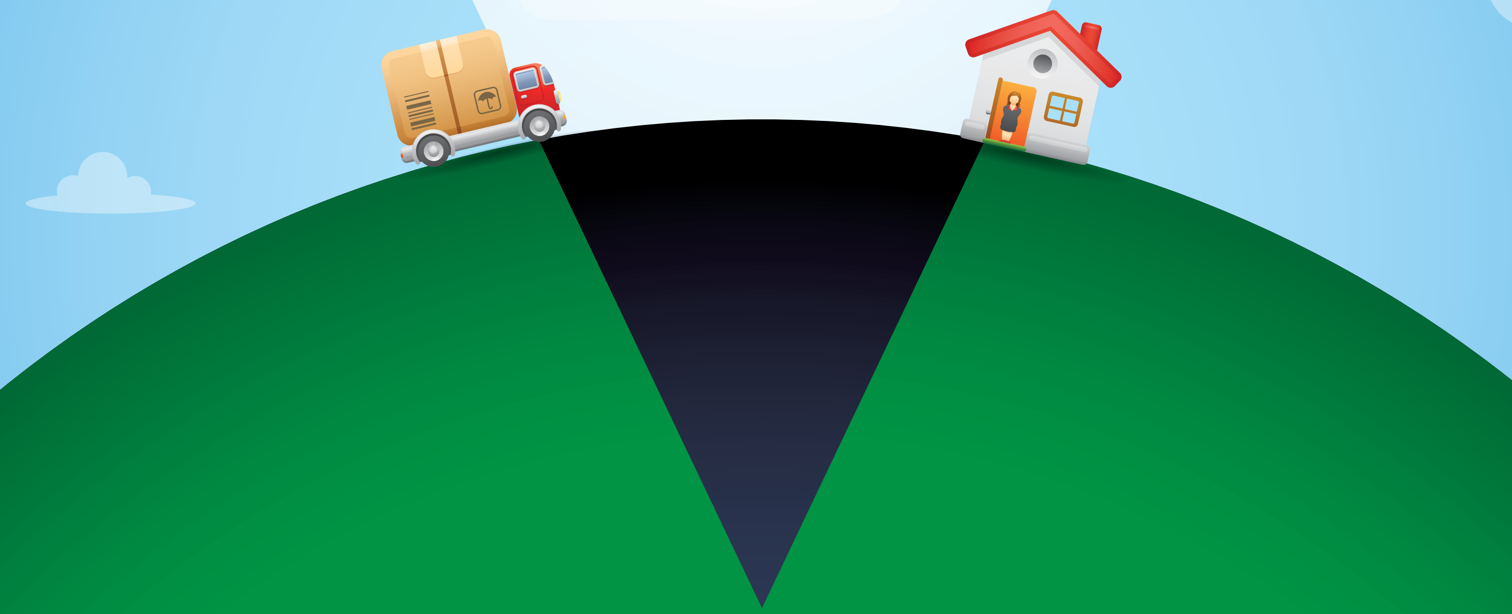
THE LAST MILE'S LASTING IMPACT



From traditional heavy goods shipments to the new influx of e-commerce-fueled home deliveries, the last mile plays a crucial role in the supply chain. Get it wrong, and you risk alienating consumers; get it right, and you may just gain a customer for life.

By Amy Roach Partridge

As anyone who has been through it knows, remodeling a kitchen can be a stressful experience. Expenses run over budget, design ideas don't pan out, and the timeframe stretches longer than anticipated. Companies involved in delivering crucial kitchen items, such as cabinets and appliances, know they need to hit the mark with delivery–or make life worse for already stressed-out homeowners and contractors.

"The last thing consumers want is their new kitchen cabinets arriving late, incomplete, or damaged," says Ron Drenski, director of corporate logistics for Masco Cabinetry, a Michigan-based company that manufactures cabinets under the KraftMaid, Merrilat, and Quality Cabinets brands.

"When consumers remodel and spend a significant amount of money to install their dream kitchen, all the components need to be delivered on time and damage-free," he says. "Anything else, and the relationship between our company, the customer, and, ultimately, the end consumer can be negatively impacted."

That's why Masco considers "last-mile" or "final-mile" delivery–the last leg of the supply chain, in which consumer products are delivered to the home–a crucial part of its supply chain. "Our delivery network is part of our value proposition to customers and their consumers," Drenski says, noting that Masco received a 2009 first-place rating from JD Power & Associates, based on its delivery model and service standards.

To ensure cost-effective, last-mile delivery that provides high-quality service for customers, Masco–which sells its cabinets through home improvement retailers as well as a network of more than 2,000 independent dealers–partners with two logistics providers that specialize in last-mile delivery: 3PD, a Marietta, Ga.-based company, and Cardinal Logistics, headquartered in Concord, N.C. Masco chooses one of the two partners to deliver its last-mile shipments based on which region of the country an order is being delivered to.

Because both 3PD and Cardinal perform last-mile deliveries for a variety of customers, they can offer Masco a breadth and depth of delivery options, physical assets, and cost efficiencies superior to what Masco could achieve by managing last-mile operations on its own. "3PD and Cardinal are able to spread fixed overhead costs across not just our products, but other companies' products as well, which reduces our costs," Drenski explains.

"Another advantage of outsourcing last-mile is having a transactional-style business relationship," he adds. "If our volumes go up or down, our providers adjust; I still pay the same price per unit, which brings a great financial benefit. Also, when volumes fluctuate, we don't have underutilized assets like we would if we handled deliveries in-house."

These benefits prompt many companies to outsource last-mile operations to third-party logistics providers. While logistics challenges abound at every link of the supply chain, the last mile carries some specific hurdles and characteristics that make it particularly tricky.

For example, it is not always easy to maneuver a 28-foot trailer along residential streets, notes Jerry Bowman, Cardinal's president and COO. "Sometimes we have to offload part of a shipment onto a straight truck in order to reach a cul-de-sac or other

For last-mile specialists such as Cardinal Logistics, delivering to homes is much different than delivering to a DC or store. Workers have to be careful not to ruin carpets or walls.

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challenging delivery area," he explains.

In addition, the intimate connection with customers inherent in home deliveries separates last-mile from other transportation legs. "When you deliver goods inside people's homes, you have to be extremely careful," says Bowman. "Workers have to be circumspect about soiling carpets and dinging walls–it's much different than delivering to a distribution center or retail store.

"It is also vitally important that communication to the last-mile customer be outstanding," he notes. "Even though we may have arranged a delivery appointment with the customer, circumstances may arise that keep them from being home at that specific time."

In many cases, the final-mile delivery provider may be the only customer-facing organization involved in this portion of the supply chain. If a consumer orders Masco cabinets from Home Depot, for example, it is not a Masco or Home Depot representative that they deal with to schedule and solve delivery issues, but workers from 3PD or Cardinal.

TECHNOLOGY LEADS THE WAY

"Last-mile deliveries require coordination among the retailer who sells the product, the manufacturer who produces it, and the consumer who purchases it," says Will O'Shea, 3PD's chief sales and marketing officer. To ensure it executes that coordination flawlessly, 3PD has invested significantly in technology that automates many aspects of communication among the various parties involved in the last mile.

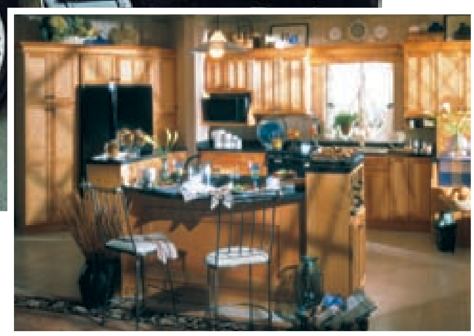
Here is how that communication system works:

When a Masco order ships from its facility in Middlefield, Ohio, the company electronically sends an advanced shipping notice to 3PD. Truckload carriers deliver the cabinets to one of 15 locations in 3PD's 28-crossdock network, where the order is scanned at the item level. This process allows Masco to provide order-tracking capability to the consumers who purchased the cabinets–they can go online and track their order the same way they could with a UPS or FedEx delivery.

"This kind of order-tracking visibility is new for heavy goods last-mile providers," notes O'Shea. "In the past, heavy goods consumers could find out from a manufacturer or retailer if their products were on a container, en route with a truckload provider, or in a local DC. But the last mile was a black hole; there was no communication there."

Once a Masco order arrives at one of 3PD's facilities, the company's system sends an email and places an automated phone call to let the customer know the goods have arrived at the local facility. After Masco schedules the delivery date with the customer, 3PD sends an email confirmation the night before, offering a three-hour time window for delivery. 3PD's drivers also place a phone call 30 minutes before arriving at a consumer's house to confirm the delivery.

3PD's automated technology kicks in again after the delivery is made to ensure drivers met the company's customer service parameters. "About 12 minutes after we receive notice that the cabinets were delivered, an automated call surveys the consumer, asking questions such as: Was the team on time? Did they call 30 minutes in advance? Did the assembly meet your satisfaction? If you had another delivery, would you want this team back in your home?" O'Shea explains.



3PD drivers delivering Masco Cabinetry products *(right)* are measured daily on performance factors such as timely delivery, and customer communication and satisfaction.

If customers are not satisfied, they can leave a voicemail, which is routed back to 3PD's call center. The company promises to get back to the customer with a resolution within one hour. "The customer does not have to call us, or the retailer, or Masco," O'Shea says.

3PD uses this information to measure each of its delivery teams every day, with a satisfaction goal of 4.82 on a scale of 1 to 5. If certain teams don't measure up, 3PD is able to quickly address issues with the drivers and make any necessary changes.

"3PD's teams make a very good impression on our consumers, which

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is key because these drivers represent Masco and are often the only people the consumer sees," notes Drenski. "3PD understands how important that is."

LAST-MILE ON THE JOB (SITE)

This combination of technology and customer service is also key when making last-mile deliveries to construction job sites, as Cardinal does for Associated Materials Inc. (AMI), a leading manufacturer and distributor of residential building materials headquartered in Akron, Ohio. The company – which manufactures products such as replacement and new construction vinyl windows, patio doors, vinyl siding, and decking, among other products – serves the professional homebuilder and remodeler market through its company-owned distribution centers and direct customer network.

AMI began its partnership with Cardinal in 2007, tapping the logistics provider to handle last-mile deliveries for its West Coast operations. It counts Cardinal's technology and service offerings as crucial benefits to helping make the last mile an efficient and cost-effective part of its supply chain.

"By utilizing Cardinal Logistics to handle our last-mile delivery, we can take advantage of its expertise, software, and technology to ensure every mile counts, while helping us manage and forecast our actual cost," says J. Craig Morrison, director of corporate logistics for AMI.

"Cardinal offers a range of scanning and technology upgrades we never had before, and presents us with a consistent and predictable cost model for each month," he adds. "This is especially important in today's economy."

Job-site deliveries also pose physical challenges that Cardinal is well-equipped to deal with, thanks to its infrastructure and assets. The 3PL provides all the equipment, professional driving staff, and technology interfaces necessary to make sure AMI's last-mile deliveries are completed seamlessly.

"We do many job-site deliveries in small residential sub-divisions and territories," Morrison notes. "Delivering this type of product via our own fleet or full-size tractor-trailers would be expensive and cumbersome."

Cardinal also keeps personnel on site at each Associated Materials manufacturing facility, helping integrate the provider into AMI's operations. The daily interaction strengthens the working relationship, notes Morrison. "Having a rep on site makes interaction between Cardinal and our shipping and production staff neat and clean, and helps resolve small problems before they become big ones," he explains.

While delivery of heavy goods from shippers such as Masco and AMI is the traditional setup for last mile, the notion of what constitutes the last mile is changing rapidly. White-glove services provided by logistics companies specializing in last-mile deliveries still make up a good chunk of the sector, but business-to-consumer deliveries have expanded far beyond heavy goods and home items, populating today's last-mile field with all kinds of providers.

"Ten years ago, last-mile delivery to consumer homes was restricted to heavy goods such as furniture, or high-value items that made it worth paying a $30 shipping charge for home delivery," says Rick Rover, senior vice president of operations for Streamlite, an Atlanta-based shipping solutions company focused on delivery of lightweight items to consumers' homes.

Today, thanks to the explosion in e-commerce, business-to-consumer deliveries have skyrocketed. In 2010, online retail sales reached $173 billion and will continue to grow, according to the Center for Retail Research. The frequency with which shoppers place online orders for products including apparel, electronics, books, and even small items, such as beauty products or medications, has changed the face of the delivery industry.

FROM ORIGIN TO MAILBOX

"The supply chain has been extended as a result of changes in consumer buying patterns," Rover notes. "As people turn to the Web to purchase lighter-weight, less-expensive goods, and do so more frequently, the supply chain extends right to the mailbox."

> **"In the past, heavy goods consumers could find out from a manufacturer or retailer where their products were in transit. But the last mile was a black hole; there was no communication there."**
>
> – **Will O'Shea,** chief sales and marketing officer, 3PD

While e-commerce orders and other business-to-consumer shipments are usually brought to homes by UPS, FedEx, or the US Postal Service (USPS), many in the logistics field now consider what takes place upstream of the actual delivery to be part of the last-mile process.

Sorting and moving packages around the country so they are in a position to be delivered seamlessly by the USPS, for instance, is the last-mile niche that Streamlite serves. The company, whose clients comprise a diverse group of apparel retailers, mail-order pharmacies, financial and automotive brochure publishers, and fulfillment companies, works with its customers to improve their final-mile shipping times and visibility, while reducing costs.

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Rover cites the example of a financial company that needed to send an SEC-regulated financial publication to 750,000 customers in one week. Streamlite worked with the firm to print in prioritized ZIP code sets, presorting pieces by destination as they rolled off the press. Because the firm was shipping from the New York area, Streamlite recommended West Coast ZIP codes get the highest printing priority. Sorting at the data level on the front end proved more efficient than sorting the 20-ounce packages in a processing center, and ensured that shareholders across the country would receive the communications by the deadline.

Many businesses that Streamlite works with have delivery needs that fall somewhere between a premium, overnight function, and the bare-bones aspects of basic delivery provided by USPS. For many products, shoppers are looking for that sweet spot where last-mile delivery takes about five to seven days and carries a reasonable cost. Businesses catering to those buyers often look to outside help to meet those shipping expectations.

"For our customers, delivery doesn't have to be overnight, but it can't take 12 days, either," explains Rover. "It also can't cost $5 or $6. It needs to cost $2 or $3, so they can offer greatly reduced shipping rates to their consumers."

As a startup, think drink Brain Toniq found it more efficient to outsource last-mile shipping to a third-party provider.

Because it partners with USPS, Streamlite can offer customers the advantage of the Postal Service's six-day-a-week delivery and mail trucks that offer final-mile delivery virtually everywhere in the country. What Streamlite brings to the table is superior tracking technology and the ability to better move goods around the country prior to the final mile.

"With our technology, customers can tell when their products moved from the origin to destination city, when they are presented to the Postal Service, and when they are out for delivery–all of which enhances what USPS alone offers," Rover notes.

Streamlite taps into the boom in online retail sales by focusing on providing last-mile delivery of less-expensive, lightweight items to consumer homes.

The e-commerce boom has also added pressure on retailers and distributors to offer customers a variety of shipping choices–making it crucial for them to combine delivery speed and cost effectiveness. Because consumers have so many options for online shopping, they are not likely to purchase an item from a Web site if they feel the shipping costs are too high.

Unhappy with a delivery charge for a book on Amazon.com, for example, a customer will order instead from Barnes & Noble.com or another online bookseller. Ditto the shipping time–if a customer needs her jeans for this weekend, she won't order them from a site that doesn't offer second-day or next-day delivery.

LAST-MILE OPTIONS

As a result, it has become essential for companies to pay more attention to the type of shipping they offer for last-mile deliveries. Choosing from the myriad options to offer their online consumers can be challenging.

That's where a company like Tagg Logistics can help. "We analyze how our clients handle their last-mile deliveries," says Tod Yazdi, principal of Tagg Logistics, an outsourced fulfillment provider with facilities in Reno, Nev., and St. Louis. "We look at the type of product they ship and what the costs are, and try to pick the best carrier to deliver to the consumer's door."

There is also a marketing and perception value to final-mile delivery that impacts the choice of carrier, he adds. "For higher-value goods, consumers often prefer to have packages brought to their door by UPS or FedEx as opposed to having USPS leave them in the mailbox. So online shippers need to consider not only cost and time of delivery, but also how their product is perceived," he says. "If it is a premium product, the customer will want premium delivery."

That ability to determine which shipping methods to offer online consumers and how to handle fulfillment for last-mile deliveries is what made Scott Ohlgren, creator of a botanical-based, caffeine-free think drink called Brain Toniq, partner with Tagg.

A few months after starting the business in 2008, Ohlgren and his partner received their first shipment of about 125,000 cans, and had to store it in the partner's barn. They did the fulfillment and last-mile shipping selection for that first shipment themselves, and soon realized they had a decision to make: purchase a forklift, rent warehouse space, and hire more employees, or find a fulfillment company to handle the process.

"I've seen many startups waste money doing things they should be delegating, and I didn't want to do that," Ohlgren recalls. "So, after researching several companies, I knew we should have Tagg manage our fulfillment and last-mile."

The 3PL now handles the fulfillment and distribution of Brain Toniq's roughly 250 orders per week. Each day, Brain Toniq receives orders from consumers, wholesalers, and retailers; collects them into one Tagg-specified file, tabulates the information, and by 10 a.m. the next morning sends Tagg an email with all the order data.

Tagg then processes and packages the orders, and ships them for the final mile via "the most time- and cost-effective method for each customer," explains Yazdi.

"We use the same process for every size order–from half a case to four cases, to an entire pallet of 128 cases. It is easy for us to do, and Tagg is able to execute these tasks faster, more efficiently, and for a lower cost than we could do them ourselves," Ohlgren explains.

Tagg also warehouses Brain Toniq's product, receiving it directly from the brewer. The arrangement has allowed the company to keep overhead low–only four employees work in Brain Toniq's Colorado office–while growing sales to one million cans in its second year.

LAST BUT NOT LEAST

Just as Ohlgren's product offers fuel for the brain, the services offered by third-party logistics companies and shipping providers fuel the ongoing demand for reliable last-mile service. And when it comes down to it, last-mile delivery is the ultimate example of the last-but-not-least cliché.

"Any supply chain is only as strong as its weakest link," notes Streamlite's Rover. "A company can move a product from China to the United States, clear it through Customs, move it to a distribution center, and fulfill it in record time. But if it doesn't deliver the product to consumers quickly enough, they are not happy, and the company's supply chain has failed." ■

Casebook

by Joseph O'Reilly

PETCO's Pet Project

For pet supply retailer PETCO, honoring its commitment to superior customer service meant finding a loyal logistics partner.

Humans are finicky about pet care–perhaps even more so than their cute and cuddly dependents. So when it comes to buying what's best for Bella the Bulldog or Calico Charlie, brand loyalty, quality, and customer service are at a premium.

As one of the leading pet supply retailers in the United States, PETCO knows this well. It operates nearly 1,100 stores in all 50 states, and caters to all animals from bearded dragons to hermetic crabs and countless other critters. Customer service isn't just a benchmark–it's part of the brand.

The San Diego-headquartered company has always been committed to continuous improvement in customer service. As part of that commitment, in 2007, after a series of changes and realignments within its logistics organization, the company brought Cookeville, Tenn.-based transportation and logistics service provider Averitt Express on board as a partner.

"It was a brand new relationship," says Jeff Brady, PETCO manager, outbound transportation. "But, after careful review, we felt it was a good fit for us based on Averitt's service-focused reputation, its understanding of the retail sector, and a footprint that mirrored some of our immediate and long-term growth needs. We knew we were laying a foundation for future growth."

"Customer service was and is a key component in our operating strategy," says Mark Hilborn, vice president of logistics for PETCO. "We recognized Averitt's core competency in truckload (TL), less-than-truckload (LTL), and dedicated solutions, and its ability to provide high-quality and consistent customer service."

Three years later, the partnership remains solid. Averitt provides TL services for outbound freight movement to retail stores from four distribution centers (DCs) in Illinois, Texas, New Jersey, and Georgia; return-to-vendor sweeps; and vendor-inbound deliveries.

PETCO also partners with Averitt for a dedicated fleet at its 525,000-square-foot DC in Braselton, Ga. This facility is the focal point of the company's southern region operations and supports two smaller regional warehouses. The retailer uses Averitt for LTL services in the Southeast as a primary trucking partner, augmenting a national program it operates with another carrier.

The PETCO and Averitt partnership has grown each year since 2007. But it all began with a problem and a simple fix.

BIRDS OF A FEATHER

When PETCO began barking up Averitt's tree, it was having issues with store deliveries, including quality and timeliness. "We didn't ask too many questions," recalls Tony Allison, regional vice president at Averitt Express. "We threw assets at the problem."

Averitt's approach with PETCO is typical of other partnerships it has engaged–a customer needs help, Averitt responds with a functional solution, then eventually jumps into a supply chain role.

"Our niche is designing a total solution around a need, with a basket of value-added services," says Allison. "We have all the warehousing, distribution, dedicated, TL, and LTL assets."

PETCO's customer service concerns were largely a consequence of transportation inefficiencies that had accrued over time. It had too many carrier partners, too little pricing leverage, and too much money tied up in operating a private fleet. All these factors impacted delivery quality.

"With a large carrier base, you sometimes wind up with too many brokers and one-off carriers, which leaves little leverage and opportunity for volume discounts," says Brady. "For five carriers, that volume means a lot, whereas for 30 carriers, it does not. I firmly believe that transportation is not a procured commodity. Partnerships and relationships still matter."

With so many carriers in the stable, quality and service suffered because there was less control. Beyond that, broken schedules were often catastrophic because there were multiple deliveries on dedicated routes–and stores often had limited personnel tasked with receiving shipments. Any late or missed delivery had a direct impact on store inventory and consumer confidence.

To better serve its 1,100 stores nationwide, PETCO enlisted Averitt's help in streamlining distribution processes.

Quality was a discriminating consideration, so PETCO found a transportation provider that could bundle both service and quality.

"We provide a price-plus service model; it's not just about cost. When you provide a good service, everything grows from that," says Allison. "Customer service is the one piece of the pie that is more costly than all the pieces put together."

INBOUND AND DOWN

The key for PETCO was finding a carrier partner that could align inbound and outbound flows between its DCs and retail stores.

"Averitt has helped us drive many efficiencies, specifically with the cross-utilization of Averitt Supply Chain Services' dedicated fleet and its truckload fleets for continuous moves to support vendor inbound; return to vendor sweeps of retail stores; outbound deliveries to stores; and DC transfers that support retail store deliveries and reverse logistics," says Brady.

PETCO has gained further efficiencies by partnering with Averitt on effective lane matching and management–moving dedicated and TL freight in lanes that are mutually beneficial. This arrangement drives effective rate management and cost structure while executing on service and driver utility.

On the dedicated side, in the past, PETCO operated several private fleets. The company decided to move away from that model for several reasons.

"One concern in this process was the safety and lack of internal resources to manage increasing legislation and regulation," says Brady. "Averitt is known as an extremely safe and efficient carrier partner. Its focus on safety in both our dedicated fleet and in our TL operations brings us a sense of confidence and lets us focus on our core competency of distribution to support pet owners."

DRIVING EFFICIENCIES

Beyond these gains, Averitt is helping PETCO achieve year-to-year improvements in its cost-to-service model for both retail store service and inbound flow. It's helping to drive efficiencies by modeling solutions that meet both companies' mutual profitability goals.

"Understanding our inbound flow, and as part of our freight terms conversion with our vendors, Averitt has been instrumental in realizing efficiencies between its dedicated and TL divisions in a flexible manner, as we work to merge our outbound and inbound volumes where we can," Brady explains.

The pet supply industry is unique because customer service really is a premium. Customers will spend money and buy quality products, and they have affinity to specific brands.

When PETCO transformed its logistics team in 2007, it was also differentiating itself from the competition through various key initiatives. Ensuring on-time deliveries was the critical first step in that evolution.

"We began seeing demand for more organic and natural food assortments," says Brady. "Pet food consumption trends are generally about three years behind humans, and we wanted to capitalize on this trend."

Pet food consumers – humans and animals alike – are loyal to their brands, so ensuring items are in stock is a critical differentiator. Once Averitt cleared the customer service hurdle, it began talking more strategy with PETCO.

"PETCO has an image to maintain. Transportation is a big part of that effort," says Allison. "It's especially critical with more just-in-time shipments. As PETCO ships smaller quantities, keeping inventories down, our job is even more important, in terms of meeting on-time demand."

To date, PETCO has streamlined its core carrier network from 30 companies to about one dozen, preferring true partnerships with service providers such as Averitt. In terms of retail store service where Averitt has come in to replace incumbent carriers, improvements have been marked.

"Service in these areas has improved by as much as five to 10 percent," says Brady. "It has helped us meet our on-time metric of 98.5 percent for store deliveries, which is an 'all-in' number. Averitt, overall, exceeds metrics on all the outbound lanes it services.

"When we've had challenges, we worked together to drive improvements collaboratively and to ensure we were setting ourselves up for success," he continues. "Additionally, we have partnered to hold rate increases, in some cases, until service was corrected and stabilized."

This type of partnership bodes well for future growth opportunities, as well as resolution of future challenges. The two companies share a mutual understanding of each other's priorities and needs.

A solution can often be as simple as finding the right carrier that can throw assets and quality at a problem – then let it grow from there. The trickle-down impact within a distribution center network, when product is always available in the stores to consumers, and in the warehouse to retailers, is invaluable.

"The crux of what we do is serving customer needs and their customer needs," says Allison. "Sophisticated customers want sophisticated solutions."

For PETCO shoppers, and their special friends, this type of customer service is priceless. ■

3PLs

APL Logistics • www.apllogistics.com

APL Logistics designs and operates global supply chains that deliver products to everywhere you need them. Its innovative end-to-end solutions use data connectivity for greater visibility and control. APL Logistics provides the resources necessary to support your supply chain. Services include shipment consolidation and deconsolidation, global freight forwarding and customs management, regional warehousing and distribution networks, and IT solutions that increase supply chain performance and reduce costs.

Lynden • www.lynden.com

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

MIQ Logistics • www2.miq.com

Built on the strength and success of YRC Logistics, MIQ Logistics helps optimize supply chains and improve overall business performance. The company's solutions help manage distribution and warehousing more efficiently, and simplify domestic and global transportation. Started in 2002, MIQ Logistics has locations in Asia, Europe, North America, and South America. Along with its global network partners, MIQ Logistics provides services in and between more than 80 countries supported by more than 5,000 in-country logistics professionals.

Port Jersey Logistics • www.portjersey.com

For more than 56 years, Port Jersey Logistics has been the number-one choice for transportation, warehousing, and distribution on the East Coast. Port Jersey operates modern, state-of-the-art warehousing space, as well as in-house trucking and logistics services. Along with our wide array of value-added services and first-class customer service team, Port Jersey Logistics is your one-stop shop for all of your supply chain needs.

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.

ECONOMIC DEVELOPMENT

Columbus Region • www.columbusregion.com/logistics

The Columbus Region-Columbus Logistics Council focuses on the growth of the region's industry in its eight counties of the broader Columbus 2020! growth strategy. The Columbus Region is your channel to the global marketplace. Through truck, rail, air, and port, the Columbus Region logistics infrastructure gets your freight where it needs to be, when it needs to be there. For more information, contact 614-225-6903.

Delaware Economic Development Office • www.dedo.delaware.gov

The Delaware Economic Development Office (DEDO) attracts new investors and businesses to Delaware, promotes expansion of existing industry, assists small and minority-owned businesses, promotes tourism, and creates new and improved employment opportunities for all Delaware citizens. Focusing on high-growth industries, DEDO believes the offshore wind industry brings near-term jobs and can transform Delaware's economy in the long run, providing good-paying, skilled employment opportunities. Delaware understands the wind industry's needs—from power purchasing, to supply chain, to policies.

Joplin Regional Partnership • www.joplinregionalpartnership.com

At the Joplin Regional Partnership of Southwest Missouri and Southeast Kansas, you'll find five counties working to provide you with a central U.S. location for a manufacturing, distribution or transportation hub. The Joplin Regional Partnership region's close proximity to Walmart headquarters makes this choice ideal, especially for both manufacturing and distribution. Three Class I railroads and two short-haul railroads are also important parts of the transportation network.

GLOBAL LOGISTICS

Catapult International • www.gocatapult.com

Catapult International provides global freight pricing tools for the logistics industry. Whether you are a shipper or a forwarder, it can combine, air, ocean, and ground contracts into one simple-to-manage Web-based system. Its dedicated contract management team also keeps today's rates up to date. To provide easy-to-use and accurate quote management tools for global companies, contact Catapult International at 913-232-2389 today.

GLOBAL TRADE

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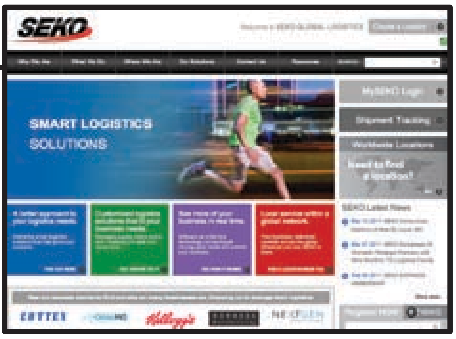
Hyundai Merchant Marine (HMM) is committed to its customers, and you'll find evidence of that on its Web site, where you can book cargo, and access sailing schedules, bill of lading information, and arrival notices. HMM differentiates itself from other carriers by offering an array of flexible and accommodating services with many different types of vessels. The carrier plans to increase its fleet and focus on service diversification to establish a global network. Toward that goal, HMM emphasizes the carriage of special cargo and continues to invest in new container terminals and inland logistics facilities.

NYK Line • www2.nykline.com

Since its founding in 1885, Nippon Yusen Kabushiki Kaisha (NYK Line) has steadily emerged as a leader among the world's shipping companies. Today, NYK is a comprehensive global-logistics group offering ocean, land, and air transportation services. Utilizing a vast range of resources, an operating fleet of 803 vessels, 308 distribution centers in 33 countries, trucks, terminals, aircraft, and other logistics assets, NYK has built a system that responds flexibly to diversifying customer needs and provides optimal integrated logistics solutions.

SEKO Worldwide • www.sekologistics.com



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

IN THIS SECTION:
Logistics IT – Trucking-TL

LOGISTICS IT

Cass Information Systems • www.cassinfo.com

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PORTS

Port of Wilmington, Delaware/Diamond State Port Corporation www.portofwilmington.com

The nation's leading gateway for imports of perishable goods, Wilmington handles nearly five million tons of cargo annually including: fruit, automobiles, steel, forest products, dry and liquid bulk, livestock, and wind energy and project cargo. Delaware's port offers its customers highly skilled labor, a courteous and knowledgeable customer service staff, and the requisite cargo handling equipment, facilities, and multi-modal infrastructure to accelerate cargo through the supply chain. A Mid-Atlantic deepwater seaport, the Port of Wilmington is owned and operated by the Diamond State Port Corporation, a corporation of the State of Delaware.

REAL ESTATE

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Binswanger is a global real estate organization uniquely positioned to provide a full range of cross-border services, including site selection. Its exceptional knowledge of states, communities, individual property owners, developers, and the transactions they are willing to structure, enables Binswanger to analyze and compare the best alternatives available.

TRUCKING-TL

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WhitePaperDigest

Industry experts amass supply chain management best practices and skill sets, and invest in new research and evaluation tools. Now you can benefit. *Inbound Logistics* has selected this collection of whitepapers that will give you a jump on important supply chain issues. For more information on any of these whitepapers, visit the Web sites listed below.

Ryder

TITLE: ***Supply Chain Security: Preventing Cargo Theft***
LENGTH: *8 pages*
DOWNLOAD: *http://tinyurl.com/4az29kd*
SUMMARY: Today's economy is driven by a global supply chain. Goods are moved around the world 24/7 – packaged and transported by air, rail, sea, or truck. As the supply chain grows more complex, so does the ability to secure them. One of the biggest challenges affecting businesses today is cargo theft, and the resulting potential disruption of the supply chain. Learn some best practices in security that will help your company combat the risks and dangers of cargo theft.

Kewill

TITLE: ***Customs Brokerage and Freight Forwarding: 2011 Industry Survey Analysis and Best Practices Recommendations***
LENGTH: *20 pages*
DOWNLOAD: *http://tinyurl.com/49pldr9*
SUMMARY: In Kewill's most recent benchmark survey, customs and freight forwarding professionals share their insights on the industry challenges and trends, the results of which are presented in this 20-page whitepaper. In addition to the benchmark data, you will gain access to more than 20 graphs and charts, along with *10 Best Practices and Recommendations for the Customs Brokerage and Freight Forwarding Industries*.

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WhitePaper Digest **is designed to bring readers up-to-date information on all aspects of supply chain management. We're building a database of SCM whitepapers, and you can help. E-mail us with whitepaper recommendations: editorial@inboundlogistics.com**

Kronos

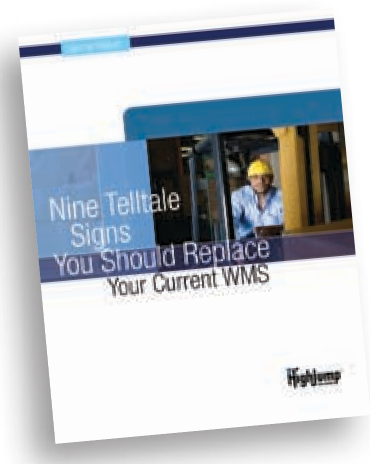
TITLE: ***Labor Management: Instill Accuracy, Efficiency, and Productivity In the Warehouse and Retail Store***
LENGTH: *23 pages*
DOWNLOAD: *http://tinyurl.com/4m4jget*
SUMMARY: This Aberdeen Benchmark Report identified that best-in-class organizations use labor management practices to deliver better business results. How? Through real-time monitoring of operational performance and by implanting performance-based incentives to motivate the behaviors that affect profitability.

Saddle Creek Corporation

TITLE: ***2011 Cross-Docking Trends Report***
LENGTH: *12 pages*
DOWNLOAD: *http://tinyurl.com/4ujyqcg*
SUMMARY: Cross-docking has increased significantly in recent years, according to a new study sponsored by Saddle Creek Corporation. The practice serves as a viable strategy for companies challenged by today's unpredictable economy – helping to improve service levels, reduce transportation costs, and consolidate shipments to destination. The *2011 Cross-Docking Trends Report* explores the latest cross-docking practices, benefits and challenges, outsourcing trends, and more.

Zebra and Motorola

TITLE: ***Customer Case Study: McMahon Cartage***
LENGTH: *2 pages*
DOWNLOAD: *http://tinyurl.com/ilzebra*
SUMMARY: Carriers across the country are struggling to reduce costs to keep their customers happy and their bottom line healthy. To survive and thrive, carriers are called upon by their customers to find new, more efficient ways to operate to help customers drive costs out of their logistics network. Download this case history to see how one mid-size carrier took touches out of the dispatch process using the latest in combined technology from Zebra and Motorola.



HighJump Software

TITLE: ***Nine Telltale Signs You Should Replace Your Current WMS***
LENGTH: *8 pages*
DOWNLOAD: *www.inboundlogistics.com/hj*
SUMMARY: Is an inflexible or legacy warehouse management system (WMS) putting your business at risk? You rely on a warehouse management system to maintain ongoing operations, support changing customer requirements, keep up with new industry regulations, and simply get product out the door on a daily basis. What happens when you're no longer able to get the job done? In this new industry report, *Nine Telltale Signs You Should Replace Your Current WMS*, you'll learn to analyze the operational factors influenced by your WMS – and find out whether your system is constraining your company's growth and global reach.

Zebra and Motorola

TITLE: ***Unlock the Power of Your Field Service Teams with Mobility***
LENGTH: *12 pages*
DOWNLOAD: *http://tinyurl.com/ilmotorola*
SUMMARY: This new report outlines how achieving maximum productivity involves streamlining and automating processes to reduce or even eliminate the large volume of paperwork that often burdens field service professionals. Discover how mobility can benefit field service operations, considerations when implementing mobile field service applications, and technical considerations when evaluating potential solutions.

MOBILE DEVICES & APPS

Total Quality Logistics (TQL)

TQL's Freight Finder mobile phone application is now available for Android products and Apple's iPhone, iPad, and iPod Touch. The freight brokerage firm lists available loads, which owner/operators and carriers can search by mileage radius, equipment type, load date, and destination city/state. Users can also search for loads according to their smartphone GPS locator's current location.

www.tql.com 800-580-3101

▲Intermodal: ChemLogix Global LLC

ChemLogix Global LLC added 50 new ISO tank containers to its BulkTainer operation. Intermodal ISO tanks are used to transport bulk liquids long distances by integrating truck, rail, and ocean freight. The newer, lightweight tanks replace some older tanks and add new capacity to meet growing customer demand.

www.chemlogix.com 215-461-3805

LXE

Designed specifically for warehouse applications, the Tecton handheld computer accelerates real-time data capture, enabling bar-code reads from four inches to 40 feet away. This capability allows operators to perform warehouse moves ranging from receiving to full pallet putaways with the same version of the computer. The device also features a scan vibration signal that can be used to verify successful scans in loud warehouses, and multiple built-in data-entry options. Keypads protect against airborne and

CONTINUED FROM PAGE 131

spilled chemical agents, and electrical components are secured to circuit boards to better withstand drops and shocks. An available cold-storage configuration includes programmable touchscreen and scan window defrosters, and a cold-tolerant backup power source that holds a charge longer in environments as low as -22 degrees F.

www.lxe.com 770-447-4224

AIR

American Airlines Cargo (AA Cargo)

Following the Open Skies Agreement in 2010 between the United States and Japan, AA Cargo will operate B777 cargo service from New York's John F. Kennedy Airport, providing connections throughout Asia, via its core interline partners. AA Cargo is the first airline in the United States to launch service between the continental U.S. and Japan's Tokyo International Airport at Haneda, opening critical new cargo routes between two of the world's leading economic markets.

www.aacargo.com 800-CARGO AA

3PLs

MIQ Logistics

MIQ Logistics, formerly YRC Logistics, relocated its Atlanta Global Service Center to a facility near Hartsfield-Jackson Atlanta International Airport, with easy access to I-285 and I-85. The facility specializes in import and export services, including customs brokerage and global trade management, and supports bonded warehousing and transportation services, consolidation and distribution activities, air cargo screening, and purchase order management.

www.miq.com 770-996-6930

Globe Express Services (GES)

GES added in-house customs brokerage services across Canada. The 3PL's offices in Toronto, Montreal, Ottawa, and Vancouver now offer classification, port and cross-border clearance, and compliance consulting.

www.globeexpress.com 905-761-6431

Xcel Delivery Services

A new Tucson, Ariz., office and warehouse expands Xcel Delivery Services' storage capacity by almost 10,000 square feet, and allows the company to offer increased efficiency in both storage and distribution services. The new facility was designed specifically for increased effectiveness, with loading docks that enable cross-docking and allow for larger loads. Xcel will continue to offer distribution services as well as airport cargo work, hot shot, urgent, pharmaceutical, and medical deliveries.

www.xceldelivery.com 520-408-7200

Regal Logistics

A new 351,000-square-foot distribution center in Charleston, S.C., provides distribution, pick and pack, export/import shipping, consolidation, crossdocking, transloading, drop shipping, administrative support, and value-added services.

www.regallogistics.com 253-922-2250

INTERMODAL

National Gateway

Operations commenced at the new Northwest Ohio Terminal, an intermodal facility in North Baltimore, Ohio, that serves the double-stack freight rail corridor between East Coast seaports. The new facility serves as the transfer point for hundreds of thousands of freight containers annually. It features green design elements such as electric cranes that reduce emissions, optical scanners that cut truck idle times, and automated car tracking technologies and remote switches that increase operational efficiency.

www.nationalgateway.org 617-752-1177

ASSOCIATIONS

Transportation Marketing & Sales Association (TMSA)

The former Transportation Marketing & Communications Association (TMCA), an organization that has served transportation marketing and communications professionals since 1924, changed its name to the Transportation Marketing & Sales Association (TMSA) to reflect its focus on aligning marketing and sales within the transportation industry. The association will continue its tradition of providing actionable tools and trend insights, and augmenting the Annual Conference agenda, the Compass Awards, and other member programs to be more appealing to sales professionals and encourage the interaction between marketing, communications, and sales disciplines.

www.tmcatoday.org 609-799-4900

◀ Expedited: Golden State Overnight (GSO)

Regional carrier Golden State Overnight (GSO) announces GSO Overnight Ground, a service that provides next-day ground parcel delivery to every address in California and the metropolitan regions of Nevada and Arizona. The GSO Overnight Ground service is now available to GSO customers with regularly scheduled service.

www.gso.com 800-322-5555

PACKAGING

Plastican Inc.

A new lightweight 4.25-gallon rectangular plastic container provides better cube efficiency and volume goods packaging for the food, consumer, and do-it-yourself markets. Suitable for liquids as well as moist, dry, and frozen goods, the containers tolerate a wide temperature range, and nest closely to maximize the number of units per pallet and truckload for fewer shipments, less product handling, and more efficient use of plastic.

www.plastican.com 978-728-5023

SOFTWARE

GT Nexus

GT Nexus enhanced its cloud-based freight spend management solution with truck transportation management system capabilities. Shippers can now procure and manage truck services on the same core platform they use for international ocean and air transportation.

www.gtnexus.com 510-808-2222

TZA

The *ProTrack Warehouse Labor Management System* and *ProTrack Drivers Labor Management System* are now available on a software-as-a-service

CONTINUED FROM PAGE 133

subscription basis, allowing users to access the applications on the Internet through any browser.

www.tzaconsulting.com 800-229-3450

EXPEDITED

FedEx Express

FedEx Express enhanced its early-morning delivery service offerings. FedEx First Overnight offers next-business-day delivery as early as 8 a.m., depending on destination ZIP code, and is available throughout all 50 states. It serves customers shipping highly time-sensitive packages. FedEx 2Day A.M. service provides a 10:30 a.m. delivery commitment time for shipments with two-day delivery to most areas in the United States. FedEx First Overnight Freight provides nationwide, early-morning delivery of critical airfreight shipments, with a 9 a.m. delivery commitment in most markets. This service is tailored for shippers with urgent manufacturing, distribution, or replenishment needs, and for palletized shipments weighing more than 151 pounds.

www.fedex.com 800-GO-FEDEX

Packaging: Cold Chain Technologies

The KoolTemp Express GTS-18 lightweight shipping carton maintains next-day shipments of vaccines, pharmaceuticals, and bio-tech products at 35 to 46 degrees F. Constructed with one piece of soft insulative foam and a pop-up outer container, the KoolTemp Express stores flat and can be reused and returned as part of Cold Chain Technologies' GreenSmart program.

www.coldchaintech.com 800-370-8566

CALENDAR

April 17-20, 2011, NASSTRAC Conference & Logistics Expo, Orlando, Fla. Hosted by the National Shippers Strategic Transportation Council, this conference features CEOs of leading motor carriers including FedEx Freight, Old Dominion, and Werner discussing issues facing the trucking industry; 3PL executives from companies such as OHL, CEVA Logistics, and MIQ Logistics on outsourcing trends; and shippers such as Armstrong Industries explaining best practices in their supply chain strategies.

952-442-8850 x208

www.nasstrac.org

April 17-19, 2011, SCOPE East 2011, Orlando, Fla. The Supply Chain Operations Private Exposition (SCOPE) program offers educational sessions focused on consumer goods, retail, and industrial supply chains; 3PLs and distribution; and summits for CIOs and procurement executives. The event also features strategic presentations and panels from industry thought leaders, real-world customer-led case studies, and targeted research meetings with leading suppliers.

310-706-4150

www.scopeeast.com

May 1-6, 2011, Supply Chain Logistics Management, Lansing, Mich. This course, offered by Michigan State University's Executive Programs, emphasizes supply chain integration, performance measurement, technological application, organizational dynamics, and the lessons learned from global world-class logistics organizations.

800-356-5705

http://broad.msu.edu/edp

May 9-10, 2011, Georgia Logistics Summit, Atlanta, Ga. This event, sponsored by the Georgia Centers of Innovation, explores new logistics business opportunities in agribusiness, air and ocean freight, energy, life sciences, and manufacturing.

404-962-4041

http://summit.georgialogistics.org

June 8-10, 2011, CSCMP Europe Conference, Barcelona, Spain. At the Council of Supply Chain Management Professionals' (CSCMP) European global conference, attendees explore new strategies for entering emerging markets, the role that business culture plays in forging collaborative relationships with suppliers and customers, and how IT drives supply chain efficiency.

630-574-0985

www.cscmp.org

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3PLs

- **APL Logistics** pg. 49
  APL Logistics works one-on-one with your company to find a warehousing and distribution solution that improves inventory management, reduces operations costs, and shortens order cycle times.
  www.apllogistics.com 602-586-4800

- **BlueGrace Logistics** pg. 25
  Use your shipping experience to discover a life of greater flexibility. BlueGrace Logistics has a limited number of franchise offerings for the right candidates.
  www.bluegracefranchise.com 800-MY-SHIPPING

- **BNSF Logistics** pg. 27
  The BNSF team can build a program to solve your toughest transportation challenges, including windmills and wind farm equipment.
  www.bnsflogistics.com 877-853-4756

- **C.H. Robinson Worldwide** Cover 2–pg. 1
  When you trust C.H. Robinson with your global supply chain, you'll experience the power of custom supply chain solutions.
  www.chrobinson.com 800-323-7587

- **CaseStack** pg. 26
  Thousands of suppliers turn to CaseStack for innovative consolidation programs, efficient warehousing systems, and streamlined transportation management.
  www.casestack.com 855-638-3500

- **Jacobson Companies** pg. 79
  Jacobson Companies has your supply chain needs covered, with warehousing, transportation, and freight management services worldwide.
  www.jacobsonco.com/cando 800-636-6171

- **Lynden** pg. 87, Cover 3
  A full-service freight forwarder, including air, ocean, and customs brokerage, Lynden connects you with hard-to-reach locations.
  www.lynden.com/mobile 888-596-3361

- **Menlo Worldwide Logistics** pg. 9
  You can trust Menlo Worldwide Logistics to give you every advantage by applying proven processes to solve complex supply chain problems.
  www.menloworldwide.com/il 630-449-1084

- **MIQ Logistics** pg. 15
  MIQ Logistics offers a proven track record in today's marketplace, as well as a commitment to expand globally with services that will meet future needs.
  www.miq.com 877-232-1845

- **Port Jersey Logistics** pg. 21
  If you're seeking a logistics partner who is perfectly tuned in to your needs, look no further than Port Jersey Logistics. Its total supply chain management services for domestic manufacturers and international shippers make sure you don't miss a beat.
  www.portjersey.com 609-860-1010

- **Ruan** pg. 39
  Ruan is driven to move you forward. With more than 75 years of experience, Ruan continues to think of new ways to help shippers maximize the bottom line.
  www.ruan.com 866-782-6669

- **Ryder** pg. 5
  Powerful, integrated, source-to-shelf solutions for the food, beverage, and consumer packaged goods industries are now part of the Ryder Supply Chain Solutions portfolio.
  www.ryderscs.com 888-887-9337

- **SEKO** pg. 22
  SEKO provides global supply chain solutions leveraging best-in-class technology, a global network of more than 100 local offices, and aggressive transportation buying power.
  www.sekologistics.com 800-228-2711

- **TransGroup Worldwide Logistics** pg. 119
  It's easy to lose track of shipments when you're managing the supply chain by yourself. Why not try TransGroup Worldwide Logistics, one of the big guns in the logistics business?
  www.transgroup.com 800-444-0294

- **Wagner Industries** pg. 60
  Wagner's North American transportation solution, distribution centers, and contract packaging services save you time and money.
  www.wagnerindustries.com 800-817-1264

- **Werner Enterprises** pg. 32
  Freight management is simple once you know the right moves. Simplify complexity with Werner, the leader in freight transportation innovation.
  www.werner.com 800-228-2240

Air Cargo

- **Alaska Air Cargo** pg. 91
  With Alaska Air Cargo, you can experience hassle-free, reliable shipping to more than 75 destinations, including new service to Calgary, Houston, and Honolulu.
  www.alaskacargo.com 800-225-2752

Career Development/Education

- **University of Denver - Intermodal Transportation Institute** pg. 12
  Transport your career to a higher level with the ITI Executive Masters Program, an 18-month program with five one-week Denver residencies and a travel seminar to an international location.
  www.du.edu/transportation 303-871-4702

Events

- **CSCMP Europe 2011** pg. 117
  In Barcelona, Spain, on June 8-10, 2011, the Council for Supply Chain Management Professionals helps you develop a sound financial strategy and apply it to your entire supply chain operation.
  www.cscmpconference.org 630-574-0985

- **CSCMP's Annual Global Conference** pg. 113
  At the Council for Supply Chain Management Professionals' annual conference, Oct. 2-5, 2011 in Philadelphia, learn how to cut supply chain costs and improve profit, connect with colleagues from all over the world, and discover new and innovative ideas that will keep your career and your supply chain competitive.
  www.cscmpconference.org 630-574-0985

- **National Shippers Strategic Transportation Council (NASSTRAC)** pg. 130
  Attend the NASSTRAC Logistics Conference and Expo in Orlando, Fla., April 17-20, 2011. Nowhere else will you find more market intelligence on transportation and supply chain management.
  www.nasstrac.org 952-442-8850

- **SMC^3 Connections 2011** pg. 120
  Discover supply chain strategies and gain valuable insights at this event, sponsored by SMC^3, in Coeur d' Alene, Idaho, June 14-17, 2011.
  www.smc3conference.com 952-442-8850

- **Supply Chain Operations Private Exposition (SCOPE)** pg. 136
  This event, April 17-19, 2011 in Orlando, Fla., offers educational sessions focused on consumer goods, retail, and industrial supply chains; distribution; and procurement strategies.
  www.scopeeast.com 310-706-4150

Financial Services

- **Regions Bank** pg. 92
  Whether you need special equipment financing, facilities loans, risk mitigation services, or access to capital markets, see what so many transportation organizations have learned: with Regions Bank and Morgan Keeper, banking takes care of itself.
  www.regions.com/transportation 770-777-6169

Freight Payment Services

- **nVision Global** pg. 37
  All freight payment companies are not the same. Let nVision Global work for you.
  www.nvisionglobal.com 770-474-4122

Intermodal

- **Alliance Shippers, Inc.** pg. 17
  When it comes to making transportation and logistics work, Alliance Shippers, Inc. is on the job. From on-time performance to customer service, Alliance Shippers strives to be the best, day in and day out.
  www.alliance.com 708-802-7517

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- **Yale** pg. 42
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Logistics IT

- **Magaya Logistics Software Solutions** Cover 4
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  www.magaya.com 786-845-9150

- **TMW Systems** pg. 7
  TMW Systems supplies solutions covering the transportation services sector – delivering technology that enables companies to improve operational efficiencies, transactional velocity, and resource utilization.
  www.tmwsystems.com 800-401-6682

Mobile Communications

- **Sprint** pg. 11
  Get your shipping business humming along at higher speeds with Sprint's fleet management tools.
  www.sprint.com/transportation 800-SPRINT-1

Ocean

- **Hyundai Merchant Marine (HMM)** pg. 59
  Whether the core of your business is in raw materials or finished goods, HMM understands the importance of ocean transportation to your supply chain.
  www.hmm21.com 877-7-HYUNDAI

- **NYK Line** pg. 13
  NYK Line's premium transport services maintain the highest safety and dependability standards.
  www.nyk.com 201-330-3000

Pallets

- **iGPS** pg. 29
  iGPS' RFID-tagged, all-plastic pallet rental service is revolutionizing today's supply chain. It can transform your business, too.
  www.igps.net 800-884-0225

Philanthropy

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  Good360 is building the world's largest online donation marketplace to help companies quickly and efficiently donate goods to qualified non-profits and eliminate wasteful expenses.
  www.good360.org/inbound 703-299-7532

Rail

- **CN** pg. 89
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  www.cn.ca 888-426-9962

Real Estate Logistics/Site Selection

- **Binswanger** pg. 41
  Binswanger is now offering a fully air-conditioned, single-story 304,000-square-foot industrial facility located on 45 acres off U.S. Highway 45W in Trenton, Tenn.
  www.binswanger.com/trenton 404-892-4100

- **Columbus Region** pg. 115
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  Home to some of the largest global companies, the Detroit region offers an array of business opportunities, an exceptional quality of life, and a highly skilled workforce.
  www.detroitchamber.com 866-627-5463

- **GP Desarrollos** pg. 55
  From site selection to property management, GP Desarrollos offers full service supported by local market knowledge and insight to facilitate your operations requirements in Mexico.
  www.grupogp.com.mx 866-540-4520

- **Merritt Properties** pg. 35
  Merritt Properties has a fenced and secure 158,000-square-foot distribution warehouse available in Joppa, Md., with a racking system in place and three permanent coolers.
  www.merrittproperties.com 410-298-2600

- **Rockdale, Texas** pg. 110
  Rockdale, Texas, offers ample, affordable land; favorable property taxes; a business-friendly environment; and an ideal, central location.
  none 512-446-2511

South Carolina

- **ADS Logistic Services** pg. 67
  ADS' state-of-the-art technology makes it an award-winning 3PL. Get acquainted with ADS' customized distribution and fulfillment services, offered from three locations nationwide, including Gaffney, S.C.
  www.adslp.com 877-ADS-1330

- **G&P Trucking** pg. 63
  Headquartered in Columbia, S.C., G&P Trucking maintains a strong commitment to a continually improving quality process, allowing it to consistently provide the best service.
  www.gptruck.com 800-922-8782

- **MeadWestvaco (MWV)** pg. 77
  MWV is a global leader in packaging and packaging solutions, providing innovative products and valuable services to consumer products companies in a variety of industries.
  www.meadwestvaco.com 804-444-1000

- **Moulton Logistics Management** pg. 80
  Moulton Logistics provides turnkey solutions for businesses that want to sell directly to consumers, but do not have the infrastructure in place to manage payment processing, drop shipping, customer service, returns, and discounts on small parcel shipping.
  www.moultonlogistics.com 800-304-6353

- **Performance Team** pg. 73
  With a Charleston, S.C., hub strategically located on the eastern seaboard to service the East Coast region, Performance Team is a national leader in custom end-to-end logistics solutions for the retail and manufacturing industries.
  www.ptgt.net 866-775-5120

- **Regal Logistics** pg. 75
  Regal Logistics' 351,000-square-foot distribution center in Charleston, S.C., offers public warehousing designed for high-volume, quick turnaround, retail-compliant shipping.
  www.regallogistics.com 253-922-2250

- **South Carolina Department of Commerce** pg. 69
  When considering market accessibility, telecommunications capabilities, or logistical advantages, South Carolina provides a clear benefit to companies locating or expanding in the Palmetto State.
  www.sccommerce.com 800-868-7232

- **South Carolina Power Team** pg. 71
  The South Carolina Power Team is the economic development alliance of the state-owned electric utility Santee Cooper, and the state's 20 electric cooperatives.
  www.scpowerteam.com 803-254-9211

■ **South Carolina State Ports Authority** pg. 65
South Carolina ports provide efficient access to global markets for American exporters, and a secure supply chain for imported goods.
www.port-of-charleston.com 800-845-7106

■ **Synergy Logistics** pg. 78
Serving North America from its Charleston, S.C., office, Synergy Logistics focuses on developing effective warehouse management systems for clients ranging from global organizations to SMBs.
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Trucking

■ **ABF** pg. 3
ABF is a global provider of customizable supply chain solutions evolved over nine decades.
www.abf.com 877-ABF-0000

■ **Old Dominion** pg. 45
Old Dominion's full range of products and services offers solutions you can count on for domestic, global, and expedited transportation.
www.odfl.com/global 800-432-6335

Wind Power Logistics

■ **Ardmore, Oklahoma Development Authority** pg. 105
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www.ardmoredevelopment.com 580-223-6162

■ **Atlantic Container Line (ACL)** pg. 99
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www.aclcargo.com 800-ACL-1235

■ **Delaware Economic Development Office/ Port of Wilmington** pg. 100
From supply chain logistics to favorable renewal energy policies and support for relocating businesses, Delaware and its deepwater seaport in Wilmington serve the needs of Mid-Atlantic land-based and offshore wind energy projects.
www.dedo.delaware.gov 302-739-4271

■ **Dumas Economic Development Corp.** pg. 102
Excellent transportation, a growing economy, dedication to wind power logistics, and proximity to a major metropolitan area combine to make Dumas, Texas, a great place to work and live.
www.dumasedc.org 806-934-3332

■ **Geodis Wilson** pg. 95
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www.geodiswilson.com 877-469-0510

■ **Joplin Area Chamber of Commerce** pg. 107
In the heart of America – Joplin, Mo. – you'll find great road, rail, and air access, plus a business community eager to help you succeed.
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■ **Landstar** pg. 101
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■ **Levelland, Texas Economic Development Corp.** pg. 103
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■ **Nebraska Public Power District** pg. 106
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■ **Union Pacific** pgs. 96–97
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